

## Annex 1 - Terms of Reference

### Impact Evaluation: Research Into Use Overview

#### Objective

Generate evidence of Research Into Use impact on poverty reduction.

#### Target Audience

Impact evaluation will be principally targeted towards international donor community, specifically, World Bank, USAID, Gates Foundation, and DFID.

#### Central Themes

- Poverty impact (relevance, income, sustainability, etc.)
- Social impact (targeting, gender, inclusion, exclusion, etc.)
- Process impact (efficiency and effectiveness, etc.)
- Policy impact (influence, attribution, etc.)

#### Outline of Evaluation Process

Phase One: Start up (April-May 2010)

- Establish Governance arrangements (see below)
- Develop draft Terms of Reference for Impact Evaluation.
- Identify evaluation consultants

Phase Two: Initial Design. (May 2010)

- Review of data bases, assessment of evaluation potential, clustering of programmes,
- Produce a brief evaluation Approach Paper outlining methodology, key questions, timetable on activities, etc.

Phase Three: Consultation with Stakeholders. (June 2010)

- Create awareness among stakeholders regarding the scope and potential design of impact evaluation;
- Create an understanding of what data will be produced and made public, etc.
- Adjust Approach Paper to reflect specific concerns, requirements, etc.

Phase Four: Design impact evaluation. (July 2010)

- Cluster projects
- Define case studies
- Address counterfactuals
- Assess additional data requirements

Phase Five: Conduct evaluation. (August 2010)

Phase Six: Report completion. (May-June 2011)

- Events to share and disseminate information
- Publish Report

## **Governance**

Overseeing the evaluation will be a Technical Peer Review Group. Membership will include representatives from senior representatives of rural development/agriculture/private sector teams of key donors (World Bank, DFID, USAID, and Gates Foundation), an impact evaluation specialist (3iE) and RIU management.

The overall objective of this group is to ensure the impact evaluation adds value to existing knowledge. The specific tasks for the group will include but not be limited to the following.

- review the evaluation process,
- provide strategic and technical inputs into design,
- and to support the dissemination of findings.

The peer group will meet no more than four times during the evaluation.

RIU will manage/coordinate the Peer Review Group. DFID may be called upon to support in identifying members of the group.

## **Introduction**

The RIU programme began in July 2006 and was designed as a five year programme: the inception period ran until June 2007 and it was envisaged that the implementation phase would run until 2011.

The aim of the programme is to accumulate and evaluate evidence to shape and share lessons on how best to enable innovation in the agricultural sector so as to achieve social and economic gains in diverse developing country settings.

RIU is primarily a research programme. In undertaking the research, however, RIU also aims to put existing research products into use at scale.

This is not simply a question of how better use can be made of the large stockpile of agricultural research products that remain on the shelf - although that was one of the original rationales for establishing RIU. The research focus of RIU is the relationship between agricultural research and innovation - working towards identifying better processes to get research into use, rather than how to put specific research products into use.

This approach responds to extensive evidence that suggests that agricultural innovation is very often not the result of simply transferring research products to farmers, entrepreneurs and policy makers. More usually research promotes innovation only when it is embedded in the wide set of relationships and processes which help shape ideas and put them into use.

The key objective for RIU is to tease out how a range of different approaches impact on making the best use of agricultural research as a policy instrument for development. This will involve looking at timing, settings, contexts, people, policies and institutions. In seeking answers to this complex question, RIU aims to provide guidance (but not a blueprint) to those seeking to make better use of agricultural research as a tool to bring about social and economic development, thereby helping to shape future practice and policy.

A robust comprehensive evaluation is a critical part of the lesson learning process for RIU. In addition, an evaluation provides a mechanism for measuring progress against the commitments agreed in the project documents. This accountability function requires that the evaluation process is independent, robust, field-based, and focused on the areas of greatest strategic value to DFID.

The evaluation will follow internationally recognized best practice of employing multiple evaluation methodologies. This will enable the evaluation to undertake broader more complex assessment of the programme's impact. A number of organizations with an international reputation of excellence will be recruited to design and implement specific modules for the evaluation e.g. Social Development Direct will focus on modules and methodologies for Social Exclusion, the IDL group will focus on modules and methodologies to evaluate enterprise development and organisational change, and TANGO international will develop modules and methodology to assess impact on livelihoods. Overall the evaluation will be managed by the Evaluation Coordinator, Dr Tim Robertson who has overall responsibility for the delivery of the evaluation and the management of the evaluation process.

OUTPUT	STEPS	TOOLS/ACTIVITIES	TECHNICAL INPUTS	KEY DATES
<p><b>Evaluation Approach Paper</b></p> <p>This will provide the evaluation framework including key evaluation questions, methodology, survey design, budget, and terms of reference for the full evaluation (no more than 15 pages, with annexes).</p>	A: Map evaluation questions.	<p><u>Programme Summaries.</u></p> <p>Map out theory of change, and agreed indicators for success (household, organization, and institutional/policy levels.)</p> <p><u>RIU Research Framework</u></p> <p>Review agreed research questions.</p> <p><u>RIU Data Sets</u></p> <p>This process will determine the volume and quality of data available across the RIU programme.</p>	<p>Livelihood, enterprise development, social development, and evaluation specialists.</p> <p>Evaluation Specialists</p>	<p>22 June Summary documents to SDD and IDL Team. File sharing system established.</p> <p>23 June. IDL to confirm team positions.</p> <p>25 June Draft literature review to SDD and IDL teams.</p> <p>5 July Conference call with Research Team.</p> <p>7 July SDD and IDL inputs into literature review finalised.</p>
	B: Map options evaluation methods.	<p><u>Literature Review Report</u></p> <p>Lessons learned from methodologies from evaluations of innovation and extension systems</p>		<p>9 July SDD and IDL submit initial ideas on evaluation questions and methods to Tim Robertson.</p> <p>13 July Draft briefing documents for</p>

	<p>C: Agree and final questions and methods into evaluation framework</p>	<p><u>RIU Research Framework</u></p> <p>Review research methods.</p> <p><u>RIU Data Sets</u></p> <p>This process will determine the volume and quality of data available across the RIU programme.</p>	<p>Entire team</p>	<p>steering committee will be circulated. Outline of the evaluation process, potential evaluation questions and methodology.</p> <p>16 July Briefing documents finalised and circulated to steering committee.</p> <p>20-22 July Team and Steering Committee in Nairobi.</p> <p>2-3 or 5-6 August (tbc) RIU, SDD, IDL , tango Team meeting in London</p> <p>21 August Draft approach paper circulated to RIU team.</p> <p>3 September Draft approach paper circulated to steering committee</p> <p>16 September Steering committee meeting</p>
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### **Terms of Reference – *the IDL Group***

These TORs are for the Enterprise Development and Organisational Modules of the evaluation.

#### **Objective**

Support impact evaluation of Research Into Use. Specifically to ensure the evaluation effectively addresses issues of enterprise development and institutional/policy impact.

#### **Scope of Work**

##### Overview

The evaluation of the RIU has been divided into three phases. In the first the evaluation team will establish the scope, objectives and methods of the evaluation, resulting in an Approach Paper. The second, or implementation, phase includes surveys and other identified activities that will establish the impact of the project, and lead to the final, reporting phase (see table one for details).

The evaluation will be overseen by a steering committee comprising DFID, other development partners who have a strong interest in the core themes of RIU [likely to include USAID, AusAID, World Bank, EC, and The Gates Foundation], and a member of 3iE (International Initiative for Impact Evaluation). The committee will comment on the design of the evaluation, its focus, and methodology and provide a degree of independent oversight to the evaluation. The IDL consultant(s) will participate in and contribute to Steering Committee meetings where possible.

The Impact Evaluation of RIU aims to provide an independent assessment of RIU contribution to poverty reduction. However, RIU has already been collecting data on lessons learned and impact over a number of years. The process for collecting this data and the research questions that have been explored are outlined in the RIU research workplan (see annex 3). The evaluation coordinator will work closely with the RIU management and the RIU research team to ensure appropriate levels of coordination exist between this evaluation and the research components of the RIU.

The consultant's contribution to the evaluation process will be divided into three phases. These are as follows:

##### Phase One

The consultant(s) will become familiar with the history and trajectory of the RIU Project.

TANGO will produce a draft literature review of evaluations that have had a similar focus and objectives. The IDL consultants should review this paper and offer suggestions on additional evaluations/papers that may strengthen the literature review. Analysis of the literature review should be used to inform the design of the evaluation and selection of evaluation questions.

RIU will produce summary tables outlining theories of change for the programme, and indicators for success for each RIU entity and network will be developed. The consultants should analyse these tables and use them to inform the methodology, and selection of evaluation questions, with particular reference to enterprise development and institutional/policy impact.

TANGO will undertake a review of RIU databases to assess the quality and availability of data to inform the evaluation design. In discussion with SDD and TANGO the IDL

consultants should use the findings of this review in determining the methodology required by the evaluation with particular reference to enterprise development and institutional/policy impact.

A senior member of the IDL consulting team will be expected to participate in meetings with the international Steering Committee that will be established to oversee the evaluation process. This will entail the following: a) contributing to briefing notes; b) participating in meetings; and c) supporting the Evaluation Coordinator make necessary adjustments to the design process.

The key output from this first phase will be an evaluation **Approach Paper** (see below for an outline). The paper will include sections on evaluation background, methodology, scope and sample of RIU projects to be reviewed, and key evaluation questions. The consultants will be expected to provide inputs into three main areas: the methodology, survey design, and evaluation questions with particular reference to enterprise development and institutional/policy impact. The consultants will also be asked to review the paper and provide overall comments.

### Second Phase

This phase will be led by a TANGO International Team Leader. He/she will have overall responsibility for the delivery of the survey (including contracting national survey teams, agreeing processes for managing data analysis and report writing). In addition, it is likely a number of survey teams will have to be established. Each survey team will be led by a member of TANGO International. The IDL group consultants will report to the TANGO International Team Leader.

The precise details of the location, survey design and methodology cannot be determined until the Evaluation Approach Paper has been agreed and finalised.

However, the consultant(s) will undertake the following:

- Design survey modules and methodologies to address evaluation questions agreed in the Approach Paper.
- Design and agree with Team Leaders a process for analyzing data and the format for reporting evidence
- Design training modules and participate in the evaluation training session for the evaluation teams.
- Assist in the selection of national consultant(s) required to support the evaluation process.
- The evaluation process will include consultation with key stakeholders including NGOs, National Government officials, Private sector actors, etc. The consultant(s) will be expected to support this consultation process where agreed
- Support the implementation of the survey. This will include troubleshooting survey problems, ensuring quality control, and assisting Team Leader in addressing logistical issues.
- Assess the quality of data. Where necessary support the collection of new data.
- A senior member of the design team will be asked to participate in briefing to the steering committee and DFID.

The key output from this phase will be an **initial survey report**. The Team Leader for each survey team will be responsible for the delivery of this report. However, the consultants will be responsible as far as feasible for the data obtained from the modules they have designed to generate evidence of key findings, conclusions and recommendations.

### Third Phase

TANGO International is responsible for producing the final evaluation report. The structure of the final report will follow standard evaluation report templates required by DFID Evaluation Department.

The key output from this phase will be the **Final Evaluation Report**. The IDL consultant's contributions to this output are as follows:

The consultants will be responsible for working with the local teams to extract the appropriate data from their modules and using the evidence obtained to write inputs into the relevant sections of the report.

Respond to comments from the Evaluation Team Leader

Respond to comments from DFID and the Steering Committee

Review final drafts of the report

Senior consultants will be required to review the final report and provide comment on its strategic direction and content.

### **Proposed Structure of the Evaluation**

The evaluation will be structured around two core principles.

#### 1) Accountability:

- Has the project delivered on the commitments outlined in its logframe and/or contracts?
- Have the RIU entities/networks implemented the agreed theories of change?

#### 2) Lessons Learned:

- What are the key lessons that can be learned from the RIU implementation process?

The evaluation will explore three levels of RIU implementation. These are as follows:

- a. At household level. This may include questions on the following<sup>1</sup>:
  - Assess how the intervention has impacted on poor households' capacity to access improved agricultural related services?
- b. At an organisational level. These may include questions on the following:
  - How has the RIU intervention impacted on efficiency and effectiveness of the organisations delivering RIU outputs?
  - How much has the RIU experiment demonstrated some form of commercialisation?
- c. At a policy/institutional level. This may include questions on the following:
  - Assess how the RIU has added value to the acceleration of innovation
  - Assess changes that RIU interventions have effected in the business operating/policy environment. What impact will these changes have on innovation?

### **Specific Tasks and timing**

The design of the evaluation has yet to be finalised. The allocation of days may have to be adjusted (upwards or downwards) once final evaluation design has been agreed. A revised estimate of days will be agreed at the successful conclusion of Phase One.

### Phase One (June-September)

Review of literature, summary tables and project documents (4 days)

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<sup>1</sup> Final evaluation questions will be agreed after the on-going assessment of data availability and discussions with the steering committee.

Participation in Steering Committee Meeting on 20-21 July 2010 (Nairobi) (6 days)  
Make contributions to Approach Paper (5 days)  
Tools/ instrument development (10 days)

Phase Two (October to December)

Training on data collection and review M&E system (up to 10 days)  
Support to survey teams in the field & trouble-shooting (up to 15 days)  
Mid-evaluation workshop (up to 3 days)  
Initial analysis of data of relevant modules (up to 10 days)  
Data analysis and report write-up (up to 5 days)

Phase Three (January to March)

Synthesis of the country /case study reports (up to 10 days)  
Drafting final report (up to 5 days)  
Meeting steering committee and DFID (up to 3 days)  
Responding to comments on the report (up to 3 days)

## Terms of Reference for SDD

These TORs are Social Exclusion Modules of the evaluation.

### Objective

To support the impact evaluation of the DFID Research Into Use (RIU) project. Specifically to ensure that the evaluation effectively addresses issues of inclusion and exclusion and other appropriate social issues identified by members of the team or project.

### Scope of Work

#### Phase One

The consultant(s) will become familiar with the history and trajectory of the RIU Project.

TANGO will produce a draft literature review of evaluations that have had a similar focus and objectives. The IDL consultants should review this paper and offer suggestions on additional evaluations/papers that may strengthen the literature review. Analysis of the literature review should be used to inform the design of the evaluation and selection of evaluation questions.

RIU will produce a summary table outlining theories of change for the programme, and indicators for success for each RIU entity and network will be developed. The consultants should analyse these tables and use them to inform the methodology, selection of evaluation questions, with particular reference to enterprise development and institutional/policy impact.

TANGO will undertake a review of RIU databases to assess the quality and availability of data to inform the evaluation design. In discussion with SDD and TANGO the consultants should use the findings of this review in determining the methodology required by the evaluation with particular reference to enterprise development and institutional/policy impact.

A senior member of the IDL consulting team will be expected to participate in meetings with the international Steering Committee that will be established to oversee the evaluation process. This will entail the following: a) contributing to briefing notes; b) participating in meetings; and c) supporting the Evaluation Coordinator make necessary adjustments to the design process.

The key output from this first phase will be an evaluation **Approach Paper** (see below for an outline). The paper will include sections on evaluation background, methodology, and key evaluation questions. The consultants will be expected to provide inputs into three main areas: the methodology, survey design, and evaluation questions with particular reference to enterprise development and institutional/policy impact. The consultants will also be asked to review the paper and provide overall comments.

#### Second Phase

This phase will be led by a TANGO International Team Leader. He/she will have overall responsibility for the delivery of the survey (including contracting national survey teams, agreeing processes for managing data analysis and report writing). In addition, it is likely a number of survey teams will have to be established. Each survey team will be led by a member of TANGO International. SDD consultants will report to the TANGO International Team Leader.

The precise details of the location, survey design and methodology cannot be determined until the Evaluation Approach Paper has been agreed and finalised.

However, the consultant(s) will undertake the following:

- Design survey modules and methodologies to address evaluation questions agreed in the Approach Paper.
- Design and agree with Team Leaders a process for analyzing data and the format for reporting evidence
- Design training modules and participate in the evaluation training session for the evaluation teams.
- Assist in the selection of national consultant(s) required to support the evaluation process.
- The evaluation process will include consultation with key stakeholders including NGOs, National Government officials, Private sector actors, etc. The consultant(s) will be expected to support this consultation process
- Support the implementation of the survey. This will include troubleshooting survey problems, ensuring quality control, and assisting Team Leader in addressing logistical issues.
- Assess the quality of data. Where necessary support the collection of new data.
- A senior member of the design team will be asked to participate in briefing to the steering committee and DFID.

The key output from this phase will be an **initial survey report**. The Team Leader for each survey team will be responsible for the delivery of this report. However, the consultants will be responsible for the data obtained from the modules they have designed to generate evidence of key findings, conclusions and recommendations.

### Third Phase

TANGO International is responsible for producing the final evaluation report. The structure of the final report will follow standard evaluation report templates required by DFID Evaluation Department.

The key output from this phase will be **Final Evaluation Report**. The IDL consultant's contributions to this output are as follows:

The consultants will be responsible for using the evidence obtained from their modules to written inputs into the relevant sections of the report.

Respond to comments on inputs from the Evaluation Team Leader

Respond to comments on inputs from DFID and the Steering Committee

Review final drafts of the report

Senior consultants will be required to review the final report and provide comment on its strategic direction and content.

### **Proposed Structure of the Evaluation**

The evaluation will be structured around two core principles.

#### 1) Accountability:

- Has the project delivered on the commitments outlined its logframe and/or contracts?
- Have the RIU entities/networks implemented the agreed theories of change?

#### 2) Lesson Learned:

• What are the key lessons can be learned from the RIU implementation process?  
The evaluation will explore three levels of RIU implementation. Examples of relevant social issues at each of these levels are as follows:

- d. The household level. This may include questions on the following:<sup>2</sup>
- Assessing the social/economic profiles individuals have been included/excluded from RIU experiments.
  - Assessing the impact of RIU experiments on gender and other social issues within households and communities.
  - Assess how relevant the technologies have been to the needs to the poor households.
- e. The organizational level. This may include questions on the following:
- Assessing shifts in organizational structure and focus (e.g. shifts in core staff capacity –more or less gender advisers) arising as a result of RIU
  - Assessing shifts in social impact (e.g. targeting, operational focus) arising as a result of institutional changes influenced by RIU.
  - Assessing shifts in the impact on governance (e.g. voice and accountability) arising as a result of institutional changes influenced by RIU.
- f. The institutional policy level. This may include questions on the following:
- Assessment of how, or indeed if, RIU interventions have impacted on pro poor growth policies and/or priorities.

The consultant(s) will be expected to work with other members of the team in developing tools and survey materials (both quantitative and qualitative) that will effectively address the final evaluation questions for each of the three layers of project implementation.

The consultant(s) will participate in the management and implementation of survey work required for the evaluation.

The evaluation process will include consultation with key stakeholders including NGOs, National Government officials, Private sector actors, etc. The consultant(s) will be expected to support this consultation process.

The process for drafting the final report will be finalized once the evaluation methodology has been agreed. However, it is anticipated that the consultant(s) will be required to participate in the following:

- a) Contribute to the draft report of case studies.
- b) Contribute to the synthesis report
- c) Contribute to the response to comments
- d) Contribute to the final report.

### **Specific Tasks and timing**

The social impact consultant(s) will provide inputs at each of the Stages as follows:

#### Stage One (June-September)

Literature review (4 days)

Participation in Steering Committee Meeting on 20-21 July 2010 (Nairobi) (6 days)

Tools/ instrument development (10 days)

Make contributions to Approach Paper (5 days)

#### Stage Two (September to December)

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<sup>2</sup> Final evaluation questions will be agreed upon after the on-going assessment of data availability and discussions with the steering committee.

Training on data collection and review M&E system (up to 10 days)  
Survey in the field & trouble-shooting (up to 15 days)  
Mid-evaluation workshop (up to 3 days)  
Initial analysis of data (up to 10 days)  
Data analysis and report write-up (up to 5 days)

Stage Three (January to March)

Synthesis of the country /case study reports (up to 10 days)  
Drafting final report (up to 5 days)  
Meeting steering committee and DFID (up to 3 days)  
Responding to comments on the report (up to 3 days)

SDD should provide a pool of team members who will be allocated to specific tasks. Final agreement on the allocation of staff will be agreed with Evaluation Coordinator.

The actual costs of travel and subsistence and any other associated incidental costs cannot be predicted at this stage. A clearer indication of these will be available after the first phase and contract amendments will be made to cover any changes as and when appropriate.

## **Terms of Reference: Quality of Science Review.**

### **Objective**

Support impact evaluation of Research Into Use. Specifically to review the quality of science that has been used in the Research Into Use Programme

### **Scope of Work**

#### Overview

The overall evaluation of the RIU has been divided into three phases. In the first the evaluation team will establish the scope, objectives and methods of the evaluation, resulting in an Approach Paper. The second, or implementation, phase includes surveys and other identified activities that will establish the impact of the project, and lead to the final, reporting phase (see table one for details).

The evaluation will be overseen by a steering committee comprising DFID, other development partners who have a strong interest in the core themes of RIU [likely to include USAID, AusAID, World Bank, EC, and The Gates Foundation], and a member of 3iE (International Initiative for Impact Evaluation). The committee will comment on the design of the evaluation, its focus, and methodology and provide a degree of independent oversight to the evaluation. The IDL consultant(s) will participate in and contribute to Steering Committee meetings where possible.

The Impact Evaluation of RIU aims to provide an independent assessment of RIU contribution to poverty reduction. However, RIU has already been collecting data on lessons learned and impact over a number of years. The process for collecting this data and the research questions that have been explored are outlined in the RIU research workplan (see annex 3). The evaluation coordinator will work closely with the RIU management and the RIU research team to ensure appropriate levels of coordination exist between this evaluation and the research components of the RIU.

The consultant's contribution to the evaluation process will be divided into three phases. These are as follows:

#### Phase One

The consultant will become familiar with the history and trajectory of the RIU Project. TANGO will produce a draft literature review of evaluations that have had a similar focus and objectives. The consultant should review this paper and offer suggestions on additional evaluations/papers that may strengthen the literature review.

RIU will produce summary tables outlining theories of change for the programme, and indicators for success for each RIU entity and network will be developed. The consultants should analyse these tables and use them to inform the methodology, and selection of evaluation questions, with particular reference to enterprise development and institutional/policy impact.

The consultant will be expected to participate in meetings with the international Steering Committee that will be established to oversee the evaluation process. This will entail the following: a) contributing to briefing notes; b) participating in meetings; and c) supporting the Evaluation Team Leader make necessary adjustments to the design process.

The key output from this first phase will be an evaluation **Approach Paper** (see below for an outline). The paper will include sections on evaluation background, methodology, scope and

sample of RIU projects to be reviewed, and key evaluation questions. The consultants will be expected to provide inputs into three main areas: the methodology, survey design, and evaluation questions with particular reference to enterprise development and institutional/policy impact. The consultants will also be asked to review the paper and provide overall comments.

### Second Phase

The consultant will report to the Evaluation Team Leader.

The precise details of the location, survey design and methodology cannot be determined until the Evaluation Approach Paper has been agreed and finalised. However, the consultant will undertake the following:

Design a mechanism to review the quality of science within RIU including, but not limited to the following issues

- **Strategy and direction:** What is the basic plan that the research project/programme/institution is following in order to reach its intended goals?;
- **Management:** What systems and processes does the project/programme/institution have in place in order to ensure that the overall strategy is carried out and that high-quality policy research is produced (*e.g.* systems of peer/user review, quality assurance and planning cycles)?;
- **Outputs:** What tangible goods and services that a research project/programme/institution produces (*e.g.* working papers, journal articles, policy briefs, web-site material, meetings, events and networks)? and;
- **Outcomes and impacts:** What changes in behaviour, knowledge, policies, capacities and/or practices that the research has contributed to, directly or indirectly (*e.g.* a change in government policy, a change in working practice among NGO staff, a reduction of poverty in a certain area, strengthened livelihoods or strengthened civil society input into policy processes)?.

The key output from this phase will be an **initial survey report**. The consultant will be responsible for producing a draft report outlining the key findings from his work.

### Third Phase

TANGO International is responsible for producing the final evaluation report. The structure of the final report will follow standard evaluation report templates required by DFID Evaluation Department.

The key output from this phase will be the **Final Evaluation Report**. The IDL consultant's contributions to this output are as follows:

The consultants will be responsible for working with the local teams to extract the appropriate data from their modules and using the evidence obtained to write inputs into the relevant sections of the report.

- Respond to comments from the Evaluation Team Leader
- Respond to comments from DFID and the Steering Committee
- Review final drafts of the report

- Senior consultants will be required to review the final report and provide comment on its strategic direction and content.

### **Proposed Structure of the Evaluation**

The evaluation will be structured around two core principles.

#### 1) Accountability:

- Has the project delivered on the commitments outlined in its logframe and/or contracts?
- Have the RIU entities/networks implemented the agreed theories of change?

#### 2) Lessons Learned:

- What are the key lessons that can be learned from the RIU implementation process?

### **Specific Tasks and timing**

The design of the evaluation has yet to be finalised. The allocation of days may have to be adjusted (upwards or downwards) once final evaluation design has been agreed. A revised estimate of days will be agreed at the successful conclusion of Phase One.

#### Phase One (September-October)

Review of literature, summary tables and project documents (2 days)

Make contributions to Approach Paper (2 days)

Tools/ instrument development (6 days)

#### Phase Two (October to December)

Design evaluation and review models. (5 days)

Consultation with Central Research Team (5 days)

Conduct the evaluation (35 days)

Data analysis and report write-up (up to 5 days)

#### Phase Three (January to March)

Drafting final report (up to 15 days)

Meeting steering committee and DFID (up to 5 days)

Responding to comments on the report (up to 5 days)

### **Deliverables.**

The consultant will produce the following:

- A. An evaluation methodology for reviewing the quality of science with RIU
- B. A schedule for the evaluation
- C. An interim report
- D. A draft report
- E. A final report

## Annex 2

# General Method and Approach of the Evaluation

v. 9th May 2011 (John Wyeth)

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### Introduction

The report of which this Annex forms a part, provides an evaluation of the Research Into Use Project funded by the UK Department of International Development. Funding for the evaluation has come from the RIU Project budget but the DFID was the source of those funds, the body that commissioned the evaluation and is its principal client. Furthermore, in order to reinforce the credibility of the independence of the evaluation from RIU influence, a Steering Committee was established of external advisors from DFID, 3IE, The World Bank, USAID and AusAid.

The RIU is a large, complex and geographically dispersed project and the evaluation has been a correspondingly long one, taking place over about a year, with the participation of specialists covering institutions, livelihoods, economics (including agricultural economics) social development and research methodology. Over the period in question there has been some turnover in the members of the team, including the Leader, and the approach has evolved with it.

There have been a number of constants however, particularly in respect of the principal challenges faced.

In particular, it was recognised from the outset that, even with the time and personnel provided, the team was not going to be able to cover all 40 plus activities of the RIU, spread across 14 countries. Neither could it deal in detail with the fundamental changes that have taken place in project leadership and approach. To do that would have required even more resources than those available.

In any case, from the start the Evaluation Team consciously wanted to avoid producing a report that would be exhaustive, going into such detail that the result would not be widely read. Instead it looked for ways of concentrating on the essentials of the Project and trying to identify a relevant theme that would provide the focus for a report that would be both readable and useful.

### The Evaluation Framework

#### *Evaluation Criteria*

The starting point for the approach came from the DAC evaluation criteria of relevance, efficiency, effectiveness, impact and sustainability.

At the same time the Team recognised a need to take account of the structure and content of the Project LogFrame.

The Team was soon made aware that there were serious doubts about LogFrame methodology within Project management. However, Logical Frameworks have a recognised role in evaluations and they form part of the normal approach of DFID. Furthermore, the Team considered that the

LogFrame would, in the minds of the Project designers, describe the essence of what they wanted to see achieved.

One of the initial activities of the evaluation was therefore to construct a table which related the DAC evaluation criteria (in the columns of the table) to the LogFrame outputs established by DFID for the RIU (in its rows).

Questions were then formulated for the evaluation to answer that could be entered into each of the cells of the table. The objective of the questions would be to establish whether each of the DAC criteria had been fulfilled for each of the LogFrame outputs.

This process produced a large number of issues for the evaluation to deal with, even though the LogFrame provided a summarised version of objectives and results expected. It did not provide the single theme that the evaluation Team was looking for. A report dealing with them all would have to spread itself too widely, and the strong advice that came from the Steering Committee continued to support the evaluation aim of concentrating on a single strong "story".

### ***Theory of Change***

In order to do this the Team moved on to develop a "Theory of Change" that would establish the philosophy and assumptions behind the design of the Project and how it would achieve transformation. No theory of change was made explicit at the beginning of the Project, but since the Project *was* trying to achieve transformation, and to gain a better understanding of what causes change, the Team wanted to capture the approach that was implicit both in the LogFrame and in the minds of those responsible for implementation.

It was recognised that the Project was diverse enough to accommodate a variety of theories of change, each relevant to one or more of its different activities. This was particularly true given that part of the Project approach was to try out a variety of mechanisms for putting Research Into Use, each of which was inevitably based on a different philosophy and set of assumptions about the way things work<sup>3</sup>.

Nevertheless, after various theories of change were considered, an overall one was adopted that the Project Management agreed was a fair reflection of what they had been trying to do. It summed up the fundamental philosophy of the Project as follows:

"that new forms of partnership will lead to innovation (which in turn contribute to poverty reduction and economic growth)"

The principal focus of the evaluation therefore came to be whether this underlying theory of change had been shown, through Project activities, to be appropriate. The working theme adopted for the evaluation as a whole, and specifically the field work it undertook, was designed to investigate the two main issues that come from this theory of change, namely:

- 1 the central role of partnerships in the work of the Project and whether the RIU successfully identified, developed and supported innovative partnerships that could deliver technology at scale that responds to the needs of the poor over the long term.

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<sup>3</sup> Many of these issues are discussed in the working paper written for the evaluation and entitled "Impact Evaluation: Method Options & Approach Issues".

- 2 what the effect had been on participating households and what benefits they might have received.

Subsequently an additional element was included to deal with issues around whether the necessary systems had been put into place to achieve the Project objectives, including quality control measures, the development of information systems along with the collection of information and how well it was used. This came to be called the quality of science aspect of the evaluation.

It should be emphasised that the original questions formulated under the DAC criteria were still retained, but they were given this extra focus. The specific themes mentioned were placed in a new table, and the questions were consolidated and re-worded to serve each theme.

It was this table that was called the "Evaluation Framework" and the questions it contained became the main guideline for the team during the fieldwork phase of the evaluation.

These working questions were further categorised into each of the four main specialist areas represented on the evaluation team, namely: policies institutions and processes, social development livelihoods and quality of science.

#### ***Evolution of emphasis during fieldwork***

The theory of change with its two principal and two sub foci as expressed in the Evaluation Framework continued to be the guide for the evaluation throughout its fieldwork. In each of the case studies the methodology used was that established in annex 2a) to this annex, based on the questions of the Evaluation Framework.

When the fieldwork began however, it became increasingly clear that, while the development and implementation of such a number of activities had generated considerable quantities of information, that it was not standardised or systematically collected. In particular, especially after the transition from Phase I to Phase II of the Project, it was confirmed that there was insufficient quantitative baseline information to allow a satisfactory quantitative estimate of the benefits that have come out of the Project.

The second of main themes indicated above was therefore addressed in a much more limited way, mainly through the qualitative household survey (described in Annex 10) and the focus of the evaluation as a whole headed toward an emphasis on the concepts of partnerships and institutional change as well as a sub theme of the social changes that had been generated.

#### ***The "I Framework" / "Innovation Diagnostic Framework"***

Even though a relatively small number of case studies had to be chosen for the fieldwork of the evaluation (as described in the next section), as it progressed 6 (or 7 ???) change elements emerged that apparently needed to be addressed if research was to be transformed into sustainable innovation by practical adopters.

Some of these elements appeared to be "necessary" to success. Others might only be "desirable" depending on subjective analytical criteria established by a development promoter. None are sufficient alone. These elements, explained in more detail in Annex 5, formed a useful and attractive framework of their own and provided the main patterns for the writing up phase.

The theory of change described above continued to be valid, but it was this emerging framework, grounded as it was on empirical observation during the fieldwork, that transformed the focus of the report from having the theory of change as its main theme, to argument based on the I Framework / Innovation Diagnostic Framework.

## Implementation

### ***The Evaluation Case Studies***

The challenges posed for the evaluation by the size, diversity and geographical spread of the RIU have already been mentioned. The RIU was divided into two main functional areas: one that implemented practices of putting research into use, and the other that was to learn from those practices and disseminate them. The evaluation dealt with the latter area mainly through the investigation of the quality of science that has come out of the Project.

The former area, dealing with the practices that were implemented, was approached by the Project by implementing activities based on its experimental models for putting research into use. A large number of these were implemented, especially in Phase I of the Project. The numbers were consolidated during Phase II, particularly amongst the Innovation Platforms where it was decided to concentrate on commodity platforms, rather than those dealing with problem areas that were included in Phase I. Nevertheless, even in Phase II there were more than 40 "experiments" and activities.

It was not practical to study all of these within the time and financial resources provided and a decision was taken to answer the evaluation questions described above based on a field study of case studies drawn from these activities.

The case studies were chosen to ensure representation of the following criteria:

- *the main experimental models / approaches* :  
representatives of each of the three experimental approaches: Asian Challenge Fund, Africa Country Programmes and Best Bets.
- *geographical spread*:  
the experimental models are already geographically concentrated to some extent, but representation from each of the three geographical regions: East Africa, West Africa and Asia, were also included.
- *functional representation*:  
an attempt was made to choose representatives of each of the points at which the value chains were being dealt with: production (including the introduction of new crop varieties), technical innovation, processing and so on.
- *sectoral spread*:  
most of the activities are connected with agriculture in one way or another, but some deal with crops, some specifically with fisheries, and some with minor livestock. An attempt was made to ensure as much representation as possible from each of those.
- *problems being dealt with*:  
varietal introduction pest and disease control,

A spreadsheet table was drawn up which established the status of each of the 43 activities that were identified as active at the time for each of these criteria. The spreadsheet was then sorted multiple times in order to establish the frequency of each of the criteria and adequate

representation. Finally, a purposive choice was made of activities that represented as many of the criteria as possible in order to ensure adequate representation of each.

Ten case studies were chosen, with the intention of carrying out eight in the first instance, and the hope that there would be financial and time resources enough to do the other two. In the event there was not.

Out of these eight, three were chosen for the Household Survey, as described in main text and reported on in detail in Annex 10.

The case studies along with process data concerning the collection of information for each are specified in Table A2-1

**Table A2-1: RIU Evaluation Case Studies**

No	Case study country	Case study activity	Experimental Model	Nature of activity
1	Rwanda	Potato Innovation Platform	Country Prog/IP	Availability of quality seed potatoes improved by: 1. training & encouraging farmers in improved positive / negative selection of seed potatoes from own crops. 2. by supporting effective multiplication, certification and commercial distribution of mini tissues from improved varieties.
2	Rwanda	Cassava Innovation Platform	Country Prog/IP	Availability of new mosaic disease free cassava planting material and crop husbandry improved through use of Farmer Field Schools.
3	Kenya	FIPS	Best Bet	Village based agricultural advisors supporting small farmers with appropriate technologies and appropriately scaled inputs for locally important crops .
4	Nepal	PCI-FORWARD	ICF	High quality seed produced locally and promoted through distribution of samples.
5	Bangladesh	Rat Management	ICF	Effective trapping systems and advice provided for controlling rats in rice fields
6	Sierra Leone	Poultry Innovation Platform	Country Prog/IP	Poultry feed expansion supported through inputs for maize and start up assistance for mills and chick production.
7	Nigeria	Aquaculture Innovation Platform	Country Prog/IP	Support fish farming value chain by facilitating access to quality brood stock, locally produced feed, production and post harvest technologies, integration with vegetable farming and linkages throughout the value chain.
8	Kenya	Shujaaz	Best Bet	Youth targeted printed and radio mass media used to disseminate agricultural and other advice..

### **Field Procedure**

An Information Matrix was then developed as a format to be filled in during the course of each case study. The left hand column of the Matrix contained the questions from the Evaluation Framework that the evaluation had to answer. The main (right hand) column received the material that would be used to answer those questions, as collected in the course of the field interviews by the team.

A standard procedure was worked out for the case study fieldwork (reproduced in Annex 2a) and circulated to the staff in charge of each activity as part of a fieldwork manual so they would feel informed about what the Evaluation Team would be doing.

The manual contained the Evaluation Framework and showed how it was used in the Information Matrix. It was emphasised that questions in the Framework and the Matrix were for the Evaluation Team, not the activity staff, to answer, and the various tools, mainly based on semi structured interviews, that the team would be using to answer the questions were described and the Household Survey Questionnaire was also included.

***Report writing.***

The final stage of the evaluation was the report writing. Each of the specialist areas prepared reports using the material in the case study matrices based on the questions in the evaluation framework and now organised according to the "I framework". A separate report was also prepared on the household survey. These all appear as annexes in this report which, in turn, provide the material for the main text and conclusions of the report.

# Research Into Use - Impact Evaluation.

## Annex 2a)

### Standard Approach for Fieldwork Case Studies

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#### Introduction and Outline of Approach to Case Studies

November 2010 to March 2011

### Introduction

This Evaluation has been designed to provide the answers to a series of questions about the impact of the RIU for presentation to DFID as the source of RIU funding and the Evaluation's principal client.

The questions are organised around two main themes relating to RIU activities. They are:

- The way in which the RIU has established, supported and learned from partnerships that help the poor to benefit from innovations in the agricultural sector.
- The extent to which RIU activities have been able to encourage households to adopt and benefit from such innovations.

The Evaluation is also looking at the quality of the science the programme has used to learn from its experiences. This includes seeing how the RIU has translated its learning into practical guidelines for encouraging innovation in the sector.

### Method

An Evaluation Framework<sup>4</sup> has been set up which puts the specific questions that the Evaluation Team will be answering under each of the themes, using evidence it gathers from individual RIU activities.

There is sizeable number of these activities, and they are geographically dispersed: around 40 of them are still active to some extent and they operate in 14 countries. It is not practical for the Evaluation Team to work with all of them and it has therefore used a number of criteria to select a representative group to study. Eight to ten have been chosen as case studies and members of the Evaluation Team are visiting each of these in turn to collect the evidence needed.

It is emphasised that the Team will not be evaluating the case studies themselves, but will be using the evidence collected from them to evaluate the RIU programme as a whole and provide answers to the questions in the Framework.

### Evaluation Procedure

The Evaluation Team will answer its questions in the Framework using the following perspectives<sup>5</sup>:

- i. The ways in which policies, institutions and processes (PIPS) have been approached and dealt with under each of the themes.
- ii. The social issues that have been addressed under each of the themes.
- iii. The impact that the programme has been able to have on the poor in the short period of its effective operations and what potential further impact it may have.
- iv. The quality of science that has been used in these activities.

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<sup>4</sup> See attached <Evaluation framework linked to Report-101109.doc>

<sup>5</sup> The colours in the evaluation Framework matrix provide a general indication of which of these questions will be dealt with under each of the perspectives.

The questions in the Evaluation Framework are not in a form that can be put very easily at the activity level so the Team has also developed a series of more practical questions that it can ask to different types of respondent during each case study. It will use the information it gathers in this way to provide answers to the questions that it has to answer.

The activities carried out by the RIU are very varied so some flexibility in the approach is allowed for in individual cases. In general, however, the Team is using the following procedure for the case studies:

### **1. Stakeholder Analysis**

The activities of the Team in each case study will be planned on the basis of an initial stakeholder analysis. The purpose of this will be:

- a. To identify the main actors within the activity and the relationships amongst them, and between them and the RIU activity.
- b. To identify the issues that have arisen as a result of the day to day interaction between the actors.

The results of the stakeholder analysis will be used by the Team, in consultation with the leader of the activity, to decide who should be interviewed, what issues should be discussed and where evidence should be looked for .

It is hoped that an initial list of stakeholders, along with a description of the relationships amongst them, can be provided by the leader of each activity working with his / her colleagues before the Evaluation Team arrives on site. A suggested format for this listing, including a more detailed explanation of what is needed, has been provided<sup>6</sup>.

One of the first activities of the Team when it arrives on site will be to work through this list along with local staff and in order to make sure it has a proper understanding of the stakeholders and how they work with the activity.

### **2. Identification of necessary visits and planning**

The result of the stakeholder analysis will allow the Team to come up with a list of people it wishes to speak to, the documents it wishes to see and the issues it wishes to discuss.

The Evaluation Team will then work with the local team to make appointments and travel plans, including dealing with transport and other logistical issues, that will allow this work to take place.

### **3. Field work interviews**

Once these plans have been made the Team will begin its field work programme and continue through the lists of interviews, documents and discussions until it has finished.

#### **3a) Household Survey**

In the case of three of the case studies a further specific series of interviews will be held with households. This will be directed at understanding the household view of the activities, their adoption of the innovations being offered and what kind of effects they are having, or can be expected to have in the future, on the household.

A sample questionnaire is attached<sup>7</sup>. The local team will be asked to help identify 2 local interviewers to help with this task and terms of reference for them are attached<sup>8</sup>

### **4. Pre-departure feedback**

It has been mentioned above that the primary focus of the evaluation is the RIU as a whole rather than the activities it is visiting. It is therefore not making specific evaluations of those activities, and no reports will be prepared about the individual case studies.

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<sup>6</sup> See attached: < Stakeholder inventory and analysis for Impact Evaluation.docx >

<sup>7</sup> <HHQuestionnaire-HH-101120.doc >).

<sup>8</sup> <Recruitment of Enumerators For RIU HH Survey.doc >).

Nevertheless, if the case study activity is interested, the Evaluation Team will end their field activities by giving the local team feedback about the impression it has been getting and some of the conclusions it had drawn as a result of its discussions about the activity.

## Duration of field work

An indicative period of ten days has been allowed for the field work of each case study. There may be variations from this norm depending on local conditions, but this has been found to be about the right amount of time to do the work planned.

## Indicative Initial Schedule

Based on the above overview the following provides a general outline of the sequence of work expected for each of the case studies.

Activity	Task	Responsible actors
1	Advice of dates and background material to local team	Evaluation team
2	Stakeholder inventory to be completed and returned to the Team via the RIU main office.	Local team leader with staff
<b>After arrival of Evaluation Team</b>		
1	Introduction and explanation of <ul style="list-style-type: none"> <li>▸ process of the evaluation</li> <li>▸ explanation of evaluation framework questions</li> </ul> Overview of the local activity to be provided by the local team.	Local staff Evaluation team
2	Stakeholder analysis with experiment / activity principal(s) (using initial list provided by activity). <ul style="list-style-type: none"> <li>▸ arrange into relationships,</li> <li>▸ importance of each actor identified</li> <li>▸ the influence and importance of each actor discussed.</li> </ul>	Local staff Evaluation team
3	Identify necessary visits from stakeholder analysis and schedule and planning of visits. Checklist of issues to settle to include: <ul style="list-style-type: none"> <li>• Contacting and making appointments with interviewees</li> <li>• Channels of communication between Evaluation and Local Teams to be established.</li> <li>• Identification of any materials or equipment needed (if any).</li> <li>• Exchange of phone numbers and other contacts</li> <li>• Transport and travel plans</li> <li>• Identification of translators where necessary</li> <li>• Finalisation of arrangement for HH survey where applicable.</li> </ul>	Evaluation Team with assistance from local team
4	Initial interviews with Local Team <ul style="list-style-type: none"> <li>▸ discussion of innovations</li> <li>▸ discussion of HH impact</li> </ul>	Local staff Evaluation team members
5	Stakeholder interviews & (HH survey)	Evaluation team members with individual stakeholders at National Regional and Field levels
6	Feed back from Evaluation Team to Local Team	Local staff. Evaluation team

## Annex 3

# A Beginner's Interpretation of the RIU Project

John Wyeth - Rev: March 2011

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NB

- Emphasise importance and strength of private sector vision in "Phase II".

## 1. INTRODUCTION

The Research into Use project is large, dispersed and complicated, and it has changed over time. This annex offers some basic information intended to guide those who are not familiar with it.

The coverage is not intended to be systematic or comprehensive. It only includes issues that were found to be confusing or interesting in some way during the experience of a single neophyte. Some of the content will seem trivial and insignificant for those already in the know; and some may be coloured by interpretation and open to debate.

Above all it will be clear that the views expressed are personal and certainly do not reflect those of the evaluation team or anyone else on it.

## 2. ORGANISATION AND OBJECTIVES OF THE PROJECT

### *i) Location*

The RIU Project is remarkably dispersed, geographically. The management, which came under NR International until the end of 2010 but has now passed to an independent company within the University of Edinburgh, is based in the UK but includes supervisory, research and support personnel that have, at different times, been based elsewhere in Europe as well as in Asia and Africa.

The Project implements activities (of various types) in 14 countries of Africa and Asia as follows:

- The 6 African country programmes: Tanzania, Rwanda, Malawi, Zambia, Sierra Leone and Nigeria.
- 7 Best Bets that have operations in 4 African countries (Tanzania, Kenya, Uganda and Ghana), only one of which also has a country programme. Some of the Asian programme projects are also now included under the Best Bets umbrella.
- An Asian programme originally organised as an Innovation Challenge Fund (but now including "Best Bets") with main operations in India, Bangladesh and Nepal, but associated activities that have taken place in Vietnam and Cambodia.

### *ii) The RIU Research Framework*

The RIU is a research project because it is experimenting with ways of putting research into use. It has a "research framework" that is organised into two broad categories (or "Components" - although that word is also used in another way - see below) of activity:

1. The first Component implements the "experiments", which include a variety of activities working with different ways of putting research into use.

The exact meaning of "experiment" in the context of the RIU is discussed below. At this point a distinction is established between the research on how to get research into use on the one hand, and the underlying agricultural research that is being put into use on the other.

In a sense all of the activities are research experiments because they are all nominally examples of several (3 to 5) different ways (also confusingly sometimes referred to as "components") of putting research into use as follows:

The first three are:

- ▶ The African Country Programmes
- ▶ The Best Bets
- ▶ The Asian Challenge Fund projects

Each of these contain a variety of individual "experiments" that are trying out different ways of carrying them out. The content of each is mentioned in the next section.

There are two other parts of the Project that could also be called "experiments" in the sense being used here. They are:

- ▶ I4D Investment For Development.  
This was a 4th group of experiments (or a 4th experiment, depending on the definition of experiment that you want to use (see below)) that did not lead to substantive output, but did provide the intellectual background to the subsequent development of the Best Bets (*is this a fair thing to say?*).
- ▶ Communications.  
This component is responsible for ensuring communication takes place effectively within all the disparate sections of the Project.

Amongst other things, however, it is also responsible for disseminating the work of the RIU to the wider world, and by doing that it is also showing the world how to get research into use and its effectiveness at that task could be investigated on those merits. It does this by maintaining an effective website and organising events that both coordinate and publicise the work of the project.

Not all of the activities are putting original agricultural research into use. In practice they vary widely in the way they are related to research and some are now simply trying to improve the way things are done. They are all supposed to be "innovating", however, even if the technologies

being innovated aren't always brand new and may already be in use elsewhere.

For the sake of convenience these 3 to 5 groups of activities will be referred to as "experimental models" to distinguish them from the individual experiments contained in each (although it should be noted that the use of the word "model" in this context is controversial).

2. The second Component of the Project comprises the learning work being carried out by the RIU itself.

Under Phase I of the Project (defined below) this was embodied under the MIL (Monitoring, Impact and Learning) Component whilst presently, in Phase II, it comes under the Central Research Team (CRT).

The objective of the work under both Phases has been to learn lessons from the experience gained from the experiments. With this experience it combines more general theoretical and practical knowledge from other sources about ways in which research is put into use and issues surrounding the problem of encouraging "innovation" in agriculture.

Further details of the research framework are discussed below.

**iii) Note on the RIU as a "Research Project"**

The RIU began as a means of putting RNRRS (also known in the ranks of RIU as "The Rhinoceros") output - expensively produced but much of which is still sitting unproductively on dusty shelves - into practice<sup>9</sup>.

The first phase of the RIU was criticised by the Mid Term Reviewers<sup>10</sup> for concentrating too much on branding at the expense of substance and (though not explicitly) for:

- i. spending too much time wondering HOW to do its work and not enough time doing it
- ii. becoming too much of a development project: i.e. simply trying to convert the Rhinoceros output into productive activity and insufficient researching of different ways of putting research into use.

The Mid Term Review (MTR) therefore emphasised that the Project should not simply be putting output from The Rhinoceros (and elsewhere) into use, but that it should also be learning lessons from the way in which the research from all sources is put into use. It reiterated that the RIU is primarily a research

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<sup>9</sup> There has always been room in the RUI for putting into use research from outside the RNRRS, but the intention of the Project Memorandum is a focus on the RNRRS. See DFID 2006 para 1.2 and the whole tenor of "Programme Details".

<sup>10</sup> Barr et al Jan 2009

project because, even though it is expected to have a development impact, it was designed around experimental models for converting research into innovation so that there could be learning about them. In this way even if the development impact is minimal, the RIU would be able to learn lessons.

**iv) Project Phases**

The MTR was finalised at the end of January 2009. It led to a major re-organisation of the Project and a new management. The first act of the new management was to commission a Technical Review to guide the direction in which the RIU should now move. A business plan incorporating these changes was approved by DFID in September 2009.

Throughout these notes "Phase I" refers to the activities of the project from its inception up to the finalisation of the MTR in January 2009 whilst Phase II refers to activities from the time the new management took over.

It is important to note that, although the MTR was published in January 2009, implementation of Phase II field activities only began with the approval of the business plan in September of that year. This means that, as of the date of the present report, the implementation period of a good deal of Phase II has only been a year and a half. For agriculturally based activities this is a very short period.

There is room for interpretation on how the two Phases of the RIU differ, but two important ones that can be identified have been:

- i. the reduction in the number of, and greater focus of RIU activities and
- ii. a more explicit emphasis on the importance the private sector as key in unlocking the potential for growth and encouraging innovation that will be sustainable.

It is also important to note that different Project activities (defined below) were affected in different ways by the re-organisation.

The Best Bets model was only introduced in Phase II and as a result has had least time to make an impression.

The country programmes existed in both Phases but were run in different ways by the respective managements of Phases I & II. Important lessons were learned in Phase I but the staff of most country programmes generally regard their field activity as only having any real substance since September 2009, even though much background work was done before that.

The Asia programme was least affected by the re-organisation since it had been set up through a series of contracts with implementing agencies that continued to be honoured in Phase II.

**v) The Experiments**

The RIU has around 40 extant activities, generally referred to as "experiments" in Phase II<sup>11</sup>. In addition some have ended naturally whilst others were stopped at the end of the Phase I because they were wasting money and time.

The "experiments" are grouped into the following ways of putting research in to use (the "experimental models") that have already been mentioned. They are:

- 1 The 6 African Country Programmes: implementing a broadly similar methodology called an "Innovation Platform" (described below). There are about 19 Innovation Platforms (this is also a slightly fuzzy<sup>12</sup> and constantly changing number but it has been pared down from 40 odd in Phase I), although some of these were not conceived as Innovation Platforms and there are many variations in how they are implemented.
- 2 The Best Bets programme - which provides starter funds on a competitive basis for individual small private sector entrepreneurs with potentially productive new ideas (that might be research output or un/under used technologies). The necessary criteria to compete for funds under this programme are that they are potentially profitable but also have social and development implications, and that the entrepreneurs lack the resources to invest.
- 3 The Asia Challenge Fund  
RIU activities are concentrated in 3 Asian countries where local organisations are implementing research, mainly output from the RNRRS, for the benefit of the poor. These are a varied set of projects and also include lower scale activities in two other countries.
- 4 The I4D  
The Innovation for Development fund was intended to provide finance for young entrepreneurs seeking to establish small and medium agribusiness enterprises arising from research output. It has apparently been shelved for the moment, although some ideas from it are apparent in the Best Bets, and it will not be discussed further in these notes.

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<sup>11</sup> The number identified from Andy Frost's list distributed on 02-Aug-10 was 43. ( Annex 1 in this report). Actually, you will only be able to count 41 in his list, but I have divided the PCI activities into their three implementation identities and specified them separately in the Annex tables because in practice they operate as separate projects in separate countries. On the other hand, some activities have been ended since then. So the number 40 is approximate, changing and only intended to provide an order of magnitude.

<sup>12</sup> For example: in Sierra Leone is there just one platform (PAID), or two (Poultry Feed and Solar Drying) or three (PAID, Poultry Feed and Drying)?

### 3. SOME WORDS FROM THE PROJECT

Exposure to any project or organisation involves an initial period of confusion about the corporate jargon. Normally information becomes quickly internalised however, and newcomers forget that they ever had a problem, becoming as unaware as their already brainwashed colleagues that they are using jargon at all.

In many instances the jargon culprits are dominated by acronyms. The RIU has its share of these, but more important in the RIU is the (sometimes apparently unconsciously) specialised meaning assigned to a few key words and phrases. A few that have perplexed me (and in some cases continue to do so) as follows:

**i) *What is an "Experiment"?***

The word "experiment" is frequently used to refer to the activities of the RIU. I am not aware of any formal definition in the Project of what an "experiment" consists of but it describes an activity which is testing a means by which some piece of research, or new approach or new idea (an innovation), is being put into use.

Each of the 40 or so presently listed activities of the RIU can be regarded as an "experiment" because each one is putatively trying out a new way of putting research into use.

On the other hand each of the 3 to 5 groups of activities can also be regarded as "an experiment" in the sense that each contains activity experiments that have a broadly similar approach (though there are variations within each).

I have already mentioned that in this annex I refer to the individual activities as experiments and the groupings of activities as "experimental models". (There are exceptions. It is difficult to see some of the Asia activities as experiments and sometimes they are referred to as "projects", although it needs to be borne in mind that the RIU as a whole is also usually referred to as "the Project".)

**ii) *What is a "Component"?***

There are at least two uses for the word "Component" in the RIU.

The first refers to the three (to five) different groups of ways of putting research into use (Country Programmes, Best Bets, Asia Programme I4D and Communications). In this sense "component" is a simile for "experimental model" as defined above.

The second refers to the distinction between first (experience gathering) component of the project, that encompasses the experimental models, and the second, (lesson learning) component embodied by the CRT.

So, whilst the words "experiment" and "component" may have official definitions, *in practice*:

"experiments" can refer either to the individual activities OR to the 3/5 groups of activities described above.

And

"components" can refer to the two main parts of the project OR to the 3/5 groups of activities.

### **iii) What is an "Innovation System" ?**

The literature about systems approaches in general and innovations systems in particular is dominated by abstract thinking and arcane explanation.

Nevertheless, it is important to get a grasp of what it means because the reference to innovation systems has been present in the RIU since the beginning. In fact the main research hypothesis of Phase I was that:

“an innovation systems approach will prove more effective than linear approaches at getting research outputs into use for the benefit of the poor”.<sup>13</sup>

The definitions of both "linear approaches and "innovation systems" are difficult to pin down for normal people. In many documents characteristics of an innovation system are discussed without a definition ever being offered. So we are told that "The systems perspective highlights the importance of networking, interactive learning and collaboration among multiple actors. It provides an analytical framework inclusive of the diversity of agents that generate assimilate and exchange . . . ." <sup>14</sup> but a definition of what it is that offers all these things is nowhere to be found.

Similarly the phrase "Linear Approach" to innovation is generally used (pejoratively) as the opposite of a systems approach but still without a clear definition.

Definitions do exist however, especially in World Bank literature. One that appears in the RIU documentation is as follows :

" An innovation system can be defined as networks of organizations or actors, together with the institutions and policies that affect their innovative behaviour and performance, bring new products, new processes and new forms of organization into economic use. As an evolutionary model, the focus is on interaction between actors and their

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<sup>13</sup> Barr et al Jan 2009 p.5

<sup>14</sup> Kraemer (nd) p.2. This paper, in common with others, has considerable discussion about the characteristics of Innovations systems contrasted with "linear approaches, but always assume the reader knows what these terms mean and so do not define them.

embeddedness in an institutional and policy context that influences their innovative behaviour and performance"<sup>15</sup>

As familiarity with these words is gained they do become comprehensible, but the paragraph is quite a mouthful for anyone not used to academic speech patterns.

The central element of an innovation system seems to be that it covers the full network of actors and stakeholders concerned with introducing a new idea, new technology or new solution to a problem.

The key to understanding it is realising that a conventional approach is regarded as "linear". A distinction is made between an "innovation system" and a "linear" system, which takes account only of a one way flow of information - from the researcher who has done the testing, to an extensionist (for example) who disseminates the new technology to contact farmers and thence to the wider population of farmers - conceptually all in a straight line: hence "linear".

Even where researchers consult with farmers, even (it seems) if they do it in an interactive or "participative" fashion, the analysis of the system is regarded as linear if only these actors are considered, and the research information can ultimately be regarded as flowing from the researcher to the farmer.

The main limitation identified of "linear systems" is described as follows: "Conventional economic models that viewed innovation as a linear process driven by the supply of R&D . ." had " limited explanatory power and lack of guidance for policy making " (Hall et al 2006 p. 12)

Introducing the idea of a system opens up and considerably complicates the understanding of a successful process because it draws into consideration all the other actors and all the information flows and interactions that occur whenever innovations start to become part of general practice. It analyses the role the actors play and how they influence the success, or otherwise, of whatever is being innovated, introduced or changed.

It is also a principle of this way of thinking that research **only** "leads to innovation" (i.e. research is only put into use) when it is integrated into this whole complex network in the proper (effective) way. Only then can the research become part of the conventional practice and be widely implemented as part of the value chain.

Although the explicit emphasis on "innovation systems" in the second Phase is lighter<sup>16</sup>, the idea has still been important to the Phase II Research Framework,

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<sup>15</sup> Hall et al (2006) p.12 and Hall et al (15-Jul-10) p.10 which modifies the rather simpler definition that appears in several places in World Bank (2006) p. xiv p. 6/7, p.18 and even on the back cover of the edition I have (!):

even though more recently there seems to be suggestions that it should be abandoned altogether<sup>17</sup>. Despite the ebb and flow of argument on this issue, however, the idea persists that finding improved ways of doing things<sup>18</sup> is not enough. For improvements to be "put into use" and lead to widespread innovation, there needs to be an associated facilitating environment.

This includes such things as entrepreneurial and business expertise, funding facilities, communications mechanisms, ways of modifying existing procedures and of dealing with the vested interests that would lose out as a result of the new technology and the importance of disturbing the system in ultimately constructive ways<sup>19</sup>.

**iv) What is an "Innovation Platform"?**

Although I have not yet found an official definition, the concept of "Innovation Platform" is easier to explain. This is just as well since it forms the main modus operandi of the African Country Programmes in that it describes the RIU method being "tested" or "experimented with" by the African Country Programmes.

One possible definition of Innovation Platforms, which includes implicit hypotheses about how they work<sup>20</sup> is:

A network of actors working in a given value chain or problem area, who interact within that value chain or problem area.

Each of the actors has a personal objective but when working together they achieve a common objective that can be evaluated in terms of problem solving, profitability or improved organisation. The more comprehensive the membership from the value chain or problem area the more effective will the IP be in problem identification and solving.

The essential element of this approach is that it is a discussion and action forum surrounding the production, marketing or anything else in a (commodity) value chain.

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<sup>16</sup> Hall et al (15-Jul-10). In fact the latest fashion in the CRT seems to be to avoid the use of the phrase "innovation system" altogether. I have even heard it said that "there is no such thing as an innovation systems approach". . . .

<sup>17</sup> Utiang's paper?

<sup>18</sup> and this could be by research, by spreading existing ideas, by developing new technologies or by changing the way existing technologies are used. The view that innovation can involve many things other than research appears to have led to a reduction in the status of research as a part of innovation.

<sup>19</sup> Note that there is nothing new in these ideas. The latter part of this argument is very similar to the descriptions of paradigm shifts described by Thomas Kuhn in *The Structure of Scientific Revolutions* 40-50 years ago

<sup>20</sup> This is not in any way an official definition. It describes my understanding and is therefore vulnerable to critique by an expert. Special thanks to Augustin Mutijima for his clarity of thought and lucid discussion on this (but no blame to him for any remaining lack of clarity).

Again it is worth emphasising the use of the word "innovation" in this definition. It does not always refer to putting in place a particular piece of research. It may also simply be a way of introducing (innovating) new solutions to problems, whether this involves new technology and / or science, or not.

**v) 'Commodity', 'Problem' and other types of Innovation Platform**

Most of the Innovation Platforms in the Country Programmes are set up around the value chain of a commodity i.e. they are "commodity based" Innovation Platforms.

In these cases the Platform is designed to get all the actors or stakeholders, that have any interest in becoming involved, together to provide a continuing discussion, problem and solution identifying forum for a particular agricultural commodity.

At present most of the country Innovation Platforms concentrate on only one, two, or only a few, particular problems within the value chain. Some of them have to do with production, others with marketing, for example. However, it is important to note that the existence of the IP is not tied to that problem. It is tied to the commodity. This means that it can continue to exist beyond the solution of the problem it is looking at in any one moment<sup>21</sup>. Once that solution is found and implemented, or even concurrently with that process taking place, the IP can identify new problems and use its resources to solve them.

Conceptually it is not necessary for an Innovation Platform to be tied to a commodity value chain. It could be set up to deal with some other issue, even one as broad as "remoteness and isolation" or "knowledge and information management". This indeed was tried in the first Phase of the Project, but it turns out to be not so easy to convince stakeholders about the value of setting up an IP around more abstract issues, especially since the variety of problems that might be identified can become very diverse, each one opening up a whole new set of stakeholders, and making it more difficult to keep the original focus of the platform.

In Phase I Innovation Platforms were organised around different themes: commodities, natural resource management, advocacy, communications etc.<sup>22</sup> For the reason noted, however, most of the surviving platforms are commodity based, although the ways in which they have been implemented and the extent to which they have been formalised, varies considerably amongst the Country Programmes. In one unusual incarnation of the Innovation Platform, it has been established as a body with broad responsibility to identify the need for Innovation Platforms in more specific areas.

<sup>21</sup> Although the CRT is keen to argue that there is no intrinsic reason why IPs should be sustainable.

<sup>22</sup> RIU (Apr 2007) Table 1 p.2.6 et seq, illustrates the sort of variety there can be.

**vi) *The relationship of the Innovation Platform to the Innovation system***

The idea of the innovation system inspired the idea of the Innovations Platform: The "system" includes everyone in the context who needs to work together to get research into use. The "Platform" gets all those people together to identify and solve problems anywhere along the process, or the "supply chain"

**4. THE "EXPERIMENTAL MODELS"**

It has been pointed out that there are three main experimental models, with a fourth that has not become active and a fifth that might only peripherally regarded as an experiment. They are as follows.

**i) *The African Country Programmes***

Country programmes, establishing and implementing Innovation Platforms, have been set up in six countries. The explicit aim has been to strengthen commodity chains and their characteristics are as follows.

The country teams:

- Each is run by a country team comprising nationals from the country involved.
- The team is always headed by a Country Coordinator, with other staff, both professional and office. Usually there are from one to three Programme or Project Officers with responsibilities established by the CC. In one case Project was implemented for some time with only one person (the Country Coordinator) on the team.

The country "Fund Managers"

- In each of the countries a Fund Manager was chosen to deal with the finances of the project. Country team staff were then hired to work with the project. Administratively the country team, through the Country Coordinator, is responsible to the Deputy Director. On professional and technical issues, including Annual and Quarterly Reports, the Country Coordinators report to the CRT deputy who is responsible for their regions.
- The Fund Manager is usually a consulting firm that is already closely involved in the rural development sector in one way or another.
- The relationship between the team and the Fund manager varies quite a lot from country to country. In one case the Fund Manager is a company owned by the Country Coordinator who therefore is therefore able to operate without problems.
- In a couple of cases the relationship seems to be less easy going.
  - In one the Country Coordinator became unhappy that the Fund Manager began to look upon RIU as a department within itself, and ended up moving office to a separate building in order to create some space between them. This has improved matters but there

- continues to be some tension over the need to deal with the company bureaucracy on financial issues.
- in another case the RIU continues to work in the same offices as the Fund Manager, and relationships appear to be satisfactory but the lack of independence and the constant need to apply to the Fund Manager all the time for money, the use of cars and so on still makes life harder.
  - In other countries the relationship is easier:
    - In one the RIU office is in the same building as that of the Fund Manager and the relationship is apparently and easy and symbiotic one.
    - In Sierra Leone the Programme has offices in the Ministry of Agriculture, reflecting the close association of the Project with the government there as well as an office in the Fund Manager's building. The Country Programme staff is also distributed between the two offices, with some members having responsibilities with other Fund Manager activities.
    - In the final case the Programme has offices both in the country host institution, which in this case is a government umbrella research agency, and in his Fund Manager's office.

#### Country transport arrangements

- It should be noted that the policy of RIU has been NOT to purchase vehicles. Each country has funds for transport, but they have to be used to hire vehicles, which are often the property of the Fund Manager.

#### Organisation of country work

- The way RIU was set up in each country was through an initial series of consultations during which the concept of the RIU was disseminated and an organising body, usually called the NIC, was set up.
- The NIC has evolved in different ways in different countries, as described in the country reports.

#### **ii) *The Best Bets Programme***

The Best Bets programme supports supporting high potential new technologies that are competitive, but limited in scale.

Some very interesting projects have been identified in this way but one of the most noticeable characteristics of this programme is that it does not seem even to try to have any sustainable system behind it. In the African cases the funding was provided competitively and it was set up in a way that will always require a paternal sponsor.

#### **iii) *Asia Challenge Fund Project***

The Asia Challenge fund was also established competitively but the source inspiration for the activities was more explicitly towards organisations willing

to take forward particular aspects of RNRRS work. There is considerable variety in these projects, but as an experimental model it does not at first glance seem to have much coherence.

**iv) *Communications***

The communications responsibilities appears to work effectively but under the definitions established at the beginning of these notes it is not clear whether it should be regarded as a 3rd Component or as another Experimental Model. It seems to have characteristics of both.

## Acronyms

CA	Country Assessment
CAADP	Comprehensive African Agriculture Development Programme
CC	Country Coordinator
CRT	Central Research Team (Phase II)
ICF	Innovation Challenge Fund
IOD	Institutional Organisation Development
IAT	Impact Evaluation Team in Phase II (i.e. the one headed by TR)
IS	Innovations System
MDGs	Millennium Development Goals
MIL	Monitoring, Impact and Learning
MTR	Mid-Term Review
NIC	National Innovation Coalition
NMLC	National Monitoring and Learning Coordinator (Country programme Monitoring officers under Phase I
NRIL	NR International Ltd
OVI	Objectively Verifiable Indicator
PAID	Partnership for Agricultural Innovation and Development
PAM	Performance Accountability Matrix
PARC	Performance Assessment Resource Centre
PPP	Public-Private Partnership
PSA	Public Service Agreement with the DFID See inception report Sn.2.3
r.i.u.	research into use - the approach
RIU (P)	Research Into Use (Programme) - the Programme / Project
RNRRS	Renewable Natural Resources Research Strategy - The "Rhinoceros"
SSC	Statistical Services Centre at the University of Reading

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## Annex 4.

### Conceptual and Theoretical Issues

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Dermot Shields

#### A4.1 Introduction<sup>23</sup>

When the Review described in the main report began, the team undertaking it worked from a theoretical understanding of RIU objectives and methods that it derived both from the guidelines provided for the programme by DFID and interpretations of what was required provided by the programme itself. The conceptual understanding of the Review team evolved as it became more familiar with the approach being taken and how the activities being implemented worked together to reach the objectives.

The theoretical underpinning of the RIU was also the focus of study within the programme's own Central Research Team, the formal role of which was to systematise the dynamics of putting research into use.

This Annex presents and discusses the Review's interpretation of the theoretical and conceptual issues behind the programme, as well as how they relate to models and theoretical constructs emanating both from within the programme and from outside it.

#### A4.2 Programme logic and the RIU theory of change

The rationale or (implicit) theory of change underlying the programme can be partly constructed from the assumptions provided in the logical framework provided above in Appendix 1. The development hypothesis linking purpose and goal, which is effectively the theory of change, is put provided as:

*Institutional arrangements are the limiting factor in preventing and excluding poor farmers moving to more efficient production paths. (This will be monitored and tracked.)*

From its start the RIU argued against the traditional 'linear' approach to innovation through extension. Instead it built on an 'institutional' understanding of getting research into use that sought to establish platforms or coalitions of stakeholders which, in turn, would develop trust between actors, improve both non-market and market coordination and provide the context and incentives conducive to the uptake of new technologies and innovation.

Institutional arrangements here refer to the organisation and capacity of a system to deliver results. It includes the structures and functions of the system and the relationship between them as well as context in which it operates. In practice, each of the programme modalities had a different starting point and a different focus in addressing institutional arrangements.

- The ACPs focused (a) on convening platforms and bringing different actors within specific policy chains together and (b) on establishing National Innovation Committees (NICs).

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<sup>23</sup> Note that this chapter was originally in the main body of the report as chapter 4 but was removed at the request of the Steering Committee and placed in this annex by the editor of the final report, who also wrote the Introductory paragraphs.

- The ABBs focused on specific agencies with commercial potential to promote a particular commodity/technology, within a given set of institutional arrangements.
- The AICF projects, which evolved out of the previous research programmes and were maintained from the first phase, tended to be focused on bringing demand and supply together.

Despite these different starting points and approaches, most of the activities were engaged in changing, developing or supporting institutional arrangements. However, many activities also provided relatively small subsidies which changed the incentives for key actors operating within the commodity chain. Without these subsidies, it is questionable if change would have been noticed or sustained.

In addition to this overarching emphasis on institutional arrangements, during the second Phase especially, programme implementation increasingly focused on one particular aspect of the institutional arrangements, namely, commercialisation and the promotion of entrepreneurship as a driver of sustainable innovation. As a result, success for central management became the realisation of a number of successful commercial projects/enterprises by the end of the programme. The Review team felt that this goal is likely to be achieved, mainly through the focused support to a limited number of projects arrived at through the process of careful “culling” of projects which has taken place over the life of the programme.

The logical framework set out three implementation assumptions which linked outputs to outcomes:

**1) National policy environments allow RIU programme and agents to RIU Country offices to exercise effective leadership (RIU support and mentoring has been built into Output 1).**

This first assumption is effectively a management assumption relating activities to outputs. However, it does point to the nature of programme interventions and the scope of RIU staff (or other actors) to drive the process, through convening networks and platforms, facilitating interaction and managing programmes.

**2) International trade environment and national trade policies are supportive of innovation (This variable will be monitored by national programmes and Output 2).**

The second assumption relates to trade policies that form part of the overall set of policies and institutional arrangements that affect innovation and it is unclear why trade has been specifically identified for mention in the assumptions.

**3) The underlying complexity of innovation can be captured by the proposed “institutionalist” approach and framework. (The “institutionalist” approach is now used commonly for an analysis of governance, institutions and political economy more generally. Lessons can be learnt even where programmes fail!)**

The third assumption relates to the validity of the “institutionalist” methodology to be used for analysis and understanding.

The first two assumptions related to the development component were given a medium risk rating, while the third assumption concerning Output 2, was assessed as being a ‘low’ risk. This was a fair assessment, as the ‘institutionalist’ approach, although not well known across the RIU staff and management, is a well-established framework and one with which the new CRT were familiar.

The extent to which the programme tested the validity of these assumptions and the implicit theory of change presented in the logical framework is the focus of this Appendix. More specifically, it addresses the issue of what has been learnt about the ‘substance’ of promoting uptake of research products by returning to a discussion of some of the issues underlying the programme logic (or implicit theory of change) which both informed the programme design and implementation and were shaped by the nature of the programme itself.

### **A4.3 Underlying concepts in the RIU discourse**

In this section, some of the conceptual ideas that underlay both the design of the programme and the discourse around programme concepts are presented and the validity of the programme logic (theory of change) is discussed in the light of the findings on programme achievements in Chapters 2 and 3.

#### **A4.3.1 Innovation systems approach**

RIU’s predecessor project, the RNRRS, as well as producing research products, generated some key lessons about the process of putting research into use. Fundamental to this was a growing (but far from across-the-board) acceptance that the traditional ‘linear’ model of innovation was inadequate for this purpose. The basic assumption of the linear model is that:

*“The initiator of innovation is science, and an increase of scientific inputs into the pipeline will directly increase the number of new innovations and technologies flowing out of the downstream end.”<sup>24</sup>*

Widespread realisation of the inadequacies of the linear model long predated the RNRRS. However, during the life of RNRRS, these inadequacies became very evident and clear lessons emerged from the RNRRS in this respect (summarised in Box A4.1.) This learning experience is reflected in RIU design, which places the Innovation Systems (IS) approach at the core of its strategy:

The Innovation Systems Approach (ISA) offers a way forward in that, by understanding and mapping the system, critical points of intervention can be identified to enhance the effectiveness of the system as a whole. The RIU hypothesis is that:

*“an innovation systems approach will prove more effective than previous linear approaches at getting research outputs into use for the benefit of the poor.”<sup>25</sup>*

Innovation is defined in the RIU website as:

*“the application of new knowledge, or of existing knowledge used in new ways and contexts, to do something better”.*

The notion of an innovation system was at the heart of RIU thinking (Box A4.1). With it came ideas regarding the functioning of an institutional system consisting of actors with capacities and motivations, together with a set of relationships between them. The strategic changes initiated in Phase 2 remained consistent with an ISA, although focus on the innovation system was from the perspective of a specific entrepreneur or actor.

<sup>24</sup> OECD 1997: National Innovation Systems; Paris

<sup>25</sup> RIU Final Inception Report, July 2006-June 2007

**Box A4.1: Key messages from RNRRS regarding the Innovation Systems Approach (ISA)**

- Many elements of the Innovation Systems (IS) approach were implicit in some of the research programmes funded by RNRRS as they evolved, but this was largely unsystematic across the programmes, and varied in timing, degree and effectiveness
- The IS approach refocuses attention from research to the process of innovation; research remains important, but becomes just one element of a wider system of activities and organisations. The interaction between suppliers and users of knowledge is at the heart of IS, and this ensures the relevance of the research taking place
- Some programmes found the IS framework useful in providing guidance for research managers wishing to achieve innovation; although not a panacea, it provides valuable insights as to why innovation may or may not occur
- The IS framework indicates which actions taken by managers of research programmes are most likely to be effective in bringing new ideas and technologies into use; an initial system diagnosis is vital
- The IS approach requires a very flexible and evolutionary approach to programme management and finance
- An essential feature of the approach is to invest in monitoring the research management process and systematised learning

(Based on Susan Turrall 2006: *From Research to Innovation Systems: Learning from the Renewable Natural Resources Research Strategy Series*)

The original idea behind the country assessments was to focus on the institutional context through which Innovation would be enabled and stimulated. However, because of the objective of getting existing research products into use, the starting point for most RIU programmes was a research product or technological innovation, and interventions were organised around commodity chains. From this perspective, the institutional system was treated as a problem, preventing innovation and the uptake of research products. The ACPs have struggled to remove this legacy and to operate at a higher policy level while at the same time demonstrating results on the ground.

The term “innovation systems approach” has promoted the idea that innovations can be facilitated through a dedicated system akin to a commodity chain. This is not the original meaning behind the ‘innovation systems approach’, which initially related to an understanding as to how innovations interacted with particular political, social and economic systems. The Innovation Systems Approach was therefore a “systems approach” to understanding innovation, rather than the search for a specific system to deliver innovations. This interpretation of a dedicated innovation system resulted in a very clear attempt to retain the idea of an “innovation system” as something distinct from the more general political, social and economic systems through which innovation and change take place.

The original idea behind the country assessments was to focus on the institutional context through which Innovation would be enabled and stimulated. However, because of the objective of getting existing research products into use, the starting point for most RIU programmes was a research product or technological innovation, and interventions were organised around commodity chains.

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This claim to a distinct “innovation system approach” has meant that there has been limited use of ideas from institutional thinking and the political economy analysis that is now common-place in development. For example, there has been no explicit analysis of power and of how it is exercised in any of the commodity chains.

Further, the concept of a distinct “innovation system” has not been demonstrated through the case studies, although such a system, if it existed, is more likely to manifest itself at macro rather than commodity chain level. However, it is clear that RIU’s approach to commodity chains as ‘systems’ and the consideration of each system in terms of its potential for innovation is extremely useful (See Chapter 2 of main report).

#### **A4.3.2 The Innovation Narratives**

The Innovation Narratives (Box A4.2) represent an important attempt to provide a strong methodological and analytical framework for the overall programme. Although the quality of the original set of specific narratives was poor, as a result of trying to retrofit an analytical structure onto existing experiments, the narratives were a radical reconceptualization in a different form, about 12 months later.

The reconceptualization of the narratives resulted in a formulation of RIU’s underlying theory of change as follows:

*“there are different ways of organising and managing innovation which will work best under a particular set of circumstances at different points in the innovation trajectory (which in turn contribute to poverty reduction and economic growth)”.*<sup>26</sup>

This statement makes the hitherto underlying theory explicit. Further, the statement could have served as the overarching programme statement through which the programme sought to validate and to develop a better understanding of the circumstances where it held true.

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<sup>26</sup> Dijkman *op cit*.

**Box A4.1: RIU's Innovation Narratives**

1. **Poor User-Led Innovation.** Approaches that place poor farmers and consumers at the centre of the innovation process as they have superior knowledge of their production and social context
2. **Public-Private Partnership-Led Innovation.** Approaches that seek to deploy the expertise, and resource and market perspectives of the private sector in an alliance with public actors and policies.
3. **Capacity Development-Led Innovation.** Approaches with a focus on institutional and network development with a view to enhancing innovation system capacity
4. **Below-the-Radar-Led Innovation.** Approaches that seek to nurture emerging innovation models that focus on the opportunities presented by large markets of poor people.
5. **Investment-Led Innovation.** Approaches that rely on financial incentives for innovation through a variety of operational forms
6. **Research Communication-Led Innovation.** Approaches that seek to improve the transmission and availability of ideas to different audiences and make them accessible through databases that use communication as a network building tool.

*Source: RIU Central Research Team Work Plan, May 2009*

**A4.3.3 Other formulations of the theory of change**

A number of other specifications of the theory of change were developed, showing the need many programme staff felt to explain and articulate the programme rationale. For example, the CPM in Nigeria, also a Research Fellow, developed his own theory of change, in the form of a hypothesis (or set of hypotheses):

*“By facilitating and promoting multi-stakeholder involvement in the uptake and use of specific RNRRS and NARS outputs to address specific innovation challenges in the cassava, cowpea/soybean-livestock and aquaculture value chains, and by working under supportive national policy and institutional environments related to these value chains, there will be: (i) significant improvements in enterprise productivity among the target stakeholders; (ii) poverty alleviation among rural and urban low-income actors of the target value chains; (iii) a boost in local livelihoods; and (iv) the emergence of sustainable public and private sector mechanisms and institutions that can effectively upscale and out-scale research into use processes across the country.”<sup>27</sup>*

The ABB do not have an explicit formal research framework, a theory of change or hypothesis or set of hypotheses. It is, instead, postulated on the proposition that failure to get RNRRS (and other) research into use in developing countries is a special case of failure in the knowledge market. This was later formalised and further elaborated in the shape of an RIU Discussion Paper<sup>28</sup>. Here it is argued that the linear model (which is what the RNRRS primarily was) stands in sharp contrast to the way knowledge is generated in the industrial world, “where there generally exists a complex

<sup>27</sup> RIU-Nigeria Country Programme: Two Year (2009-2011) Work Plan (Narrative), August 2009 (p.5)

<sup>28</sup> Norman Clark and Ian Maudlin: *Putting Research into Use: A Market Failure Approach*; RIU Discussion Paper Series, No. 4, September 2010.

scientific system whose services may be drawn upon fairly readily by productive units. Typical components of such a system are the R&D departments of firms, specialist engineering and consultancy firms and the network of institutions in the public research sector, which possess a wide range of scientific and technological facilities of relevance to the business of economic production” (ibid. p.4). In comparison the system found in poor countries dominated by subsistence agriculture is characterised by:

- a belief that the appropriate vehicle for agricultural R&D is a publicly-funded agricultural research system to produce ‘knowledge’ that will benefit the poor farmer;
- a publicly-funded agricultural extension system responsible for generating technology packages, based partly on research products usually produced by the national agencies;
- handing over responsibility for communicating these packages to agricultural extension agents who are often poorly qualified and always under-resourced to do the job.

This is all complicated by the way in which agricultural scientists view and value their work and consider that ‘good science’ can only be pursued under conditions of controlled experimentation (ibid. pp 11-12).

#### **A4.3.4 Lessons from ‘traditional’ extension models**

Another idea that pushed the programme towards taking an “innovation systems approach” (ISA) was the rejection of the notion of ‘traditional’ agricultural extension. Extension services were seen as being delinked from research and based on a false idea that the lack of uptake was due to producers either being unaware of new farming techniques or having problems accessing inputs. This view was untenable since there was evidence to show that uptake of research products was often weak even when farmers were well informed and could see the potential benefits of new technologies.

The problems of extension services, worldwide, are well known. However, many of the activities undertaken by RIU and reported in earlier chapters are not dissimilar to those undertaken by government extension officers, many of whom are still in post, often providing limited services due to budget restraints. Furthermore, the RIU covers, at least partially, the same functions as many extension services. There may, therefore, have been lessons from the experience of extension services from which the RIU might have benefitted.

In particular, the Training and Visit (T&V) system<sup>29</sup> designed by Daniel Benor in the 1980s sought to address two of the same problems that feature in the discourse around innovation systems: (i) the lack of coordination of knowledge, water, inputs and credit and (ii) the absence of effective research-extension linkages. The Benor system, at least as originally conceived, was based on an annual calendar of agricultural activities, developed with and by researchers, from which a coordinated programme of activities was devised, allowing different professionals to provide inputs as required and on time. Reviews of the T&V system were mixed and, over time, as the system spread to numerous countries, often in a form which although labelled as T&V systems bore little resemblance to the original principles, these reviews became increasingly negative.

The Benor system was originally designed in the wake of the first wave of green revolution activities in North India at a time and in a place where there were clearly favourable prices for agricultural

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<sup>29</sup> Feder G, R Slade (1986), The Impact of Agricultural Extension: The Training and Visit System in India, The world Bank Research Observer Vol 1 (2)

products and a regular stream of new varieties emerging from research stations. This important element of previous research into innovation/adoption systems does not seem to have been taken into consideration by the RIU research design.

The second point that can be made from the Benor system was that it was designed in the 1980's, in an age of managerialism, where the state exercised strong control not only over departments of agriculture but also over other quasi-independent agencies such as input dealers, financial institutions and markets. The language at the time was that of command areas and a command economy. The reality of state control over agricultural services exists, in part or in whole, in many countries. At a recent RIU conference, it became very clear that the risks for entrepreneurs in many commodity chains in many countries were not climate change, weather variations or even market volatility but were concerns over government activities with regard to licencing and other controls and the effect they had on processes and returns. Despite these realities, the context for RIU is no longer that of managerialism, but of institutions and systems where the interventions are necessarily in the form of reconfiguring systems and nudging key agents to align.

#### **A4.3.5 The commercialisation agenda**

From the start of RIU, there was strong belief that the private sector was a major player. This was moved from a major consideration in Phase 1 to the focus of the programme in Phase 2. The thinking behind this approach was that the private sector had to survive in the economic environment in which they operated while governments and government staff were unable, for many reasons, to ensure a sustainable support system for small farmers. Further, seeing and treating actors as private sector players made it easier to attribute motivation and to stimulate this motivation through incentives of various sorts.

This idea underlay the ABB programme, the assumption being that a “Best Bet” entrepreneur had analysed their own context and had reached the conclusion that they could operate successfully in that context. In that sense, the conceptual difference between the ACP and the ABB programmes was one of phasing – the ACPs started, in theory, with an open position and carried out country assessments to identify and understand the policy and institutional context, whilst the ABB programme relied on the entrepreneur to have already carried out this analysis. The ACP projects were reviewed at the start of Phase 2 and only those projects with commercial potential were retained.

The commercial focus of the Phase 2 programme has been promoted in several ways – partly through the identification and retention of only those experiments which were deemed to have some commercial potential and partly through the search for experiments where business plans could be developed and the balance of RIU inputs shifted from subsidies to investment. This approach clearly provided a conceptual clarity which had been missing in Phase 1 and sharpened the managerial focus which was also missing at the time of the MTR. However, it is too early to say whether the entrepreneurs incubated during this period will be sustainable. There must be huge risks for each entrepreneur, in the absence of an analysis of the overall market and policy context in which these enterprises will operate.

The fundamental problem with the commercialisation agenda is that it does not address the structural and institutional problems affecting smallholder agriculture in Africa. Many of these problems relate to a lack of investment in public infrastructure and to policies that belong to conditions no longer prevailing. So, although the best bets approach has resolved strategic and managerial

problems for the programme, it has done so by narrowing the institutional focus and therefore not fully addressing the programme purpose.

#### **A4.3.6 The “market failure” argument**

The issue of market failure has already been alluded to in the context of the implicit ABB theory of change. An ABB Discussion Paper<sup>30</sup> reopened a debate as to whether the problem of innovation was due to markets not functioning as signalling mechanisms and, therefore, demand was not being transmitted back to input and other suppliers. Again, this argument was not tested or analysed by the CRT, and only one RIU discussion paper addressed the issue.

The issue of the role and capacity of rural markets in Africa to deliver growth and reduce poverty is currently very topical, especially in the wider policy debate around the future of small-holder agriculture. This debate centres on whether the ‘value’ in the value chain is sufficient to “carry” all the actors involved in the chain and to ensure a functioning chain. If not, the argument is that large commercial leasehold farming is more appropriate. This is a particular issue in many parts of Africa, when the economies of scale for small operators, faced with long distances and low population densities, act as a disincentive for participation in the process. Even if the problems in commodity chains are not entirely derived from market failures, it would have still been useful if market failure had been recognised as a factor in the design of the programme.

An implicit assumption of the first phase of the RIU programme is that the use of pro-poor agricultural research and technologies was constrained by the lack of effective demand. This, no doubt, reflects the programme’s starting position, where there was a strong emphasis on the promotion of RNRSS research products. The implicit assumption behind this approach is that “supply would create its own demand”.

This assumption was not tested. Effective demand depends on returns and prices, which vary over time and from place to place. There are few circumstances in which a given research product will be superior in all circumstances. Effective demand for a new technology depends not just on the qualities of the technology but on the prices and risks involved. What is attractive at one point of time and at a certain location may not be so at another time or place. Assuming farmers are price sensitive (or, more precisely, risk-adjusted price sensitive), the uptake of a new technology will depend on favourable input/output price ratios. Therefore any assessment of a new technology must be made in the context of prevailing prices and in the light of other social and political factors. A common assumption which could have been tested, and at least should have been controlled for, is that the more favourable the price ratio of output to inputs, the faster the rate of adoption. Given this not unreasonable hypothesis, it is surprising that no economic analysis was undertaken before promoting any of the new technologies.

The oversupply of research products is sometimes inevitable and even highly desirable - as evidenced by the huge investment in medical drugs which are developed, but never come to market. It is, however, also highly frustrating for researchers to know that many research products with apparent benefits are not being used. An RIU programme which was less embedded in the research world might have challenged the assumption underlying research into use that the problem was one of demand.

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<sup>30</sup> Clark N, I Maudlin (2010), Putting Research Into Use: A Market Failure Approach, RIU Discussion Paper No 4

### **A4.3.7 The role of “incentives” as drivers of systems**

The discussion on market failure is related to the role of incentives in RIU programmes. Clearly, in many cases, the main feature of the programme is the engagement of actors whose income depends on the functioning of the commodity chain as a whole. This is in contrast to the T&V system described above where most people received salaries which were not related to effort.

The management of incentives was a major issue for staff working on commodity programmes faced with ensuring that inputs and subsidies were applied in order to ensure that there were incentives for all the critical actors along the commodity chain to perform their roles.

The programme has not undertaken any significant economic analysis, nor has economic analysis featured in the CRT agenda. However, in practice, CPMs and project managers have overcome some of these market problems through providing subsidies to key players and through promoting information and knowledge through training and capacity building.

Further analysis of the nature of markets would have allowed a narrative to emerge as to why markets were not functioning, which would have opened up avenues for policy-related interventions as a means of considering alternative incentives to improve the functioning of the different innovation systems.

However, as the present Review shows, while demand may be a necessary condition for putting research into use, it is far from being a sufficient condition. As well as demand, the uptake of new technologies requires a supply chain that is capable of delivering research products to the farmer, favourable price ratios providing incentives for key players throughout the chain, market or non-market coordination mechanisms in which key players have sufficient trust and, finally, policies and administrative regulations which are conducive to, and supportive of, the new technologies.

## **A4.4 Conclusions and lessons**

### **A4.4.1 Contribution to knowledge**

The main report notes (Chapter 3) that the programme has contributed to a greater understanding of the process of uptake of research products and this body of knowledge may yet be expanded by papers still to be produced. However, the extent to which the RIU programme has and will add to the overall body of knowledge on innovation and the promotion of research into use is, perhaps inevitably, less clear. Although understanding has been advanced, major gaps remain unaddressed. In particular, key issues such as (a) the relationship between an innovation system and its political and economic context and (b) the conditions required for both financial and economic sustainability have not featured in the RIU discourse and, therefore, remain outstanding.

The importance of ‘institutional arrangements’ in determining the uptake of research was set out in the programme logframe. Further, the approach was well known to LINK whose championing of the framework was the basis for their appointment to lead and manage the CRT. However, the institutional perspective did not shape the development programme which was largely determined, in Phase 2, by the logic and strategy of promoting ‘commercialisation’ and, as was pointed out in the previous chapter, the opportunity to use RIU experiments as a means of testing this perspective was missed.

From an institutional perspective, an understanding of the role of incentives for different players and agents within a commodity chain is as important as the nature of the structure and the relationships between actors in determining the outcome of the innovation system and in

promoting research into use. Although, as was shown in Chapter 2, the provision of subsidies as incentives to actors in the commodity chain was a feature of all the case studies, this was barely recognised in the discourse around both the development and research components.

A number of Discussion Papers, prepared by the Best Bets team, address the issue of market failure regarding knowledge and awareness of technologies. However, the problems of economies of scale and the low returns for traders and dealers along the market chain in many African countries do not appear in the general discourse. Such a perspective would have opened up opportunities for RIU to develop a greater understanding of the policy issues related to smallholder agriculture. Many of these problems relate to 'government failure' and include a lack of investment in public infrastructure and government policies that belong to conditions that no longer prevail.

The focus on commercialisation which shaped Phase 2 of the programme has resolved many of the strategic and managerial problems for the programme. However, it has done so, by narrowing the institutional focus and, therefore, not fully addressing the programme purpose. None of the issues of government failure, suggested above, could be addressed by the Phase 2 strategy, which focussed on the commercial success of a single project or entrepreneur.

#### **A4.4.2 Programme design and management**

The absence of a unifying framework for the programme as a whole which would serve as a means to shape the experiments and which, in turn, would provide the population of interest for the research component has both created tension and limited programme achievements.

The commercialisation strategy which was introduced after the MTR provided greater clarity and cohesion to the programme to the activities retained in Phase 2. The changes were carefully and quickly executed through a difficult and no doubt painful process, which resulted in a programme with a narrower scope and sharper focus. Evidence for the success of this transformation is seen in the broadly positive results described in Chapter 2, which were achieved in the very short period that remained of the programme.

However, a number of obvious, but important, lessons emerge. These include the importance of **programme design and construction** and the need for:

- an overarching programme logic (theory of change) or, in its absence, a process to arrive at such a theory. This is important not just for research purposes but as a vehicle for staff to situate their own activities in a wider context. The existence of such a framework would have helped to ensure that RIU research was able to and did make use of RIU experiments. The stated commercialisation approach did indeed provide that framework for Phase 2 activities, but was too narrow to address the programme goals and therefore did not encompass Output 2.
- a management plan - or logical framework - which reflects reality. The difficulties associated with the initial formulation and structuring of the logical framework were never resolved and therefore it quickly became a meaningless document, which was no longer reflecting or driving the programme.
- a single management structure over-seeing both research and development. Both Phase 1 and 2 of the programme struggled with management arrangements that allowed parts of the programme to develop their own dynamic. This is not necessarily the result of the different

management arrangements, but they certainly made it more difficult to align all elements of the programme under a common framework.

- a monitoring system which helps to reinforce programme structure and goals, but which does not squash initiative or become burdensome.

Other lessons relate to the **limited range of instruments** available to management. RIU inherited a research-centric programme, using management tools and approaches commonly found in research rather than in development programmes. As a result, the programme structure effectively resembled a “mini-research council” providing grants but remaining relatively hands off in terms of controlling project activities. This approach has proved difficult at times as illustrated by the problems associated with the attempt to bring research and programmes together.

Whilst recognising the benefits and implications of the new strategy, the main instrument available to management to execute the shift in direction was the identification and retention of projects who met the commercialisation criterion. This meant that alternative strategies and approaches, such as refocusing the ACP programme on the policy and institutional arrangements rather than linear commodity chains, were not available to management, since this would have required new ways of working and additional types of professional staff.

The introduction of decentralised management increased the autonomy of Country Programme Managers in Phase 2 and allowed staff to respond to the requirements of the situation on the ground. However, this required staff to be analytical, responsive and context-sensitive with access to a broader set of tools. This support was particularly missing around political economy, social and economic issues, where local knowledge would have benefited from interacting with new ideas and concepts.

The task of shaping and supporting the country programmes was assigned to the CRT. This did not happen and the resulting vacuum was not addressed. As a result, staff felt isolated and unsupported. Although CPMs gained greater autonomy and a “flexibility fund”, which they could programme directly, they were also under pressure, in the short time frame in which these events were taking place, to refocus the programmes and produce results and, as a result, there was little additional analytical work undertaken. None of the flexibility funds were spent on analytical studies. A major lesson for a multi-country programme, such as this, is the need to ensure that the autonomy and responsibility for results is matched with adequate support to field staff.

The programme staff and, indeed, consultants associated with the programme comprise a relatively homogeneous group, many of whom have been involved in previous RNRRS activities or in the debate around innovation systems. Few have had development experience outside research-related programmes: hence the need to provide a wider range of expertise particularly on political economy, social, economic and policy issues to support country staff expand their understanding and analysis of local systems. Further, many of the lessons described in this report are already well documented outside of the agricultural research community. There would have been benefits in engaging more directly with the non-research development community and taking on board experience and lessons from other sectors.

### **A4.4.3 Summary of lessons**

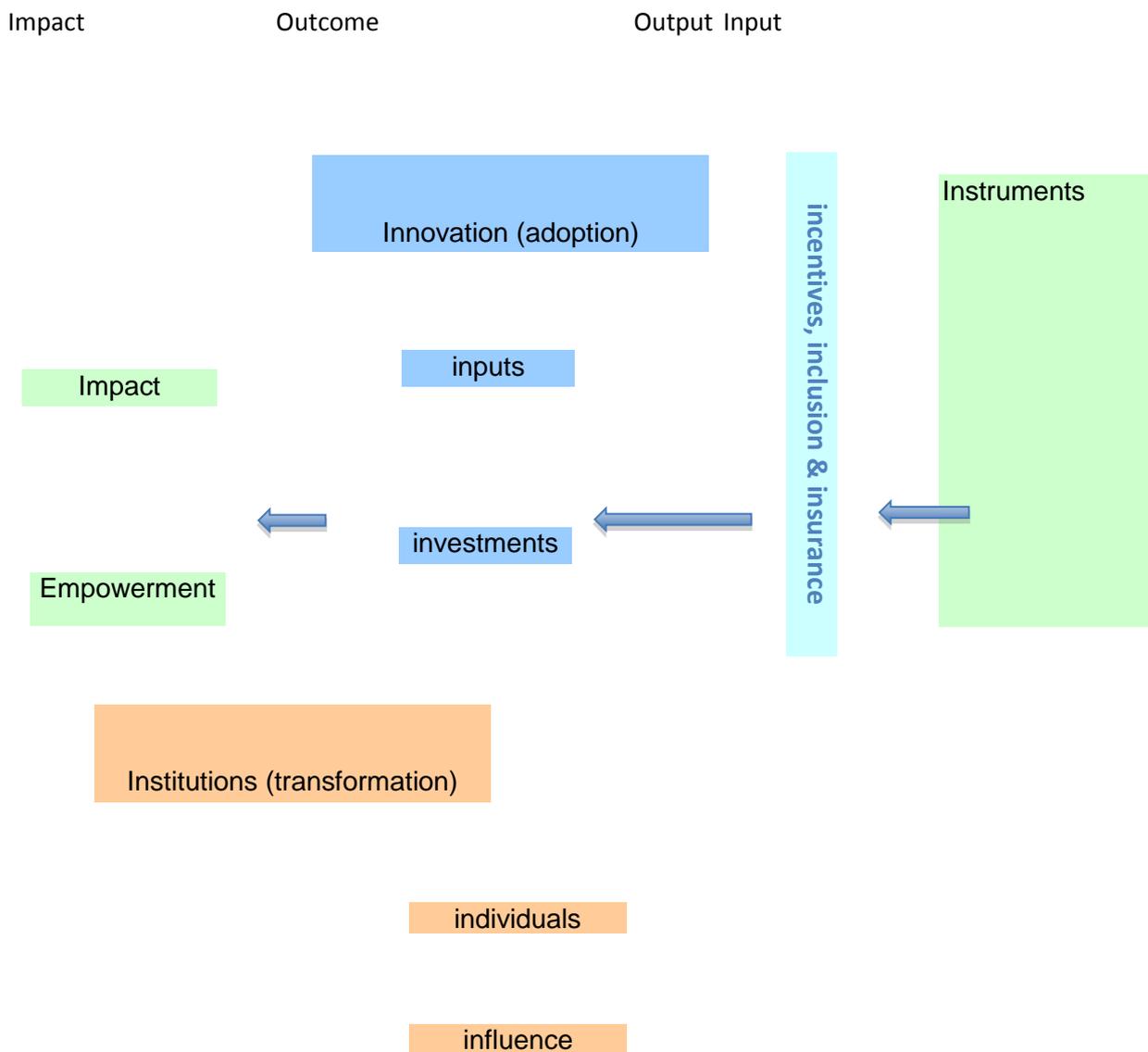
The impact evaluation has focused on documenting emerging lessons and assessing programme processes. No overall assessment of the programme is possible at this stage and was not part of the study's mandate.

The main lessons emerging from the study are as follows::

- The programme was complex, the programme logic unclear and the time frame short. The changes introduced following the MTR resulted in a sharper and clearer focus on commercialisation which subsequently shaped the development component.
- Beneficial impacts are likely to be realised from the relatively small number of remaining projects. The sustainability of these benefits depends on the robustness of the institutional arrangements after programme support ends and the incentives for actors to continue to play their role.
- The opportunity to shape and use the development projects as experiments was missed, as was the opportunity to explore the reasons for limited uptake in the projects that were dropped after the MTR.
- The programme will have contributed, in all probability, to the body of knowledge and understanding on research into use.

However, the extent to which this contribution will address the critical elements of the institutional framework in which getting research into use takes place is limited by the narrow focus of the programme on commercialisation and by the absence of contextual information on the political economy of the context in which the projects were situated.

## Annex 5: The *i*-Innovation Model



### Evolution of the model

The *i*-innovation model is the result of an extensive evaluation of the Research into Use programme (RIU). The RIU programme attempts to understand how innovation, or new technology, is adopted by poor people in the agricultural sector. This evaluation visited 8 of the 40 plus case studies based in Africa and Asia, covered by the RIU. This model has evolved from the collection of data and analysis in the case studies and has not come from the extensive academic literature on innovation and innovation systems. From these

observations, a new model is posed that elevates our understanding and attempts to explain the complexities of reality, the processes observed that achieve the transference of innovation into use.

The initial starting point for the model was the identification of common sets or clusters of outcomes, seen amongst the case studies. These outcomes form 6 *i*'s namely; inputs, investments, insurance, individuals, inclusion and institutions. Some or all of these elements have been observed in each of the 8 case studies selected for the evaluation. There is no suggestion that they are either mutually exclusive or exhaustive, although observation does suggest that some of them are "necessary" to success. None are sufficient alone.

The individual elements are explained in more detail below with examples of how they have appeared in RIU activities. The *i* of influence was added later to capture change in policy and advocacy. The *i*-Innovation model model has been analysed and discussed with the evaluation team and a reconfiguration of the *i*'s into the above model has emerged.

### **The model logic**

The model logically works from right to left starting with individual instruments. As demonstrated from the RIU, these are many and varied. The model proposes that all instruments should then pass through an *i*-catalyst. This is formed of 3 important elements namely incentives, inclusion and insurance and are important for creating the environment and stability needed to transfer innovation. Incentives is an underlying driver that creates the momentum for change and propels people, institutions and investors to act differently and in accordance with a new innovation. Inclusion ensures that the innovation is well positioned, suitable and has the potential for improving people's capacity as both producers and consumers, necessary to generate wealth, growth and sustainability. Insurance is necessary for both recruitment and retention of agents and institutions as it ensures that risk has been identified, analysed and mitigated. Having insurance measures in place also protects the system to prevent collapse and potential loss throughout the stakeholders.

### **The innovation and institutional outcomes**

The next section of the model outlines desired outcomes and these are divided into 2; first, the innovation and its absorption and second, the institutions and the transformation of the capacity of the system to absorb innovations and adapt. The adoption of innovation relies on 2 principal components inputs and investments. Institutional transformations are characterized by changes in the roles and behaviours of individuals and agents as well as the creation of new institutional structures. Influence is necessary to bring about changes in the enabling environment with a broader range of actors, officials and policy makers in order to create the conditions within which innovations can be produced, adopted and evolved. It is these 2 levels working together that create the desired impacts and inclusion creating a sustainable transformation of the system with a poverty reduction focus.

## The *i*-catalyst

The *i*-catalyst works at every level in the outcome chain.

**Incentives** are needed in the form of inputs to enable people to trial new innovations without great risk or investment from farmers potentially operating at a subsistence level. Equally incentives are needed at the investment level. The innovation product or process must create its own commercial imperative that tempts investment in. Investors do not get involved in innovation without a clear commercial benefit, like the ability to enhance their own brand, to reach new markets and audiences, or to create value from the product or relationships that ensue. These all form incentives for private sector involvement and investment. Corporate social responsibility was not seen as a strong enough incentive in the RIU case studies but could form part of the incentive structure for big corporations.

Incentives also operate at the institutional level. New institutional structures like the platforms exist to create a forum for unblocking barriers within value chains. They enable actors who sit along the value chains often in isolation, to come together, raise issues, share information and agree solutions. Additional incentives for new institutional structures is the opportunity to build social capital amongst peer groups, bridges to other agents within the value chains and also to link out to higher value relationships with officials, government or financial institutions.

Incentives at the individual level are more self focused and relate strongly to inputs. Individuals have been identified and trained to use, demonstrate and pass training on farmers in new technologies. For these individuals, additional incentives are the social capital that is built within communities and the links out to the innovation promoters. This relationship also leads to improved knowledge on farming and the market, which leads to increased status of these individuals within their communities.

The incentives behind creating change and influence are more complex. Wider system and policy change operate along convoluted pathways and there are often many and various incentives that create change and influence. In the innovation arena incentives can be economic, commercial, social and /or link to achieving other objectives, which may or may not be known. However political intelligence and an understanding of the incentives behind creating influence are important to achieve greater systemic and transformative impacts.

**Inclusion.** The second *i* within the *i*-catalyst is inclusion. The rationale behind creating an inclusive approach operates at an economic, social and commercial level. At the innovation level, agricultural technologies are pitched at raising production of small-scale low productivity farming to a more commercial footing. In order to achieve this, the instrument adopted has to embrace an understanding of the socio-economic complexities of the agricultural sector, within the context it is operating. This includes an understanding of the target beneficiary, their incentives, their constraints and the environment within which they operate. Inclusion in agricultural innovation is highly gendered and adopting a gendered approach or not, is the difference between deeper longer-term adoption or short-lived more partial adoption. Innovation instruments ignore gender, at their peril. The

structure and processes surrounding the nature, distribution and timing of inputs must take an inclusive path. Absorption ability and capacity will be shaped by people's access to assets, information and voice.

Inclusion at an investment level displays a different set of drivers and logic. At a commercial level the ability to reach the low-income mass markets largely untapped in Africa and Asia is a great investment opportunity. Equally raising the assets and income level of subsistence producers raises the volume of small-scale disposable income over a wide consumer base. Safaricom is the most profitable company in Kenya as it has tapped its mass market of millions of low-income users spending less than a £1 a month on their mobile phones.

Institutional inclusion is central to the creation of the value chain platforms in the RIU. Bringing different actors together sets up a new and innovative process which can have beneficial results but platforms rely on the role of a broker to bring parties together, facilitate their operation, provide information and risk mitigation and last regulate the institutional environment to ensure that the structures remain inclusion.

An inclusive approach towards 'individuals' penetrates deeper than simply the selection of individuals to take part in the innovation process. Understanding that individuals have differential access to parts of the community, institutions and networks is key to designing the process for selecting individuals to take part. An empowering approach might recruit more marginalized people to act as '*individuals*' and ensure that they have the support and capacities to reach and target other marginalized groups. Promotion of inclusion in an influencing agenda relies on opening up the range of actors and informants into a policy or institutional setting. It also promotes more inclusion as a policy target for better social and poverty outcomes.

**Insurance** within the innovation system has been typically weak or unexplored in the RIU portfolio. However innovation programmes are inherently risky at every level. Getting the inputs wrong, for example, not only means wastage of resources, but also potentially a failed crop or investment for the farmer who is left to deal with losses, that are hard to bear for subsistence households.

Equally investors are naturally risk averse as their investment has a very short time horizon to yield results. A failed investment has reputational issues for the investors which promote further caution. Institutions run both internal and external risk. Internally there is a risk to stakeholders if the institution is not run according to common objectives or where competing agendas cause conflict or risk for participating parties. External contexts can change and need to be monitored closely to ensure that the institution remains relevant within the changing political and socio-economic environment, presents further risk to its viability.

There is a further insurance that is needed and has been absent in the RIU which is that risk should be thoroughly understood from a systems approach. Major risks to the system can undermine the instrument itself. Understanding risk at a systems level, need to be taken into account, and mitigation or insurance against this, put in place, to avoid undermining the whole innovation approach.

**Impact and Empowerment**

The *i*-innovation model starts with a statement of impact and empowerment as the end goal to be achieved. It is important to set the programmatic sights firmly on what the programme is aiming to achieve. In complex innovations programmes it is easy to lose sight of this. Specific objectives at the impact level can be set at the programme outset, which determines the design of the instrument. Impact might be seen as a set of poverty reduction and economic growth targets. Having empowerment at goal level is critical to shaping the nature and design and framing the programme within this framework. At this point, the instrument thrust changes from innovation adoption to innovation agency - changing the set of drivers which determining how you do it, what you do and who does the doing!

## Annex 6

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*Shujaaz* Audience Assessment Report: Quantitative Assessment; Synovate Ltd, Nairobi for GTZ Kenya

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Njihia, Caroline (2010 - October)

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Reddy T S, Vamsidhar; Andy Hall and Rasheed Sulaiman V. (2010 - October)

New organisational and institutional vehicle for managing innovation in South Asia: Opportunities for using research for technical change and social gain.

RIU discussion paper 07

OECD - Development Assistance Committee (1991)

Principles For Evaluation Of Development Assistance. OECD. Paris

OECD - Development Assistance Committee (1997)

National Innovation Systems. Paris

O'Reilly, Sheelagh (2009 - October)

Research into Use Programme Impact Evaluation Component: What have we learnt so far.

RIU

Ojha, Hemant (2010 - July)

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(PDF 290KB)

RIU (2007)

Programme Implementation Plan (PDF 250KB)

RIU (2007 - 4th April)

RIU Programme Third Draft Inception Report &

RIU Programme 3rd Draft Inception Report Annexes.

RIU Impact Evaluation, (2010 - 2nd August)

Evaluation of Innovation Systems and Agricultural Research Programmes: Literature Review (by TANGO)

RIU Impact Evaluation (2010 - September)

Research Into Use Impact Evaluation: Method Options and Approach Issues (by John Wyeth)

RIU Impact Evaluation (2010 - August)

Research Into Use Impact Evaluation: Approach Paper; (by Tim Robertson)

RIU (2007)

Final Inception Report, July 2006-June 2007

RIU (2008)

RIU Practice note: Lessons for out-scaling and up-scaling from DFID's RNRRS studies and research  
250KB)

RIU (2008)

Innovation systems: concepts, approaches and lessons from RNRRS: Lessons for out-scaling and up-scaling from... RIU Practice Note 1. (PDF 80KB)

RIU (2008)

Managing agricultural research for poverty alleviation

Lessons for out-scaling and up-scaling from... RIU Practice Note 2 (PDF 90KB)

RIU (2008)

Rates of return to research

Lessons for out-scaling and up-scaling from... RIU Practice Note 3 (PDF 80KB)

RIU (2008)

Monitoring and evaluation

Lessons for out-scaling and up-scaling from... RIU Practice Note 4 (PDF 90KB)

RIU (2008)

Participatory research approaches

Lessons for out-scaling and up-scaling from... RIU Practice Note 5 (PDF 90KB)

RIU (2008)

Fisheries and poverty reduction

Lessons for out-scaling and up-scaling from... RIU Practice Note 6 (PDF 80KB)

RIU (2008)

Common pool resources: management for equitable and sustainable use

Lessons for out-scaling and up-scaling from... RIU Practice Note 7 (PDF 80KB)

RIU (2008)

Linking research, policy and livelihoods: challenges and contradictions

Lessons for out-scaling and up-scaling from... RIU Practice Note 8 (PDF 80KB)

RIU (2008)

Understanding policy processes: a review of IDS research on the environment

Lessons for out-scaling and up-scaling from... RIU Practice Note 9 (PDF 90KB)

RIU (2008)

Effective policy advocacy

Lessons for out-scaling and up-scaling from... RIU Practice Note 10 (PDF 80KB)

RIU (2008)

Fisheries and economic growth

Lessons for out-scaling and up-scaling from... RIU Practice Note 11 (PDF 80KB)

RIU (2008)

Fisheries and governance

Lessons for out-scaling and up-scaling from... RIU Practice Note 12 (PDF 80KB)

RIU (2008)

Signposts to more effective states: Think and operate politically

Lessons for out-scaling and up-scaling from... RIU Practice Note 13

RIU (2008)

Communication for research uptake promotion: learning from practice

Lessons for out-scaling and up-scaling from... RIU Practice Note 14

RIU (2008)

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Lessons for out-scaling and up-scaling from... RIU Practice Note 15

RIU (2008)

Gender and the DFID Renewable Natural Resources Research Strategy

Lessons for out-scaling and up-scaling from... RIU Practice Note 16

RIU (2008)

Pro-poor seed systems in East Africa

Lessons for out-scaling and up-scaling from... RIU Practice Note 17

RIU (2008)

Plant breeder and farmer partnerships

Lessons for out-scaling and up-scaling from... RIU Practice Note 18

RIU (2008)

Poverty measurement, mapping and analysis

Lessons for out-scaling and up-scaling from... RIU Practice Note 19

RIU Africa Country Programmes (2010)

Malawi country programme quarterly report for April – June 2010

RIU Africa Country Programmes (2010)

Malawi country programme quarterly report for July – September 2010

RIU Africa Country Programmes (2011)

Malawi country programme quarterly report for October– December 2010

RIU Africa Country Programmes (2009)

Nigeria country programme Two-Year (2009 – 2011) Work Plan (Narrative) August

RIU Africa Country Programmes (2010)

Nigeria country programme quarterly report for October– December 2009

RIU Africa Country Programmes (2010)

Nigeria country programme quarterly report for April – June 2010

RIU Africa Country Programmes (2010)

Nigeria country programme quarterly report for July - September 2010

RIU Africa Country Programmes (2011)

Rwanda country programme quarterly report for October - December 2010

RIU Africa Country Programmes (2010)

Rwanda country programme quarterly report for April – June 2010

RIU Africa Country Programmes (2010)

Rwanda country programme quarterly report for July - September 2010

RIU Africa Country Programmes (2010)

Sierra Leone country programme quarterly report for April – June 2010

RIU Africa Country Programmes (2010)

Sierra Leone country programme quarterly report for July - September 2010

RIU Africa Country Programmes (2011)

Sierra Leone country programme quarterly report for October - December 2010

RIU Africa Country Programmes (2010)

Tanzania country programme quarterly report for April – June 2010

RIU Africa Country Programmes (2010)

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Tanzania country programme quarterly report for October - December 2010

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RIU African Best Bets (2010)

Aquashops Quarterly report for July - September 2010

RIU African Best Bets (2011)

Aquashops Quarterly report for October - December 2010

RIU African Best Bets (2010)

Armyworm Forecasting and Control Quarterly report for January – March 2010

RIU African Best Bets (2010)

Armyworm Forecasting and Control Quarterly report for April – June 2010

RIU African Best Bets (2010)

Armyworm Forecasting and Control Quarterly report for July - September 2010

RIU African Best Bets (2011)

Armyworm Forecasting and Control Quarterly report for October - December 2010

RIU African Best Bets (2010)

BCA registration in Ghana Quarterly report for July - September 2010

RIU African Best Bets (2010)

BCA registration in Ghana Quarterly report for October - December 2010

RIU African Best Bets (2010)

FIPS-Africa report for January – April 2010

RIU African Best Bets (2010)

FIPS-Africa report for April - June 2010

RIU African Best Bets (2010)

FIPS-Africa report for July - September 2010

RIU African Best Bets (2010)

FIPS-Africa report for October - December 2010

RIU African Best Bets (2010)

NERICA Rice Quarterly report for January – April 2010

RIU African Best Bets (2010)

NERICA Rice Quarterly report for April – June 2010

RIU African Best Bets (2010)

NERICA Rice Quarterly report for July – September 2010

RIU African Best Bets (2010)

NERICA Rice Quarterly report for October - December 2010

RIU African Best Bets 2010

Real IPM Lesson Learning Report January-March 2010

RIU African Best Bets (2010)

ShujazzFM Quarterly report for April-June 2010

RIU African Best Bets (2010)

ShujazzFM Quarterly report for July - August 2010

RIU African Best Bets (2010)

ShujazzFM Quarterly report for October - December 2010

RIU African Best Bets (2010)

Stop Striga Quarterly report for April – June 2010

RIU African Best Bets (2010)

Stop Striga Quarterly report for July-September 2010

RIU African Best Bets (2010)

Stop Striga Quarterly report for October - December 2010

RIU African Best Bets (2010)

Yam Seed System Quarterly report for July-September 2010

RIU African Best Bets 2010

Yam Seed System Quarterly report for October - December 2010

RIU AICF: Integrated Floodplain Management in Bangladesh (2010)

Quarterly report for April - June 2010

RIU AICF: Integrated Floodplain Management in Bangladesh (2010)

Quarterly report for July – September 2010

RIU AICF: Promoting sustainable coastal aquaculture in Bangladesh (2010)

Quarterly report for July – September 2010

RIU AICF: Promoting sustainable coastal aquaculture in Bangladesh (2011)

Quarterly report for October – December 2010

RIU AICF: Rat Management for Rural Communities, Bangladesh (2010)

Quarterly report for April - June 2010

RIU AICF: Rat Management for Rural Communities, Bangladesh (2010)

Quarterly report for July – September 2010

RIU AICF: Rat Management for Rural Communities, Bangladesh 2011

Quarterly report for October – December 2010

RIU AICF: Rojiroti, India (2010)

Quarterly report for July – September 2010

RIU AICF: Rojiroti, India (2011)

Quarterly report for October - December 2010

RIU CRT (2011)

Research Into Use Paper-O-Meter, January

RIU MIL (2009?)

New Upland Rice Varieties for India's Rainfed Agriculture; Impact Study No.1; Figure 5 (n.d.; not earlier than 2009)

RIU Nigeria Country Programme (2010)

RIU Learning Event (9-11 November 2010): Evaluation of the Event

RIU South Asia Best Bets (2010)

Quarterly report for April - June 2010

RIU South Asia Best Bets (2010)

Quarterly report for July – September 2010

RIU South Asia Best Bets (2011)

Quarterly report for October - December 2010

RIU Zambia Country Assessment and Strategy Development Team (2008 - October)

Zambia Country Assessment and Strategy

Sulaiman V, Rasheed; Andy Hall, Vamsidhar Reddy, T S and Kumuda Darai (2011 - January)

Studying rural innovation management: A framework and early findings from RIU in South Asia. RIU discussion paper 11

Torr, S.J., I. Maudlin and G.A. Vale (2007)

Less is more: restricted application of insecticide to cattle to improve the cost and efficacy of tsetse control; *Medical and Veterinary Entomology*, 21, 53-64

Turrall, Susan (2006)

From Research to Innovation Systems: Learning from the Renewable Natural Resources Research Strategy Series

Ugbe, Utiang P (2010 - October)

It may take a little while... Insights on agricultural research for innovation and development in Nigeria. RIU discussion paper 05. (PDF 300KB)

Ugbe, Utiang P (2010 - November)

What does innovation smell like? A conceptual framework for analysing and evaluating DFID-RIU experiments in brokering agricultural innovation and development. RIU discussion paper 10 (PDF 350KB)

Ward, Andrew (2010)

Progress Reports on Aquashops Best Bet

Ward, Andrew (2010)

Progress Reports on Armyworm Forecasting and Control Best Bet

Ward, Andrew (2010)

Progress Reports on BCA registration in Ghana Best Bet

Ward, Andrew (2010)

Progress Reports on FIPS-Africa Best Bet

Ward, Andrew (2010)

Progress Reports on Rice Outgrowers (NERICA Rice) Best Bet

Ward, Andrew (2010)

Progress Reports on Real IPM Best Bet

Ward, Andrew (2010)

Progress Reports on Shujaaz Best Bet

Ward, Andrew (2010)

Progress Reports on Stop Striga Best Bet

Ward, Andrew (2010)

Progress Reports on Yam Seed System Best Bet

Welburn, S.C., I. Maudlin and P.P. Simarr (2009)

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Witcombe, J.R., K.P. Devkota and K.D. Joshi (2010)

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## Annex 7

### RIU Review of Guidance and Learning on Gender and Social Exclusion

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#### A. Background

The RIU website is a key site for dissemination of information, learning and research findings for stakeholders across and within programme and project countries. In reviewing the initial recommendations given by the MIL study, SDD sought to assess the extent to which social development, exclusion and gender approaches were being considered across the key learning and guidance areas of the RIU and how this is reflected in research products available largely through the RIU website. This task sits within the TOR remit for SDD to effectively address issues of inclusion and exclusion and other appropriate social issues in the evaluation of the RIU programme.

#### Research task methodology

A discrete research task was carried out to review the following areas of the website to gather evidence of social development, social exclusion and gender approaches:

- Discussion papers (all 11 available)
- All available practice papers (all 19 available)
- Emerging lessons (1 page)

In addition a simple site keyword search was conducted to gather key pages that would add to the static body of learning materials on the site outlined above. The top ten hits for the following key search terms were included:

- gender
- women/ men
- social exclusion
- marginalise/marginalisation

#### B. Evidence and Findings of Gender and Social Exclusion Analysis or Guidance

##### Social Development Aspects of the RIU Programme

At the RIU programme-level, consideration of social development issues is patchy despite the programme having pro-poor objectives. The early stages of the programme saw a number of papers produced relating to both gender and social exclusion and their centrality to any attempt to have a pro-poor impact in the agriculture sector. Whilst no reference was made to empowerment as a guiding concept, in 2007 recommendations were made concerning the need for the programme to look at the social exclusion and gender issues *at country level* which would prevent particular groups/individuals from benefitting from the programme.<sup>31</sup> An earlier paper dealing with the monitoring and learning aspect of the programme highlighted the need for disaggregated data<sup>32</sup> but this suggestion, like that concerning country studies of social exclusion and gender issues, seems not to have been operationalised.

Recommendations to this effect were also combined with reflections on the RIU Inception Report (2007), which was thought to integrate gender and social exclusion issues poorly in both strategic and analytical terms. This was seen to be a constraint to the programme effectively being able to ensure that the programme reached the poorest and what may prevent particular individuals/groups from participating in

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<sup>31</sup> Watson, S., 2007, 'Social Exclusion, Gender and the RIU Programme', Draft, Research Into Use, London.

<sup>32</sup> RIU, 2006, 'Ensuring that Socially Excluded Groups Benefit from Research Programmes through the RIUP MIL', Draft for comments, RIU, London

the programme.<sup>33</sup> This 'power blindness' was not helped by the lack of specific group addressing gender and social exclusion who could have undertaken baselines, gathered monitoring data, and ensured country programme designs were adequately informed by the gender and social exclusion issues which faced a particular country context.

The early impetus concerning gender and social exclusion issues was discontinued and also failed to be disseminated across the programme<sup>34</sup>. The social aspects of RIU's work plan were arguably never central to the programme as a means of achieving its programmatic ends.

### **MIL Advice**

As part of the MIL contract (2005-2009), a number of short papers were written to guide the RIU on what were the critical social exclusion and gender issues with recommendations of how to improve understanding of social exclusion and gender, and how to get subsequent policies and learnings mainstreamed into the project cycle.

One of the papers was a stocktake and review of key RIU programme documents and the extent to which social exclusion and gender had been considered throughout the RIU, as set out in programme documents<sup>35</sup>. Overall they found RIU documents were weak in analysis of social exclusion. The paper provided a clear rationale (quoted in the box below) for including social exclusion and gender analysis throughout the RIU, design and implementation, however after 2008 (when it was published) there is little evidence of this having been adopted.

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<sup>33</sup> Watson, S., 2007, 'Social Exclusion, Gender and the RIU Programme', Draft, Research Into Use, London

<sup>34</sup> In the case of the RIU Country Office, staff were unaware that such papers existed.

<sup>35</sup> Please note the exact publishing date (beyond the year) of this document was queried with an RIU staff member but was not able to be determined.

### Why Social Exclusion and Gender?

- **Socially excluded people make up a large number of the world's poorest and therefore have to be incorporated into any efforts that aim to alleviate poverty.** For example people with disabilities, especially women and girls, consistently rank among the poorest of the poor (Mobility International). However, socially excluded people are by definition (and this is reflected by experience) less likely to benefit from innovations that aim to improve productivity and help to lift people out of poverty. Their exclusion from social, economic and political participation means that their specific needs in relation to innovation, including their inability to take on risk or invest, may not be considered.
- **Women tend to be more discriminated against than men. • Natural resources and agriculture provide opportunities for sustaining basic livelihoods for socially excluded people in rural areas.** The contribution of some socially excluded groups, such as women, are also essential in sustaining agricultural production on a much wider scale, making them principal agents of food security and household welfare in rural areas.
- **People who are economically and socially empowered are more likely to be able to tackle livelihood insecurity.**
- **Social exclusion can reduce the productive capacity – and rate of poverty reduction – of a society as a whole.**
- **Evidence suggests that women are more likely to spread the benefits from their improved livelihoods to the wider household** and their involvement in the value chain from research to sales, may often exceed the benefits achieved by men. For example, in Cote d'Ivoire the improvements in child health and nutrition brought about by a US\$10 increase in women's income would require a US\$110 increase in men's income.
- **Current environmental and economic crises are placing further pressures on vulnerable socially excluded people** who rely on natural resources for subsistence and income generation. Steep increases in food and fuel prices in recent years have eroded the purchasing power of poor households and raises concerns about food insecurity and malnutrition in many countries. Recent estimates indicate that that the crisis may push 105 million people in low-income countries below the poverty line, representing a loss of 7 years worth of poverty reduction – with a significant negative impact on poor socially excluded people. Evidence suggests that crises including economic crises and pressures caused by climate change are more likely to harm women, marginalised and vulnerable groups as they have less access to and control over resources, and are less protected by society and the law through their exclusion and discrimination (Quisumbing et al, October 2008). People are likely to focus their efforts on basic subsistence, rather than focusing energies on new innovations. It is therefore even more pertinent that these vulnerable people are socially and economically empowered to deal with these crises.
- **Whilst integration of poor people into markets and value chains, through innovation, has the potential to improve social and economic well-being of poor people, it must be recognised that value chains and markets are highly competitive and do not normally function in the interests of the poor** (Ponte, 2008). As well as empowering poor people to manoeuvre effectively within these markets more powerful stakeholders within the value-chain must have a greater 'stake' in considering the interests of socially excluded groups (Bolwig et al., 2008). In the long-term, measures and initiatives that mean to provide a better deal for the poor will not work if they do not challenge the basic factors underpinning the 'normal' functioning of a value chain (Ponte, 2008). Recent turmoil in global markets and the resulting negative impacts on local markets and lives of the weakest actors in the value chain emphasises this, whilst potentially providing opportunities for more equitable market dynamics to be established in the future.
- **RIU Logframe outputs clearly refer to the need to achieve impact for different social groups of poor people and to report on effectiveness of an innovations systems approach for different social groups of poor people, including women.**  
As a concept social exclusion can help the RIU Programme partners and coalitions to • focus on *groups of people* (rather than individuals) which leads on to looking at societies for causes and solutions. • focus attention on the *agency* – who is *being excluded and who is actively excluding others*
  - focus attention on the *institutional* structures that serve to include or exclude
  - focus on issues of *power*

The key recommendations that emerge from the stock take can be summarised as follows:

- **Prioritise impact for different groups** through the mechanism of the log frame, the development of a policy statement and subsequent 'How to' guide issued for programme/ project offices.
- **Analysis needed on capacities and needs of socially excluded groups** to enable effective communication with them. The institutional commitment needs to be determined to pave the way for the development of a strategy to analyse and access the most excluded groups.
- **Facilitation lacking for the distribution of the learning on engaging socially excluded groups** that it has access to. The recommendation outlined the dissemination of global 'know how' on how to access socially excluded groups, that a specific focal point was appointed and that a system be put in place to encourage learning about what works for specific groups, disaggregated by their exclusion variable.
- **Collect disaggregated data and analyse socially excluded groups and women.** Overall impact on these groups should be understood beyond this data through analysis.

### The RIU Website

Given the varied implementation methods and components of the projects and programmes, accessible communications on policy, learning and findings are paramount to fulfilling the communications aims of the RIU programme. The presence of a dedicated strategy, a communications team, a website platform and resources reflects a commitment to this.

The communication's strategy identifies two aspects of implementation, communications as a tool, and communications as a RIU research area. This review focused on the first aspect of this, however the findings may have implications for the second. The communications tools and content were implemented so the wider team "can communicate effectively with each other and our partners, and that we can share our plans, ideas, experiences, lessons and outputs with, and facilitate feedback from, a broad global audience."<sup>36</sup> Maintaining this ambition in practice is crucial to supporting consistent identification, analysis and learning on social exclusion throughout the project cycle.

The RIU website appears to be the central interface between RIU's staff, country programmes and projects and has undergone significant development since the initial MIL stock take. The present version of the website was launched in May 2010, with an improved interim site going live in mid 2009. This development has had a clear impact on the number of visitors, with a quoted 64,000 PDFs<sup>37</sup> being downloaded from the site to date. Whilst it is clearly being accessed by a large number of people, the published data does not indicate the origin of visitors or the information they sought out. It is not clear whether this disaggregation was sought or analysed to configure communications to reach different groups.

### C. Research Task Findings

#### Practice papers

The practice papers are a synthesis of key RNRSS lessons learnt and output reviews. Their inclusion in this area of the site is to provide programmes and projects with easily- accessible key learnings from the RNRSS studies and research. All of the papers were posted in 2008.

<sup>36</sup> RIU Website, 2011. *RIU Communications Strategy*. Available at: <<http://www.researchintouse.com/communications/01strategy.html>> [Accessed 4 April 2011].

<sup>37</sup> RIU Website, 2011. *Web Statistics January – July 2010*. Available at: <<http://www.researchintouse.com/resources/riu10web-stats-jan-july.pdf>> [Accessed 4 April 2011].

A total of 53% of the papers contained keywords or references to social exclusion or gender analysis, whilst 42% of the papers referred to examples of socially excluded groups or gave limited guidance on gender or social exclusion. Only one paper was focused specifically on gender and acknowledged the lack of guidance on how to deal with gender issues during the RNRSS. This paper gave a number of recommendations for the programme to include guidance on gender analysis and social exclusion and crucially acknowledges women and men have different priorities and ways of learning and sharing information. Across the body of practice notes, whilst not a focus, there is a clear vein of guidance recommending research and understanding of social contexts, power relationships and beneficiaries in the project's next phase.

This largely reflects what the MIL stock take findings indicated: 42% of documents (56 out of 132 documents) reviewed evidenced social exclusion consideration and 49% (66 out of 132 documents) gender consideration, though it should be noted the practice papers were published in the same year as the MIL stock take findings were published.

### **Discussion papers**

The purpose of the discussion papers is to document and share emerging findings and ideas in order to stimulate debate and discussion amongst RIU staff and external stakeholders. At the time of this review, just four comments were posted about two of the papers on the site, none of which referenced any terms related to gender or social exclusion. All of the papers were published on the site between July 2010 and January 2011.

Of all the discussion papers, 36% did not contain any keywords or references to gender or social exclusion. However 27% of the papers cite examples of projects targeting women or traditionally excluded groups. This can be broadly compared with some of the results of the MIL stock take which found 26% of documents identifying different groups suffering from social exclusion (22 out of 85 documents).

Across all discussion papers, just one paper sought to examine gender in depth, though this focused largely on a literature review and theoretical recommendations urging a shift from gender analysis to 'gender learning'. Further information on this paper is included below. Across the papers there is very limited analysis of gender or social exclusion in current projects and programmes. Though their purpose was to provide a basis for and promote discussion, there is little evidence to suggest this is happening.

### **Emerging lessons**

This section of the site's intention is to draw emerging lessons from across RIU programmes and projects and states that they are updated and refined as this information is gathered.

No lessons referred to gender or social exclusion.

### **Key word search**

There were 20 unique pages that cited the respective terms. 10% of these pages were planning reports that evidenced broad gender analysis being undertaken, whilst another 10% evidenced partnerships being created or learning sought on social exclusion or gender.

The majority of the top pages that came out in the key word search, 40%, were from the RNRSS Knowledge section of the site, indicating they were produced in or around 2008. 15% of the pages focused on gender disaggregated data that had been collected or in the process of being collected.

The one page viewed which evidenced obvious, ongoing discussion on gender issues was a blog post by Vera Mugittu, RIU's Tanzania Country Coordinator (See Box below)



### Gender Support from CRT

At a wider programme level, RIU has undertaken a literature review of gender and agricultural innovation, as a specific assignment to a Research Fellow met during the review. The research Fellow is Kenya based, however, the assignment was not specific to Kenya and while profiling 2 RIU case studies, did not use primary data from RIU or draw specifically on the experiences of RIU programmes in Kenya.

The RIU programmes in Tanzania and Nigeria were used as case studies. According to the Research Fellow, both programme's gender issues emerged as the programmes grew, and gender issues have been generalised into poverty issues and submerged in the programmes. For example, the paper's findings indicated that other factors impact on utilisation of resources for women, creating challenges for the empowerment of women. The conclusions also highlighted that there are gender related factors in women's environment, the households and social factors, which limit women's innovation capacity. The paper called *"Gender and Agricultural innovation. Revisiting the Debate through an innovation System Perspective"* (Discussion Paper 3) has been published by RIU. The conclusion from the paper raised the question: 'Why not look at Gender as it evolves in the programme – from a systems approach, and address gaps as they arise in a specific context'?

According to the research fellow, the paper has been used beyond RIU to include other people, especially academia, involved in research and in agriculture at all levels. The paper drew several responses for more information and questions on the subject of the paper.

### C. Analysis and Conclusions

#### Review of site in relation to MIL recommendations

After the production of the RNRSS Knowledge pages and the MIL Stocktake and Review recommendations (both produced in 2008), subsequent RIU website pages and resources have largely been light on social exclusion and gender advice and learning.

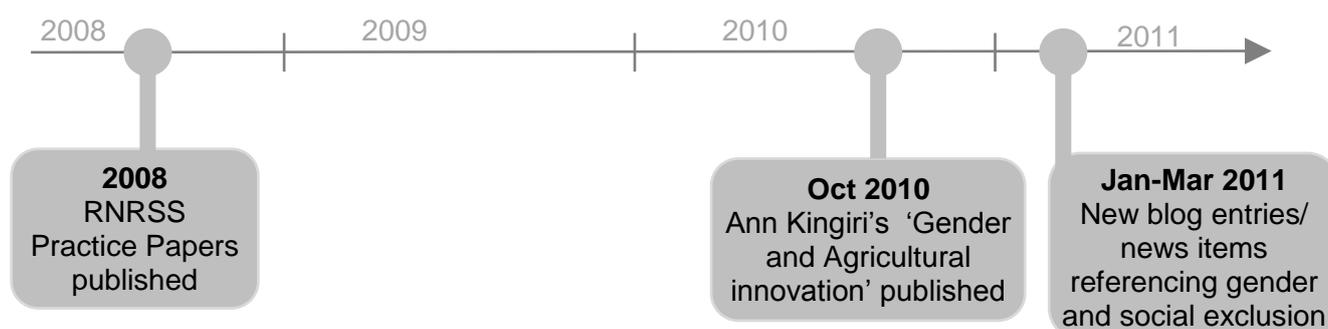
1. ***Gender and social exclusion learning generated from RNRSS and MIL has not been absorbed across the RIU programme.*** There was no obvious inclusion of a gender or social exclusion policy statement or subsequent guidance beyond the initial RNRSS Knowledge pages and related documents, though this

was a recommendation of the MIL Stocktake and Review. This area of the site outlines a number of learnings that do not appear to have been built on through subsequent guidance on the reviewed sections of the website. However without a dedicated focal point, or staff with specific expertise on gender and social exclusion, it should be recognised that developing guidance and ongoing learnings would be difficult to establish or maintain.

2. **Lack of disaggregated data.** There is limited reference to the citing of data according to social exclusion variables, though there is evidence that there have been pages that have cited gender disaggregated data in recent months. Whilst increased evidence of gender data is promising, the lack of social exclusion data and the fact that there is limited analysis of impact beyond the collection of this data, limits the potential for learning about the social dimensions of the programmes/ projects.
3. Across the areas reviewed, there are few and infrequent comments from stakeholders and sparse evidence of ongoing discussion. Whilst interactivity and dynamic content is outlined as a key part of the communications strategy, the site has not received many comments. The open discussion is the 'Updates' blog platform is well received and conducive to comments. The comments across the reviewed pages indicated they were mainly from RIU staff and stakeholders. This may be the intended primary audience, however this is not clear in the description of the page. It is also not clear whether any analysis has been done of the viewing data that disaggregates beyond visits, page views and hits<sup>38</sup> which would be an interesting analysis.

### Website content and frequency

When reviewing the timespan of content publishing, it should be noted that while there has been limited content uploaded on gender or social exclusion since the RNRSS learning pages were published in 2008, based on the pages reviewed there appears to have been a minor increase in content relating to gender and gender and social exclusion disaggregated data since October 2010. The timeline below broadly illustrates this:



### Expertise and guidance

In the context of the website not having an dedicated focal point for gender and social exclusion issues, content relating to these themes is isolated and relies on a few proactive individuals within programmes, for example Grace Jokthan (RIU Nigeria) attending a ILRI gender and market oriented agriculture workshop earlier this year or Vera Mugittu in Tanzania raising issues in her blog. In addition there is no obvious expertise that within the programme that would have the capacity to fulfill the remit of a focal point. In the absence of this expertise or focal point, consequently there don't appear to be any obvious tools, formal

<sup>38</sup> RIU Website, 2011. *Web Statistics January – July 2010*. Available at: <http://www.researchintouse.com/resources/riu10web-stats-jan-juy.pdf> [Accessed 4 April 2011].

discussions or feedback cycles about these issues that were recommendations of the RNRSS lessons and the MIL study recommendations.

In conclusion, the RIU research does not provide sufficient evidence or learning in the areas of gender and social exclusion. This may be because gender and social exclusion has not been an explicit focus of the RIU programme and the different RIU initiatives have adopted local strategies for understanding or analyzing the social development and gender aspects of the case studies which have not been aggregated or analysed at a programme level. Whilst the frequency, depth and type of content is inconsistent, in the past six months content and evidence of discussion related to these themes has increased. The volume of this recent increase however may not be sufficient enough to truly engage a wide range of stakeholders across different countries beyond RIU programme staff. For the website to function as an effective guide and ongoing learning tool for gender and social exclusion issues for all stakeholders, a strategy needs to be established, a focal point appointed and encouragement of ongoing engagement of all stakeholders extensively promoted.

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## **Annex 8.**

### **Evidence on the social development findings - case studies**

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#### **Contents:**

#### **Summary of Social Development lessons from the Case Studies**

#### **Africa Country Programmes**

Nigeria

Sierra Leone

Rwanda

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Shujaaz

#### **Asia Innovation Challenge Fund**

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## Summary of the Social Development lessons from the case studies

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This summary outlines the lessons learned from the RIU case studies innovation programme and makes suggestions for future design and implementation of innovation programmes. Based on our reviews of the eight case studies, we have identified various steps that should be undertaken within the design and implementation stages of an innovation programme, in order to ensure that the needs of poor and marginalised people are adequately understood and addressed and that empowerment and poverty reduction impacts can be achieved.

### **Ensuring that poor and marginalised people have increased access to innovations requires careful poverty and social analysis.**

This can increase understanding of the economic, social and cultural context, highlight barriers to uptake for poor men and women, and inform the development of the most appropriate delivery mechanisms, institutional configurations and monitoring tools and approaches. This kind of analysis was largely absent from most of the case studies, with some exceptions. In Sierra Leone, the Country Programme consulted with a range of stakeholders in order to define the particular groups of poor people they wanted to reach. This resulted in an explicit focus on youth and gender equality. The majority of Country Programmes did not collect any baseline data relating to social issues, nor was any data gathered as part of a monitoring process.

In the Asia case studies baselines existed which captured data on a range of socio-economic indicators, and disaggregated data related to gender and other marginalised groups. These were used to inform the selection of project areas, and targeting of input distribution, but did not influence the programme beyond this. As a result, programmes in most of the other case studies (Rwanda, Nepal, Bangladesh), had implicit but not explicit social development data and analysis, nor did they form an integral part of the workplan.

None of the case studies seemed to involve a social scientist at the design stage. None of the country programmes or Asia projects employed staff members with a specific mandate to ensure the gender and social exclusion issues were addressed in the programme.

### **A Needs Assessment phase should include consultation with a wide range of stakeholders to identify a common vision for change.**

This is particularly in the case of innovation platforms which are multi-level, multi-stakeholder responses to addressing a complex problem within the value chain. The Sierra Leone programme for example, included consultation with various groups, which led to the adoption of a clear pro-poor focus, as well as the identification of particular groups that the programme would aim to benefit. The programme would have further benefited from promoting the sustained involvement of stakeholders in the design process, implementation and monitoring.

### **Addressing gender and social exclusion issues must go beyond targeting women and excluded groups to receive inputs and promoting their representation in organizational structures.**

Almost all of the case studies included a 'group' component as a way of institutionalising innovation uptake. There is clear evidence that being part of a group developed farmers' capacities to participate, ask questions, discuss issues. Being able to speak as a group also increased farmer's voice vis-a-vis external stakeholders. However, community-based institutions are not inherently more inclusive and are likely to reflect existing political and social dynamics and inequalities (e.g. the predominance of men or certain ethnic groups). Poor people often do not have the same capacity, time and resources to engage in community-level processes, and approaches that focus on community structures run the risk of further marginalizing the poorest. Women in particular find it

more difficult to engage in community-based institutions and so, understanding of how poverty and power relations intersect at the community level, and specific and appropriate measures to ensure their participation are needed. In both Rwanda and Nepal, although government policies supporting greater representation of women in public bodies may have led to increased participation, there is little evidence that the group dynamics and the extent to which women and minority group members have been able to translate this into effective participation was monitored. In fact, the role of the 'group' as potential gate-keeper of the programme's benefits risks reinforcing social inequalities, and so it is important to monitor closely that it is not just local elites that benefit.

The FIPs programme in Kenya is unique in that it aimed to target individual farmers who, by virtue of not being members of groups, were not traditionally targeted by extension workers and input supply companies. None of the programmes has explicitly considered the issue of accountability to users, and limited attention has been paid to poor farmers' ability to demand transparency or accountability from the groups that they participate in.

**Working through community based organizations and individuals promotes uptake as these agencies often enjoy credibility and trust within their communities.**

It is challenging to try and establish direct relationships with poor and marginalised people, who are often hard to reach, live in remote areas, and can often be 'invisible'. Many RIU programmes have adopted the approach of working with community groups which have existing relationships and networks at the community level. The role of 'individuals' and local community groups does seem to have been critical to establishing trust amongst farmers and community leaders, encouraging farmers to feel comfortable about participating in a new innovation. It is important to ensure that partners are truly representative of their communities.

**Specific strategies are needed that will increase the opportunities for women's involvement and benefit. There should be based on an understanding of various factors that need attention in terms of women's inclusion in innovation programmes. These include but are not limited to:**

- Time available (over and above other duties and commitments),
- Ability to make decisions within the household,
- Ability to control assets & the revenue from them,
- Level of education to enable the to take part of training and meetings,
- Any cultural/social barriers to overcome in order to voice news and speak out in front of men and officials,
- Ability to hire labour if necessary (trust, control, money),
- Mobility and capacity to travel,
- Knowledge and networks,
- Access to governance structures,
- Ability to resist others perception that you are doing well and jealousies.

**The strengthening of social capital – in its bonding, linking and bridging forms – has been one of the most noticeable impacts across all the case studies.**

The group mobilisation approach of the majority of the RIU case studies has focused on bringing like-minded groups, such as farmers, together, as well as the various actors in the value chain. There is considerable evidence that this has enhanced relationships within groups, as well as linkages with other actors at the community and government level. However, none of the programmes carried out social capital baselines, which would have illuminated the social context of the project areas (including the linkages with conflict dynamics) the power relationships between actors, and highlighted any processes of exclusion that the project should either aim to address, or try not to

reinforce. Nor was any assessment made of communities' capacities, skills, commitment to working together, which has important implications for the sustainability of the models.

**Innovation as a process can only emerge from risk-taking, and attention to risk is critical for giving poor people equal opportunity to benefit from new technologies.**

Programmes that create demand by offering free or subsidized inputs must ensure that their activities do not expose people, particularly already vulnerable groups, to more risk. None of the programmes reviewed appeared to have undertaken risk analysis, or developed risk mitigation strategies. Some programmes aim to address risk by focusing on the provision of information that allows farmers to make informed choices. However none of the programmes incorporates any form of 'insurance' in the event of large-scale losses resulting from the innovations. Neglect of risk can take various forms – promoting inappropriate technologies; increasing farmer dependency on expensive or unsustainable technologies (Kenya, Sierra Leone); or creating awareness about benefits of a technology that is not accessible (Bangladesh).

**Knowledge dissemination and demonstration of the benefits of new technologies can be very effective in promoting uptake.**

Many of the programmes incorporate knowledge dissemination approaches which aimed to increase farmers' understanding of various agricultural challenges, as well as awareness of the possible solutions. Increase in knowledge and awareness was cited across many of the case studies as one of the principal benefits of the programme. However in many cases the medium- to long-term impacts of knowledge dissemination activities are not monitored. As a result, there is little learning about how farmers are using the knowledge they have gained from programmes; the extent to which such activities need to be repeated in order to increase commitment to innovation; whether ongoing knowledge dissemination/ demonstration is an effective way of mitigating risk, etc. In those programmes, where one-off trainings and provision of inputs is not accompanied by wider institutional transformation, the issue of maintaining awareness levels and momentum must be considered. In order to monitor adoption, monitoring must be sustained beyond the limited time-frames of projects.

**Innovation adoption is increased when delivered by farmers for farmers at the village level.**

In many of the case studies the innovation was demonstrated by local village based farmers who were selected as innovation messengers. These farmers provided a link between the innovation promoter and a network of other farmers and were given incentives through inputs and training. The constant availability of the 'neighbourhood farmer' and the demonstration effect of trialling crops or techniques on their own plots is powerful and persuasive and presents an effective innovation transfer mechanism.

**Understanding the changing context and addressing emerging issues and challenges is critical to establishing acceptance for innovation, and ensuring that innovations remain relevant.**

Ongoing monitoring is critical for signalling where change is occurring, whether the results are intended or unintended, and positive or negative. Ongoing monitoring also allows programmes to assess the extent to which their activities are achieving the desired results, and highlights opportunities for learning and adjustment. Many of the case studies the evaluation reviewed did not undertake baseline. Even those that did, in most cases, these studies were considered to be for comparative purposes only, i.e. to measure against end line data. None of the programmes monitored the social impacts on an ongoing basis. As a result, various opportunities for making adjustments in order to make programmes more inclusive, effective and/ or sustainable were missed. Various opportunities for learning about barriers to uptake, and factors which encourage sustainable adoption were also not taken up.

**Farmers should be seen as innovators in themselves, and initial uptake as a stage in the process of innovation, and not the end.**

Those programmes which focused on developing commodity platforms clearly understood that innovation is not about facilitating the supply of new knowledge from research to farmers, and were focused instead on providing opportunities for the various stakeholders involved in a value chain to make markets work and production and marketing issues in complex farming systems. In those programmes where the focus was on providing knowledge and demonstration, uptake by farmers was seen as the end goal in the innovation process. Farmer knowledge and expertise should however be seen as an asset that can contribute to innovation. Few of the country case studies monitor beyond immediate outcomes, such as participation in training, receipt of seed kits, attendance in platform meetings. The focus should be on monitoring what they do with the inputs once they have been provided them, and how they tailor them to suit their needs. There has been limited learning on the calculations that poor farmers make when deciding to invest in innovations.

***Summary lessons for future design***

*Establishing context and baseline* is an important first step to designing a programme. Conducting a rigorous poverty and social analysis of as early as possible in project preparation, identifies the key social development and poverty reduction issues that should be further analysed and considered during the design phase. This analysis helps also to identify the key issues, the people who are likely to be affected both positively and negatively, and the constraints and barriers for the poor and excluded. It also enhances understanding of factors such as social organizations and networks, livelihood patterns and resource use, knowledge base, and leadership patterns, as well as issues of absorptive capacity constraints, and gender gaps.

This should be followed by a process of *issue and target setting for outcomes*, which involves a wide range of stakeholders in identifying market blockages, required incentives, and desired outcomes. The development of objectives, outcomes, indicators, and measures should be undertaken on the basis of this meaningful engagement with stakeholders including those from poor and marginalised groups. Effective *implementation* requires ongoing monitoring against baseline indicators to identify what kinds of changes are occurring and where. Ideally indicators that measure changes in relationships beyond structural change such as power, trust and responsiveness should be emphasised. In an innovation programme, this should be undertaken with a view to identifying opportunities for learning and adjustment.

The key elements of the design and implementation of an i-innovation programme should include the following:

**Step 1 & 2 =  
development of Theory  
of Change and i-  
innovation design.**

#### **Establish Context and Baseline**

- Social capital baseline
- Institutional Analysis
- Economic and Market analysis (ag. sector and linkages)
- Risk analysis
- Empowerment and poverty baseline

#### **Issue and Target Setting for Outcomes**

- Market blockage identification
- Consultation with stakeholders
- Identifying incentives, inclusion and insurance within system
- Detailed design of programme i-outcomes
- Participation and design of monitoring and recruitment of monitors



#### **Ingredients for Implementation**

- Delivery of Outputs
- Monitoring of Outcomes
- Self-adjustment and learning

## Social exclusion, gender and empowerment: analysis of the Nigeria country evaluation data

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### A. Background

The Nigerian government has invested highly in agriculture through federal funding of up to 15 National Research Institutes (NARI), federal colleges of agriculture, specialized agricultural Universities and faculties<sup>39</sup>. The Agricultural Research Council of Nigeria (ARC�) was established in 2007 with a number of roles, including a role to advise the federal government on national policies and priorities on agricultural research, training and extension. RIU-Nigeria was set up in the same year and consequently opened up formal relations with ARC�, with the RIU office currently hosted by ARC� through a memorandum of Understanding. As well as facilitating links with government, the ARC� also facilitates RIU to access and cooperate with NARIs, whose mandates are directly related to intervention areas of RIU-Nigeria Programme.

According to RIU-Nigeria, their programme activities have been ‘experimental’. Focused in the three subsectors of aquaculture, cassava and cowpea/soybean and livestock feed, the programme largely focuses on the following:

- Facilitation of networking among a range of stakeholders, bringing together farmers’ associations, women’s groups, processors, traders, technology fabricators, scientists, policy makers and local government officials. This brokerage role includes facilitating discussions to address bottlenecks.
- Engagement with relevant national policies, institutions, processes and priorities. This includes knowledge management involving compilation of research outputs from 15 agriculture institutions, sensitization of NARIs on experimental approaches to facilitate innovation, working with key agricultural research institutes to address key innovation challenges.
- Collaboration with development agencies working in targeted value chains.

The RIU Aquaculture Innovation Platform was selected as the focus for the evaluation team’s activities in Nigeria. RIU’s key relationships with research institutes for this platform are with the National Institute for Oceanography and Marine Research (NIOMA) and the Nigerian Institute for Freshwater Fisheries Research (NIFFR).

Estimates indicate that the aquaculture industry in Nigeria has a value of 22 Billion Niara<sup>40</sup>. Fish meal importation is estimated at close to 68.8 million kgs, valued at over US \$40 million. Fisheries have a substantial social, economic, nutritional and food security importance, and contribute to employment creation, income generation, provision of valuable animal protein, rural development and foreign exchange inflow through export of shrimp and smoked fish. The Master Plan 1999-2010 for the Presidential Committee on Fisheries and Aquaculture predicts that aquaculture development will help change the economic structure in rural areas, create employment, increase farmers’ income and improve livelihoods.<sup>41</sup>

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<sup>39</sup> Ugbe P. Utiang, October 2010, It may take a little while ... insights on Agricultural Research for Innovation and Development in Nigeria. RIU Discussion Paper Series.

<sup>40</sup> NIOMR, Interim Report on Fish Meal Production From Low Value Tilapia.

<sup>41</sup> NIOMR, on Federal Ministry of Agriculture(2005), Report of the Presidential Committee on Fisheries and Aquaculture, Federal Ministry of Agriculture and Rural Development.

However, the industry in Nigeria is severely restricted by a lack of suitable and standardised aqua feeds. As a result, over 80 percent of cultured fish produced in Nigeria relies on imported floating feed, and feed constitutes at least 70 percent of the production cost of cultured fish<sup>42</sup>. The result is that production costs for aquaculture are high, elevating fish prices and making them unaffordable for many low income families in Nigeria.

RIU-Nigeria has three levels of intervention in the aquaculture platform, at farm level, post harvest value addition and market development and policy related activities<sup>43</sup>.

**Table 1 illustrates the RIU Nigeria aquaculture platform activities<sup>44</sup>**

<b>Levels of Intervention</b>	<b>Farm Productivity</b>	<b>Post Harvest Value Addition &amp; Market Development</b>	<b>Policy Related activities</b>
<b>Activities Facilitated in the Aquaculture Platform</b>	Farmer Access to certified fish fingerlings from Authentic breeders, fish brood stock and acquired through fish farmer associations, among women groups, training and capacity building on integrated aquaculture-horticulture management, business management, linkage to financial services	Facilitation of capacity and skills development in fish processing (smoking, filleting, packaging, export); business management, entrepreneurship, linkage to financial services, market development services	Working with 2 mandate research institutes (NIFFR & NIOMR) to build local capacity for production of fish meal for acquisition and use by private sector based fish feed producers, thereby aiming to reduce over reliance on imported fish feed

## **B. Headlines: Impact and Inclusion**

- RIU-Nigeria have managed to include both male and female farmers in platform activities, including training sessions;
- Male and female farmers report increased knowledge and new contacts with suppliers and buyers as a result of networking opportunities at training sessions and platform meetings;
- As a result of improved knowledge and networking, farmers have reported decreased losses and increased yields in fish production. As such, they were experiencing higher incomes and had greater hopes that aquaculture was an industry they could benefit from in the future.

## **C. Description of the intervention through a social development lens**

The overarching vision for RIU-Nigeria has a clear focus on poverty reduction:

<sup>42</sup> Ogundipe S.O. Participation in the RIU-Nigeria Programme Activities on Building Local Capacity for Aquaculture Fish Feed Production in Nigeria, Rebson Agric Enterprises Ltd, Zaria.

<sup>43</sup> Strategy of the Research Into Use programme – Nigeria, prepared by the Nigeria Country Strategy Development Team, May 2008.

<sup>44</sup> Source: Ugbe P. Utiang, October 2010, It may take a little while ... insights on Agricultural Research for Innovation and Development in Nigeria. RIU Discussion Paper Series.

*“[to] see widespread adoption of research-based knowledge in the renewable natural resource sector to reduce poverty and improve livelihoods of Nigerians<sup>45</sup>”.*

As such, the RIU country strategy was designed with explicit consideration of the commodities that would have an impact on poor people and women. According to the country strategy, cow pea and soybean production are more prevalent in poorer areas, and are also commodities where women are more dominant in cultivation and processing. Likewise, cassava is a major staple crop and cuts across gender. In the aquaculture value chain, it is widely accepted that women play an important role in the processing and sale of fish and dominate the retail fish business.

In relation to the aquaculture platform, specific objectives include upscaling production of high quality and affordable fish meal by at least 30 percent and making protein available to 30 million people who cannot afford table fish<sup>46</sup>. The central idea is that by reducing farmers’ expenditure on imported fish meal by using locally produced fish meal from low value tilapia and clupeids, fish and fish-products will be more affordable to a wider population, including those on very low incomes.

#### **D. Evidence and Findings using the *i*-Innovation Model**

##### ***Incentives***

###### ***Inputs***

As described below, inputs provided by RIU through the aquaculture programme fall into two categories: financial inputs and capacity building inputs.

###### *Financial inputs*

RIU-Nigeria has provided direct investment in research conducted by Research Institutions (NIOMR and NIFFR) to develop inputs intended to either reduce the costs of production for fish farmers, or to add value to fish post harvest. This includes, for example, the development of lower-cost fish meal and the development of affordable smoking kilns and dryers.

###### *Capacity building inputs*

RIU-Nigeria has also delivered a series of trainings to various members of the aquaculture platform who represent different groups in the value chain. This includes trainings on integrated aquaculture-horticulture management, business management, accessing financial services, and skills training in post harvest activities such as fish processing, for example, smoking, filleting and packaging and exporting.

###### ***investments***

A key aspect of the approach adopted by RIU-Nigeria is to stimulate interest among private sector companies in the innovations being developed through RIU’s partnerships with the research institutes. Animal feed producing companies have already ensured a market for the research innovations and two of these companies have established formal collaboration with the research institutes. This is part of a longer term strategy to ensure future supply of low cost fish meal and other innovations to farmers once RIU’s involvement has come to an end. Overall, interviewees from the private sector expressed a readiness to take forward the RIU initiatives

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<sup>45</sup> Strategy of the Research Into Use programme – Nigeria, prepared by the Nigeria Country Strategy Development Team, May 2008.

<sup>46</sup> DFID RIU Nigeria Learning Event, 9-11 November 20101, Report.

### **insurance**

Unlike some other RIU country programmes that have attempted to use innovation platforms to reinvigorate entire sectors, RIU-Nigeria, given the country context, has instead attempted to support new innovations to replace existing inputs within established value chains. As such, the activities of RIU-Nigeria could be seen as lower risk than RIU activities in some other countries.

Arguably, RIU's activities in Nigeria were designed to address existing vulnerabilities of various groups within the aquaculture value chain, including fish farmers whose livelihoods were often negatively affected by supply of poor quality fingerlings and fish meal which impacted on yield. In brokering relationships with genuine suppliers, and working with research institutes to reduce the cost of inputs such as fish meal, RIU has attempted to reduce the risk which farmers and others are exposed to.

### **Institutions**

#### **Individuals**

Members of the aquaculture platform are divided into clusters, depending on their position within the value chain. For example fish farmers form one of the clusters. Each of these clusters is headed by a Cluster Lead, who are responsible for recruiting more stakeholders to the platform, and facilitating linkages between the different clusters. These Cluster leads play a crucial role in the aquaculture platform and the coordination and ultimate success of activities within it.

#### **inclusion**

As noted above, the initial selection of the innovation platform was guided by its potential to reach poor people and to ensure the participation of women. In terms of ensuring inclusive participation in platform activities, there is no evidence that the participation of different social groups has been particularly encouraged or monitored, apart from inclusion on the basis of gender.

On the ground the programme works with different categories of stakeholders in the aquaculture value chain, including cooperatives, women's groups and individual farmers (both men and women). For example, through the six farmer Aquaculture Groups working with RIU, the programme has been able to reach a total of 432 farmers, out of which about 56 per cent (240 farmers) are women and 44 per cent (192 farmers) are men.

**Table 2: Aquaculture: Participation by Gender in RIU Aquaculture Events**

<b>Activity</b>	<b>Men</b>	<b>Women</b>
Inauguration Meeting of Aquaculture Value Chain	35	24
Aquaculture Zoned Workshop Idah - Kogi State	42	29
Aquaculture Zoned Workshop Zaria - Kaduna State	20	36
First Stakeholders Meeting on Fish Feed – Top View Hotel Abuja	11	2
Second Stakeholders Meeting on Fish Feed – Top View Hotel Abuja	6	2
Entrepreneurial Skill Acquisition Training Workshop – National Institute for Oceanography and Marine Research Lagos	26	44
<b>Total</b>	<b>140</b>	<b>137</b>

Source: RIU Nigeria computed by RIU from Meeting records for the RIU Evaluation

Trainings and other activities organized by RIU-Nigeria have actively targeted both men and women in the various categories and levels of the value chain. From the 6 activities organized by RIU below, a total of 277 participants have been involved. Out of these, men constitute 51 percent (140) and women constituted 49 percent (137) of the direct beneficiaries from the RIU events (see table 2 above).

### ***institutions***

RIU-Nigeria has adopted an approach of working with existing institutions, such as the NIOMR and NIFFR research institutes, and establishing new institutions which bring different groups of stakeholders together. The most important example of this is the aquaculture platform itself, which brings together various stakeholders from across the value chain. Within the aquaculture platform, various groups within the value chain have been brought together to form Clusters. These Clusters are arguably separate institutions in themselves: meeting regularly, working together to identify challenges and opportunities, receiving focused trainings and coordinating relationships with other Clusters. Importantly, although formed of stakeholders involved in similar activities (eg fish farmers, or those involved in marketing), the clusters have brought together individuals and organisations, that although likeminded, have not necessarily worked together before.

### ***influence***

RIU-Nigeria's approach has been underpinned by a commitment to work with both government and private sector stakeholders in order to ensure their long term interest and involvement. This has involved an ongoing process of influencing and relationship development. Central to the ability of RIU-Nigeria to influence government has been the strategic decision to base the RIU office in the ARCN, which is designed to advise the federal government on national policies and priorities on agricultural research, training and extension.

One of the examples of government recognition and buy-in to RIU is the fact that the Government is going to use the structures created by RIU for the Aquaculture platform to reach farmers through the delivery of the West African Agriculture Productivity Programme (WAPP). The WAPP intends to reach two million farmers and will use the RIU network to promote the programme and reach out to farmers<sup>47</sup>.

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<sup>47</sup>Abuja, NIGERIA, February 4<sup>th</sup> 2011, Lagos, Interviewee: James O. Apochi, Consultant, Mediatix Limited, Interviewer: Hope Kabuchu (SDD)

**Table 3: Summary table of i-Innovation in the Aquaculture Innovation Platform**

The I's	Commentary
<b>1. Incentives</b>	
Inputs	<ul style="list-style-type: none"> <li>• Fingerlings</li> <li>• Support to Research Institutes.</li> <li>• Trainings for various value chain clusters, including farmers</li> </ul>
Investment	<ul style="list-style-type: none"> <li>• Focus on investment from government and the private sector</li> </ul>
Insurance	<ul style="list-style-type: none"> <li>• Reduced vulnerability as a result of brokering relationships with legitimate suppliers</li> </ul>
<b>2. Institutions</b>	
Individuals	<ul style="list-style-type: none"> <li>• Cluster group leaders within the platform</li> </ul>
Inclusion	<ul style="list-style-type: none"> <li>• Choice of Innovation Platform based on its potential to reach to the poor and participation of women</li> <li>• RIU trainings and skills development for Aquaculture platform members have involved participation by men and women.</li> </ul>
Institutions	<ul style="list-style-type: none"> <li>• Aquaculture Innovation Platform</li> <li>• Value chain Clusters</li> <li>• Working to strengthen existing research institutes</li> </ul>
Influence	<ul style="list-style-type: none"> <li>• Relationships with government and private sector, including the Federal Department of Fisheries.</li> </ul>

**Impact**

Given that the Aquaculture Platform was established less than two years ago, it is in many ways too early to capture impact as a result of platform activities, and the extent to which farmers' involvement with RIU has, for example, contributed to their empowerment. Nevertheless, farmers interviewed as part of this evaluation did report certain benefits as a result of their participation in the aquaculture platform so far. In the first instance, many of these centre on improved knowledge and networking and can be divided into those that relate to human capital (eg skills development), social capital (eg improved networks and relationships) and physical capital (eg increased yields and higher incomes as a result).

***Human Capital – attitudes and skills development***

For many farmers and farming groups, their involvement in RIU platform activities was marked by a growing confidence in the aquaculture industry. This included strengthened confidence among farmers that aquaculture was a sector that they are likely to benefit from.

Many farmers also believe they have benefited in terms of skills development as a result of the investments RIU-Nigeria has made in training and capacity building activities for various members of the aquaculture value chain, including farmers. This includes improved knowledge and skills in relation to fish farming, for example on reducing losses through better management of fish ponds. It also includes knowledge about packaging, marketing and exporting products. Adopting a training-of-trainers approach, this investment in skills development is likely to have benefited a large number of farmers, with training participants going on to train other members of their group.

*“With the comprehensive training of the trainers coordination and mentoring conducted by RIU, our association learned so much in coordinating complete value chain in aquaculture such as fingerlings breeding, feeds production, grow out, processing and marketing. We*

*now know how to add value and quality to our finished products... we seized the opportunity to train a lot of our members that could not be present in the previous trainings<sup>48</sup>*

### **Social Capital – improved networks and strengthened relationships**

#### *Bonding social capital – collaboration within and between farming groups*

Evidence from interviews suggests that the involvement of farming groups in the aquaculture platform has led to stronger relationships within farming groups. Some of the groups explain that they have felt rejuvenated by participating in RIU activities, and that engagement in the platform has encouraged them to be better organised. This has tangible benefits for group members, including improved collaboration in marketing fish and collectively agreeing prices. Farmers explained that they had welcomed the opportunity to work together to address common challenges and to collectively discuss ways to address them.

#### *Bridging social capital - collaboration between different parts of the value chain*

Through RIU trainings and platform meetings, members of the platform have been exposed to other members in the value chain. This has strengthened their networks and knowledge about how different parts of the value chain work. For example, some of the training sessions have linked farmers to private sector companies involved in feed processing and breeding. In addition, farmers and private sector companies have been able to interact with trainers from the research institutions. There is also evidence that these direct interactions have enabled farmers to tap in to wider networks and make new contacts, as well as exchange technical advice and access materials.

*“The group has linked up with other farmers groups and cooperatives such as Fishhouse in Kaduna and the Air force Women Cooperative in Kaduna. They are in touch with producers of Fingerlings such as Ojodu Farm. They have made contact with Feed meal producers such as Feed masters. Members have also made individual contact to NIFFR for advisory support with establishment of a Hatchery<sup>49</sup>”.*

### **Physical Capital – improved yields, livelihood prospects**

As a result of increased knowledge and new skills developed through RIU training sessions, and the improved networks and relationships that have been developed as a result of these interactions, farmers believed they were now benefiting financially. In particular, the access which these new networks had provided to reputable suppliers of inputs such as fish meal and fingerlings meant that farmers had experienced a reduction in losses and as a result were achieving higher yields.

Furthermore, the trainings had led to improved management of fish farms which had also led to increased yields. For example, one female farmer said she lost 700 fish to disease and overcrowding before the RIU training. Now her yields have increased and are currently up to almost 100 percent loss-free.

## **E. Conclusions and Lessons**

A number of lessons can be drawn from RIU’s work on the aquaculture platform, which can be used to inform similar work in Nigeria and elsewhere in the future:

<sup>48</sup> Fish Farmers & processors Association of Nigeria, Progress Report of 19/01/11, from President and General Secretary.

<sup>49</sup> Zaria Fish Farmers Group

**1. Look for opportunities for low-risk 'quick wins'**

In developing the Aquaculture Innovation Platform, RIU-Nigeria sought to address bottlenecks in an existing industry which was, to a certain extent, well established and functioning relatively well. By focusing on specific challenges such as supply of fish meal and fingerlings and investing in new innovations that could improve existing practices, RIU-Nigeria has managed to contribute to significant change in a relatively short timeframe. This example illustrates that, in countries where agricultural infrastructure is relatively well developed, innovations which replace existing inputs in an established value chain can represent 'quick wins'. In addition, by targeting innovation to improve products which farmers are already purchasing risk to livelihoods are arguably lower than innovations which require farmers to take up new activities.

**2. Place yourself strategically and think about sustainability at the start**

RIU-Nigeria being set up at the same time as the ARCN represented a strategic opportunity for the two organizations to develop a close working relationship. RIU-Nigeria had clearly considered the need for government and private sector involvement early on in order to ensure that RIU initiatives could be taken forward once the programme comes to an end. In so doing, RIU has been able to focus on playing a more catalytic role. Given the need for RIU to engage with government, and ARCN's role in influencing government policy, the relationship between the two organizations was particularly strategic. This emphasizes the need for those promoting new innovations to think imaginatively about partnerships at inception phase.

**3. Use capacity building activities as an opportunity for networking and relationship development.**

The training sessions and platform meetings delivered by RIU-Nigeria have clearly provided an important opportunity for farmers and other groups to expand their knowledge of new techniques and innovations and to learn more about the activities of others in the value chain. However, in addition to focusing on skills and knowledge, these trainings and meetings have also been designed as opportunities for networking and relationship development. As a result, members of the platform have described the new contacts they have developed and fish farmers in particular have talked about the new access this has given them to certified suppliers and buyers. Because of this, farmers are now reporting reduced losses and increased yields. This clearly demonstrates the importance not only of using capacity building activities to transfer knowledge, but as opportunities to broker new relationships that can help to ensure that innovations are put into use, and ultimately have a positive impact on poor people's lives.

## Social exclusion, gender and empowerment: analysis of the Sierra Leone country evaluation data

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### A. Background

The strategy for the Sierra Leone country programme was based on initial consultation with a range of stakeholders and has since undergone a number of iterations and subsequent changes in focus. The current programme is largely centered on the development of the Partnership in Agricultural Innovation for Development in Sierra Leone (PAID) and many of the programme's other activities are delivered through the PAID partnership.

Established in 2008, PAID is a membership-based social business network of organisations and enterprises and is essentially a 'knowledge marketplace'<sup>50</sup>. PAID was designed to bring together a range of organizations working in the agricultural sector and to facilitate networking and coordination between them. Members include NGOs and CBOs, farming organisations, public sector organisations, research institutions and private sector enterprises. Members must pay an initial joining fee and an annual membership fee in return for opportunities to network, share information and, for some, participate in other RIU commodity platforms. The intention is that PAID will deliver the institutional development that will drive the rest of the RIU programme, including the programme's commodity platforms.

One of these commodity platforms is the Poultry Feed Innovation Platform. RIU, in consultation with other stakeholders, identified that the majority of eggs bought in Sierra Leone are imported from India, Brazil and the Netherlands, meaning that most eggs are at least two weeks old by the time they are eaten and are often of poor quality. Locally-produced eggs are usually much fresher and of far higher quality, but are in short supply and are more expensive, meaning they are usually sold to wealthier consumers or larger restaurants and hotels. RIU went on to identify a series of bottle necks which prevented both increased production of local eggs and decreased production costs that could be passed on to the consumer. It was calculated that feed costs currently account for approximately 60-70 percent of total poultry production costs in Sierra Leone, with the unreliability of feed supply identified as a major bottle neck.

One of the key areas of activity for the poultry feed platform was to encourage the uptake of Western Yellow maize production by farmers in three districts in Sierra Leone in order to stimulate supply of maize as one of the main ingredients of poultry feed.

As the RIU Country Coordinator for Sierra Leone explained:

*"RIU wanted to ensure the poultry sector has access to uninterrupted feed supplies. So we needed also to work with maize producers. We facilitated access to the improved maize variety Western Yellow and also appropriate stocks of fertilizer for more than 16,000 farmers - more than half of whom were women. With better cropping and higher yields this intervention should help to create a constant supply of maize for the poultry industry. By brokering access to the poultry sector, maize farmers have seen a dramatic increase in their incomes."<sup>51</sup>*

### **Focus of the RIU evaluation in Sierra Leone**

The poultry feed platform was selected as the focus for the evaluation team's activities in Sierra Leone. However, it is clear that PAID plays an important overarching role in the delivery of the poultry feed platform and other RIU activities. Furthermore, a number of the interviewees consulted

<sup>50</sup> Partnership in Agricultural Innovation for Development (PAID), draft strategy, May 2009

<sup>51</sup> RIU Sierra Leone website, accessed on the 1<sup>st</sup> April 2011

for this evaluation used 'RIU' and 'PAID' interchangeably and made little distinction between the two. As a result, while this country case study is primarily focused on the poultry feed platform, it also makes some references to the PAID platform, where appropriate.

## B. Headlines: Impact and Inclusion

- RIU-Sierra Leone has achieved a diverse membership in terms of the CBOs and NGOs which are participating in the poultry feed innovation platform. This has enabled RIU to distribute inputs such as seed and fertilizer to poor farmers, including women and youth.
- Although it is very early days, farming groups are already experiencing clear benefits from participating in the poultry feed platform, including increased income from the sale of maize and diversified diets through eating the maize and through buying other food products with the income generated.
- Farming groups also report improved social capital as a result of their participation in poultry feed platform activities. In particular that:
  - Relations within farming groups have improved as they have needed to work as a team to produce a new labour-intensive crop;
  - Farming groups now have a closer relationship with the CBO or NGO who brokered their relationship with the platform;
  - Farming groups have established new relationships with the district council and extension services as a result of growing a potentially high-yield cash crop through the platform.

## C. Description of the intervention through a social development lens

### Objectives

RIU project documentation and information on the RIU-Sierra Leone website explicitly emphasizes two key ways in which the Poultry Feed Platform will impact on the lives of poor people: first by increasing income levels among farmers, particularly women and youth, who are growing Western Yellow maize, and second by improving poor people's access to protein through good quality poultry and poultry-related products<sup>52</sup>.

*"The aim is to achieve benefits to the lives of users – getting actual money into the pockets of the poor".<sup>53</sup>*

Early consultation with stakeholders in developing the original strategy for the RIU country programme led to a thematic focus on 'engaging youth meaningfully in the development process in a post-conflict environment'.<sup>54</sup>

*"Everyone involved believed that youth was an important area to focus on – that is why it is one of the three thematic clusters – youth make up 40 percent of the Sierra Leone population and youth is a very important issue given that we are a post conflict country and that youth unemployment is so high."<sup>55</sup>*

<sup>52</sup> Projected direct Impact of RIU Programmes and Projects on Households, RIU

<sup>53</sup> PAID National Coordinator, 20.01.11

<sup>54</sup> <http://www.researchintouse.com/programmes/riu-sierra-leone/riu-sl03strategy.html> accessed on 27th January 2011

<sup>55</sup> RIU Country Coordinator, 22.01.11

This focus on youth, and to some extent a focus on gender, is reflected in the RIU country strategy, which recognizes gender issues as ‘serious and important in Sierra Leone’<sup>56</sup>. Much of the discussion relating to gender in the country strategy is located in an annex, which asserts that,

*‘[i]nterventions, particularly to do with making markets work, will need to ensure that gender inequalities are not reinforced and women are not displaced from potential economically viable activities’<sup>57</sup>.*

### **Analysis**

However, despite acknowledgements of the importance of gender issues to RIU’s work – and the explicit commitment to promoting youth participation in agriculture, there appears to have been little or no analysis of gender, social exclusion or poverty issues in order to inform the design and implementation of the RIU programme and specific platform activities.

*“There was no explicit focus on gender and social exclusion but we were mindful of these issues.”<sup>58</sup>*

The baseline assessment of the poultry sector, conducted by RIU in August 2010 asserts that, *‘[t]he development of the sector will also create job opportunities for women and youth’<sup>59</sup>*. However, there is little evidence of the analysis this is based on, beyond the finding from existing literature that, *‘[i]n most countries, birds are owned and managed by women and children’<sup>60</sup>*.

Although none of the members of staff within the Sierra Leone RIU programme or PAID Secretariat has a specific mandate to ensure social exclusion, gender inequality or empowerment issues are addressed, they do believe that they have been able to draw on their own existing knowledge of gender relations within Sierra Leone to inform design and ongoing implementation of RIU and PAID activities.

*“There was no analysis of gender and agricultural issues to inform the design of PAID – but we were aware of issues relating to women because of our own existing knowledge – for example the division of labour.”<sup>61</sup>*

### **Monitoring**

At field level, the National Coordinator for the poultry feed platform collects data on the number of farming groups that are participating in the platform, and the number of farmers each groups represents. Crucially, the data on individual farmers is broken down by age and gender – providing a detailed picture of the number of male and female youth and adults who are now growing Western Yellow maize. This is an important step in understanding who is taking part. However, there was no evidence that the RIU team or its partners are gathering any data on who is actually benefiting from the uptake of the innovations being promoted by the platform, why and how.

<sup>56</sup> Sierra Leone RIU country strategy, August 2008

<sup>57</sup> RIU, 2008, Sierra Leone RIU Country Strategy

<sup>58</sup> RIU Country Coordinator, 22.01.11

<sup>59</sup> RIU, August 2010, Baseline Assessment of the Poultry Sector in Sierra Leone [Zero draft]

<sup>60</sup> *ibid*

<sup>61</sup> PAID National Coordinator, 20.01.11

## D. Evidence and Findings using the *i*-Innovation Model

### *Incentives*

#### *inputs*

The approach taken by RIU in Sierra Leone to encourage uptake of new innovations through the poultry feed platform has been to provide members of the platform with a number of free inputs. These tended to be provided as an initial one-off and included free western Yellow seed, free fertilizer and training on how the maize should be grown in order to maximize yield. These inputs were provided to CBO and NGO members of the platform who then distributed them to the farming groups they were linked to. The National Coordinator for the Poultry feed platform recorded the numbers of men, women and male and female youth who were part of the farming groups receiving the seed and fertilizer.

The fact that these inputs were provided free of charge (at least initially) to a large extent removed the need for further incentives to be established in order to encourage take-up by farming groups. In terms of explaining why they had decided to take part in the production of Western Yellow maize, the answer was consistent and clear: they were being offered free resources and could not see a reason why they would not agree to take part. They were being offered seeds, fertilizer and training for a crop which they were told by RIU would produce higher yields and would fetch a higher price than their existing crops. Heads of CBOs and NGOs and the individual farmers they worked with all explained that they could see no reason why they would not join the platform and start growing Western Yellow maize.

*“We decided to take part because they were going to give us seeds, fertiliser and training – why would we not do it?”<sup>62</sup>*

#### *investments*

One of the main areas of activity for the poultry feed platform has been to stimulate production of maize. However, the availability of competitively priced, locally produced maize is just one of the ingredients for the production of poultry feed – and just one of the bottlenecks originally identified by RIU. In order to stimulate the production of poultry feed at scale, and to ensure other inputs required in the process are available, RIU has been working with the private sector.

Two priority areas of focus for RIU have been the need to increase supply of feed concentrate (a key ingredient in the production of poultry feed) and the supply of day-old chicks (crucial to poultry production). Both of these commodities are in extremely short supply in Sierra Leone, and concentrate can only be obtained through import.

The Sierra Leone country programme has been negotiating with potential investors in the private sector, including a regional animal feed company to increase supply of concentrate, and with private investors who are importing fertilised parent-stock eggs.

#### *Potential investments as an incentive for participation*

For some of the organizations which have joined PAID, the potential for the platform to attract future funding and investment, either from donors or the private sector, is one of the main attractions for joining PAID and paying the initial registration fee. While some of the small private enterprises interviewed for this evaluation said they had yet to experience any benefits from being

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<sup>62</sup> CFWC, 25.01.11

members of PAID, they intended to continue being members in case they could benefit from future funding or investment which may be channeled through PAID in the future.

#### ***insurance***

The RIU country programme have been ambitious in developing the poultry feed platform. Rather than attempting to replace an existing component of a value chain with a new innovation, RIU is instead attempting to re-establish the poultry sector in Sierra Leone. This is largely in response to the devastating impact of Sierra Leone's long conflict on agricultural production and the amount that needs to be done to rebuild broken value chains. However, the level of ambition being sought by RIU has arguably also increased the level of risk associated with platform activities.

It is clear that the bulk of risk associated with the platform rests with individual farmers within the farming groups, who are using their land and spending their time on the production of Western Yellow, rather than focusing their time and resources on existing crops. Two key factors appear to pose a particular risk to farming groups which are participating in the poultry feed platform:

1. That there are still 'missing parts' of the value chain in order for the maize being produced to be turned into poultry feed, and then used to increase poultry production. These 'missing parts' of the chain mean that markets for the maize being produced are currently uncertain;
2. That although fertilizer provided to farming groups through CBOs and NGOs was initially free, farming groups will now have to buy their own fertilizer in order to continue production of the Western Yellow maize, creating a permanent reliance on a costly agricultural input.

These risks are recognized by the RIU country programme:

*"With the poultry feed platform the risk sits with individual maize farmers who are taking part. If we can't get access to markets for them and unlock key bottle necks like getting the concentrate, the hatcheries, the vaccines, access to a working mill....it is a risk"*<sup>63</sup>

The issue of risks for poultry farmers and for NGOs operating in the poultry sector was reflected in questions posed to stakeholders in consultation for the poultry sector baseline study conducted by RIU. However, the potential risk to maize farmers/ farming groups as a result of participation in the poultry feed platform does not appear to have been addressed<sup>64</sup>.

It could be argued that a certain amount of risk is a natural byproduct of most innovative activities. Furthermore, views on the amount of risk which it is acceptable for farmers to shoulder will vary considerably. However, what is important is a) the extent to which risk has been assessed and analysed, b) whether people carrying the bulk of the risk have been made explicitly aware they are doing so, and crucially, c) whether efforts have been made to mitigate risk to vulnerable groups. There was little evidence that any of these had taken place in relation to the poultry feed platform.

While risks were discussed during initial stakeholder consultation for the RIU country programme overall, this was solely based on people's existing ideas and assumptions about risk and vulnerability, rather than an assessment of risk specifically in relation to all groups involved in platform activities. Without a more detailed understanding of the specific risks involved, it is difficult to see how adequate steps can have been taken to effectively mitigate them.

<sup>63</sup> RIU Country Coordinator, 28.01.11

<sup>64</sup> RIU, August 2010, Baseline Assessment of the Poultry Sector in Sierra Leone [Zero draft]

*“We did consider risk during the initial stakeholder meetings and when we were developing the implementation plan and the logframe. We discussed risks based on our own existing knowledge – they are outlined in the summary implementation plan which lists all of the assumptions we were making...there was no specific risk analysis.”<sup>65</sup>*

Discussions with farming groups suggest a lack of clarity in relation to who they will sell their maize to and what RIU’s role will be in guaranteeing the maize is sold. Some farmers and CBOs mistakenly believed that either RIU/ PAID had already identified guaranteed buyers for the maize, or in some cases, that RIU was even going to purchase the maize itself.

*“RIU has told us that they need feed meal for their poultry farmers.”<sup>66</sup>*

*“When we have our next harvest we will sell our yield from the next harvest to RIU”.<sup>67</sup>*

These clear misunderstandings mean that some farmers may have taken more of a gamble than they had realized when they agreed to take part. Potential risks are arguably confounded by the lack of market and livelihoods analysis to inform the design of the platform, something which RIU/ PAID staff in Sierra Leone recognize as a potential weakness of the programme.

## ***Institutions***

### ***individuals***

A number of individuals have played an important role in the delivery of the poultry feed platform. One of these is the National Coordinator for the platform who coordinates and monitors all activities. The ability of the National Coordinator to draw on existing networks in order to broker relationships between RIU and other organizations was clearly important.

The approach adopted by RIU in recruiting farmers to take part in platform activities has been to work in partnership with existing CBOs and NGOs which are linked to a large number of farming groups. The heads of these organizations have played a central role as intermediaries between RIU and the farming groups. An essential aspect of their role is that they are known and trusted by farming groups and community leaders, encouraging farmers to feel comfortable about participating in a new innovation.

### ***inclusion***

#### ***Representation of women***

Although there was no evidence of formal quotas for women to be represented in platform decision-making structures, RIU/PAID staff explained that it was widely accepted that women should be represented at all levels and, for example, where a man had been elected as the head of an executive committee or Board then a woman should be in the vice chair position. Furthermore, the national coordinator for the poultry feed platform is a woman and a number of women engage with the platform through partner organizations.

#### ***Strategic partnerships***

The overall RIU country programme has drawn on a number of strategic partnerships to bring a gender and social exclusion perspective to their work, for example, their partnership with the

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<sup>65</sup> RIU Country Coordinator, 28.01.11

<sup>66</sup> CECSHIP, 24.01.11

<sup>67</sup> ibid

Women, Agriculture and Nutrition Unit in the Ministry of Agriculture, Forestry and Food Security (MAFFS) and the Ministry for Youth, as well as contacts in UNDP.

The approach adopted by RIU in delivering the poultry feed platform, which involves working through existing CBOs and NGOs in order to encourage and coordinate uptake of innovations by farming groups, reflects an explicit intention to draw on these organisations' understanding of gender and social exclusion issues and their existing relationships with marginalized and excluded groups.<sup>68</sup> As such, RIU did not identify specific target groups to participate in platform activities, or specific gender or social exclusion issues which might, for example, impact on participation. Instead, RIU have relied on the knowledge and reach of the CBOs and NGOs they are working with:

*"We know that most CBOs and NGOs are targeting the most vulnerable groups – like youth and women so we wanted to work with them so that we could benefit from the access they provide to these groups. Working through CBOs and NGOs was a strategy for being able to target the most vulnerable groups"*<sup>69</sup>.

*"Working through CBOs, NGOs, we relied on them being representative of poor people rather than targeting specific groups ourselves".*<sup>70</sup>  
Open invite

A risk when working solely through existing organisations is that current power structures – and patterns of exclusion – can be maintained and reinforced. Those groups which lack effective representation can be denied the opportunity to participate, with the potential for a negative impact on the poorest and most excluded. However, members of the RIU team are keen to stress the open nature of invitations to join the poultry feed platform and feel confident that the CBOs and NGOs they are working with have links to a diverse range of communities and social groups.

*"The invitations to join PAID and the platforms were mainly done over the radio – it's the main form of communication. It was an open invitation – open to everyone so organisations which focus on issues relating to crosscutting issues like HIV, disability, youth and gender – they are there".*<sup>71</sup>

Interviewees from member organisations also tended to agree that the platform approach was an effective way of engaging with excluded groups, including youth and women, and enabling them to benefit from new innovations<sup>72</sup>.

*"I think the platform approach is a good way to reach women. As soon as PAID was established a good number of women's organisations became members. Women's organisations were also invited to initial RIU workshops."*<sup>73</sup>

RIU's open invitation to the poultry feed platform, for example through radio broadcasts, does appear to have successfully attracted a diverse range of organisations, including those which represent youth and marginalised groups of women. However, as we did not have the opportunity to speak to CBOs and NGOs which had not joined the platform, it has not been possible to fully understand why some organisations joined while others did not.

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<sup>68</sup> RIU Country Coordinator, 22.01.11

<sup>69</sup> RIU Country Coordinator, 28.01.11

<sup>70</sup> ibid

<sup>71</sup> RIU Country Coordinator, 22.01.11

<sup>72</sup> OPARD, 24.01.11, Women in Agriculture and Nutrition Unit, 27.01.11

<sup>73</sup> Women in Agriculture and Nutrition Unit, 27.01.11

Nevertheless, in trying to understand disincentives to take part and adopt a new innovation, it is helpful to look at the resources that were needed by organisations and their farming groups in order to take part in the platform. The key factors appear to have been: access to land and agricultural materials, existing relationships with – and trust in – RIU staff/ other members of the platform, and access to financial resources to pay the initial joining fee for PAID (approximately \$25) and subsequent annual memberships fee (approximately \$50 per annum). While there is no evidence that some organisations have been turned down for membership of PAID and the poultry feed platform, it is possible that less well connected - and less well funded organisations - might have felt that joining the platform was not something they could even consider.

There was a recognition among some interviewees that the membership fee in particular may be prohibitive to some organisations joining the platform,

*“we have the income to pay our membership fee to PAID but maybe some organisations can’t as they don’t have the money.”<sup>74</sup>*

In addition to paying a membership fee to become a PAID member, CBOs and NGOs also have to meet further criteria: they must have sufficient organisational capacity, effective organizational structures and be registered with the district council. Therefore, in order to be a farmer which takes part in the poultry feed platform and has the opportunity to benefit from new innovations identified by RIU, they need to be a member of a farming group which is linked to a CBO or NGO that has sufficient capacity (organizational and financial) to become a member of PAID/ the poultry feed platform. It is possible therefore that groups of farmers which lack strong representation through CBOs and NGOs are unable to take part in the platform and are therefore not offered the opportunity to take up the new innovations they offer.

Furthermore, from a social exclusion perspective, it is important to consider the resources which are required by farming groups to take part in platform activities once the CBOs/NGOs they are connected to have joined the platform. While farmers explained that they needed equipment such as ploughs and shovels to grow the maize, by far the most important resource which farmers needed access to in order to grow the maize was land. For some social groups, this is far easier than for others: unless you have access to family or community land, the only other option is to have access to financial resources to be able to lease it. An issue for many youth in Sierra Leone, particularly those who were displaced during the conflict, is a lack of access to land, which poses significant challenges for the RIU programme which has identified ‘promoting youth involvement in agriculture’ as one of its key aims. While there was evidence of youth participating in platform activities as part of the community farming groups they belonged to, and through some of the youth organizations which are members of PAID and the poultry platform, there were also examples of young men providing casual labour to farming groups to help with activities such as ploughing and brushing in preparing land for Western Yellow maize production. In such cases, these young men tended to be paid either very small sums of money or were provided with food in return for work.

There was also evidence that access to land – especially over the longer term was also an issue for other groups, including marginalized groups of women, for example a group of homeless women who were engaged in commercial sex work.

*“We went to the chiefs of our communities and asked for some land – they have given us access to some for free for the first year, but not after that... our big challenge is still access*

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<sup>74</sup> CECSHIP, 24.01.11

*to land. In terms of access to land, the communities have now told us that they will not provide us with free land for future harvests.”<sup>75</sup>*

It is clear that the platform’s approach of working through existing CBOs and NGOs has resulted in what appears to be a diverse range of members and has given RIU the ability to offer opportunities for take-up of agricultural innovations to a range of social groups, including women, youth and people who are HIV positive (with data on the exact numbers of women, men and male and female youth monitored at field level).

However, given the resources and organizational relationships which are a prerequisite for participation in the platform, it is also possible that some social groups may have been left out. In May 2010 the Sierra Leone country programme commissioned a baseline assessment of existing PAID members which was intended to analyse members in terms of the type of organisation, their capacity, their information needs and linkages<sup>76</sup>. However, the assessment largely focused on the location of member organisations and representation in terms of the four regions in Sierra Leone. While exclusion on the basis of location is of course an important issue, other dimensions of exclusion, for example based on gender, disability, HIV status, ethnicity and land ownership do not appear to have been explored. This potentially represents a missed opportunity to understand the extent to which various social groups such as youth and women are represented among PAID/platform membership and to identify any groups which are underrepresented in RIU activities.

#### ***institutions***

There are two new institutions which have been central to RIU’s approach to encouraging uptake of new innovations in relation to the poultry sector: the poultry feed innovation platform itself and PAID. For discussion about the extent to which these new institutional relationships were inclusive of different social groups, see section the previous section above.

#### ***influence***

There was very little evidence that the RIU had sought to influence policy or other decision makers in relation to social development issues, and in particular any learning on these issues which had been highlighted through RIU’s work. However, DFID had recently informed the RIU programme that it expects disability to be treated as a crosscutting issue throughout all of the work it funds. Although too late to inform the design of RIU activities in Sierra Leone, there is evidence that in response to this, RIU staff have attempted to influence the Ministry of Agriculture, Forestry and Food Security (MAFFS) to treat disability as a cross cutting issue alongside gender and the environment. They have also requested that all members of PAID consider disability issues, particularly in their work with RIU.

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<sup>75</sup> Coordinator for the Alternative Approaches to Commercialised Sex Association, 24.01.11

<sup>76</sup> RIU-Sierra Leone, 2010, Baseline Assessment of Registered Members of the Partnership for Agricultural Innovation and Development (PAID), Sierra Leone

**Table 1: Summary table of i-Innovation in the Poultry Feed Innovation Platform**

The I's	Commentary
<b>1. Incentives</b>	
Inputs	<ul style="list-style-type: none"> <li>• Seeds</li> <li>• Fertiliser</li> <li>• Training</li> </ul>
Investment	<ul style="list-style-type: none"> <li>• Discussions with private investors in other parts of the value chain (eg concentrate and day-old chicks)</li> </ul>
Insurance	<ul style="list-style-type: none"> <li>• Lack of evidence of detailed analysis of risks, awareness of them by farmers and efforts to mitigate them.</li> </ul>
<b>2. Institutions</b>	
Individuals	<ul style="list-style-type: none"> <li>• National Coordinator for the Poultry feed Innovation Platform</li> <li>• Heads of CBO/ NGO members</li> </ul>
Inclusion	<ul style="list-style-type: none"> <li>• Strong representation of women in decision-making positions</li> <li>• Strategic partnerships established, including with CBOs and NGOs who can reach marginalized groups.</li> <li>• No analysis of which social groups are/ are not represented in the platform.</li> </ul>
Institutions	<ul style="list-style-type: none"> <li>• PAID</li> <li>• Poultry Feed Innovation Platform</li> </ul>
Influence	<ul style="list-style-type: none"> <li>• Efforts to influence the Ministry of Agriculture, Forestry and Food security (MAFF) to treat disability as a cross-cutting issue.</li> </ul>

**Impact**

Discussion about the impact of the poultry feed platform on the livelihoods of farmers must be considered in light of the strong caveat that it is still very early days. The farming groups consulted for this evaluation had only had one harvest of Western Yellow maize which was meant to be an initial test crop. Nevertheless, discussions with farming groups and interviews with heads of CBOs and NGOs that are members of the platform suggest that farmers are already benefiting from the innovation they have adopted through the platform. These benefits appear to fall into two areas:

- Increased income and ability to meet basic needs
- Improved social capital

***Increased income and the ability to meet basic needs***

With maize fetching a higher price than other crops such as cassava, vegetables and rice, farming groups have already generated some income from the first harvest of Western Yellow maize.

However, it is important to note that while the opportunity to participate in the platform is mediated through membership of a group, so too is control of the proceeds. Decisions about how to use the harvested crop of Western Yellow and to allocate and spend any income generated from it tend to be taken by either the community-based farming group, led by the village chief, or by a CBO or NGO and the head of that organization.

The extent to which individual farmers and their families benefit from the adopted innovations promoted by the poultry feed platform rests on decisions made by the farming groups or the organisations they belong to. While there were examples of benefits to individuals and their

families, there was also a clear emphasis on farming groups, CBOs and NGOs using platform activities to benefit the organisation or community overall.

*“With the money we got, it is the organisation which holds it...We will use the money to strengthen the organisation and our ability to provide skills training - if we have any left then we will give it to the women...”<sup>77</sup>.*

*“In the first harvest, we did not make a lot of money because we ate and saved more maize than we sold. We made a total of 150,000 leones (approximately £25). This money belongs to the community as a whole. We have a community store of money which we save for medicines and things when people are sick, if the well needs to be repaired, or if people in the community need a loan. We also pay members of the community for their labour with ploughing and harvesting etc.”<sup>78</sup>*

In terms of the proceeds that have been allocated to individual farmers, there is evidence that these are being spent to meet the basic needs of themselves and their families. A number of farmers had used income from the maize to improve their housing, for example one female farmer had used money from the maize to buy a zinc roof to replace the tarpaulin she had been using, others had bought Bannimix for their babies or had used the money to pay for their children’s school fees and to buy medicine.

Many farmers also used the maize they had grown to diversify their own diets – either by eating it or by using the income from it to buy other food products.

*“With the last harvest of maize we ate some of it – “it is very, very, very, very good to eat!” It is much better to eat than the traditional type of maize and we had more of it to eat than before”<sup>79</sup>.*

*“with the money we got from the first harvest, we were able to buy ourselves good food to eat so we can eat many different things, not only what we grow ourselves. We don’t only want to eat maize we want many other food items... Since the last harvest, we can buy Bannimix for our babies – because they need that to grow - and rice and ground nuts for us to cook with ourselves.”<sup>80</sup>*

Farming groups also expressed greater hopes for the future as a result of adopting new innovations through the platform – especially those which had saved considerable quantities of seed from the first harvest and were hoping for high yields in future seasons.

*“They feel that the maize has helped them to feel differently about the future – they are more hopeful that they will be able to carry on sending their children to school for example”. [using a translator]<sup>81</sup>*

### **Improved social capital**

Another important area of positive impact as a result of participation in PAID and the poultry feed platform was in relation to social capital. Interviews with the heads of CBO and NGO members and discussions with the farming groups they work with highlighted an increase in both bonding (within

<sup>77</sup> Alternative Approaches to Commercialised Sex Association, 24.01.11

<sup>78</sup> MOVE FGD, 26.01.11

<sup>79</sup> ibid

<sup>80</sup> ibid

<sup>81</sup> Hands of Charity FGD, 25.01.11

groups) and bridging (between different groups) social capital as a result of platform activities. In some cases examples were given of existing relationships being strengthened. In others, there was evidence of new organizational relationships being formed. The greatest evidence was of increased social capital in terms of the following relationships:

- Within farming groups (bonded social capital)
- Between farming groups and the CBOs/NGOs they are part of (bridging social capital)
- Between various CBOs and NGOs and between CBOs and NGOs other agencies (bridging and bonded social capital)

*Within farming groups*

Farmers explained that as Western Yellow maize produces 3-4 harvests a year it is far more labour intensive than many other crops. As a result, farming groups have needed to work closely together. Working as a team on something which they believe has the potential to improve their lives has, they say, improved relationships between members of the group.

*“within the community, we have fewer quarrels now since growing the maize. Growing the maize has needed us to work together very much as a team – there are three or four harvests a year so there is very much work to be done – we have to work together more than with other crops”.*<sup>82</sup>

*Between farming groups and CBOs/ NGOs*

Discussions with farming groups and interviews with the heads of CBOs/ NGOs both emphasized that relationships between the two had strengthened as a result of having a tangible project around which to focus the relationship

*“Because of the RIU we have a stronger relationship with MOVE (NGO member of PAID and the poultry feed innovation platform). We had some relationship with MOVE before RIU but now it is much stronger.”*<sup>83</sup>

*Between CBOs and NGOs and other agencies*

The greatest improvement in social capital expressed by farming groups was in terms of new or strengthened relationships between the CBOs and NGOs they were part of and other agencies, in particular the district council and the ministry of agriculture.

Farming groups explained that when they grew only subsistence crops, they had no relationship with the council. Now they had started to produce a cash crop with the potential for high yields, they said the council was paying more attention to them.

*“We also now have a connection to the District Council – in our ward committee meetings, they ask us to register any organisations we are working with. We have registered that we are working with MOVE on the maize production so the District Council now knows we are working on maize growing.”*<sup>84</sup>

Furthermore, since being part of groups that are working with PAID and RIU, officials from the ministry have come to visit the farmers. This has put them in touch with extension officers and other support

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<sup>82</sup> MOVE FGD, 26.01.11

<sup>83</sup> *ibid*

<sup>84</sup> MOVE FGD, 26.01.11

*“they [the council] need to cooperate with us now we are in groups. Extension never had interest in our small crops – they are only interested now we have come together to grow larger crops...It was PAID that sensitised us to grow in groups”.<sup>85</sup>*

*“Because of the maize platform we had to register with the ministry of agriculture and with the Farmers’ Federation. Because of this we are now involved in other agricultural activities – the ministry has given us support with growing rice.”<sup>86</sup>*

Following the first harvest of Western Yellow, the CBOs and NGOs with farming groups that have produced the highest yields have come together to form a Maize Growers’ Association. The intention is that the association will coordinate sales of maize among its members in order to set a higher price for the maize. Members of the association are also planning to work with other organisations to help improve the yields produced by their farming groups.<sup>87</sup>

*“The association will decide what the harmonised price for maize should be. It will broker a link between buyers and sellers. So communities will have direct contact with the market.”<sup>88</sup>*

This is a positive example of an RIU platform having led to a new independent institution being established by its members. However, it was not clear who had made decisions about which organisations could join the association, or what the longer term implications are for those organisations – and their farming groups – which are not part of the association.

## **E. Conclusions and Lessons**

The poultry feed platform in Sierra Leone provides a number of important lessons for future work in relation to the uptake of new innovations designed to reduce poverty. These lessons can be derived from both the strengths of the platform approach in Sierra Leone, and areas which could be strengthened by others with similar ambitions in the future. Key lessons include:

### **1. The need to identify the people you want to reach**

RIU-Sierra Leone, through consultation with a range of stakeholders, clearly identified not only their intention to improve the lives of poor people, but to define particular groups of poor people they wanted to reach. As such, the intention to promote the participation of youth in agriculture and to benefit women was explicitly stated in the RIU country strategy for Sierra Leone. This has enabled RIU to define their overall approach according to these objectives, and to develop monitoring tools which ensure women and youth are participating.

### **2. The need to identify partners with existing access to target groups**

Instead of trying to establish direct relationships with poor and marginalized groups of farmers, the Sierra Leone country programme instead developed strategic relationships with existing CBOs and NGOs which already had access to a range of communities and farming groups. This approach not only enabled RIU to shortcut a lengthy and expensive process, but also ensured that CBOs and NGOs could act as a trusted intermediary who could effectively secure farming groups’ interest in taking part in new activities.

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<sup>85</sup> Hands of Charity FGD, 25.01.11

<sup>86</sup> Coordinator for the Alternative Approaches to Commercialised Sex Association, 24.01.11

<sup>87</sup> Hands of Charity, 24.01.11

<sup>88</sup> MOVE, 25.01.11

**3. The need to identify the risks – and address them**

Arguably, the uptake of new innovations – particularly ones that are part of an ambitious agenda to stimulate an entire sector – are going to be accompanied by a certain degree of risk. Although the Sierra Leone programme discussed risks as part of its stakeholder consultation, there appear to be a lack of analysis of the specific risks associated with the poultry feed platform for each of the groups talking part. Such analysis could be used to inform strategies to ensure that, as far as possible, risks are mitigated, particularly those which relate to the livelihoods of already vulnerable groups.

## Social exclusion, gender and empowerment: analysis of the Rwanda country evaluation data

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### A. Background

Agriculture is the principal social and economic activity for 84 percent of the population in Rwanda.<sup>89</sup> However, farming has historically been small-scale and subsistence-oriented, requiring low levels of labour and yielding low levels of per unit productivity. This has meant that despite accounting for a high proportion of the population's income generation, the actual GDP from this sector ranges between 30 to 40 percent.<sup>90</sup> The Government has put in place a number of policy frameworks to guide the modernisation of the agricultural sector in order that it contributes a greater portion of GDP. The principal policy instruments, implemented principally by the Ministry of Agriculture Animal Resources (MINAGRI) are as follows:

- National Agriculture Policy (NAP) (2004): This aimed to modernise the agricultural sector, achieve food security (a major and persistent Concern for Rwandan farmers), orient the sector towards the market, ensure that the benefits from all products resulting from different stages of processing were distributed fairly, and create an integrated and diversified agricultural system.
- Strategic Plan for Agricultural Transformation in Rwanda (PTSA): Implemented in two phases (2005-8 and 2009-12) the PTSA aims to increase the incomes of the rural population through improved agricultural productivity and transforming the subsistence economy to a market-oriented one oriented towards production for both domestic and export markets<sup>91</sup>.
- PSTA-II is designed to ensure that Rwanda works consistently towards achieving regional and international goals articulated in the Comprehensive African Agricultural Development Programme (CAADP) of NEPAD and the Millennium Development Goals.
- Other relevant policy instruments include Vision 2020, which foresees Rwanda becoming a middle-income nation by 2020 and reducing poverty to under 50percent, and the Economic Development and Poverty Reduction Strategy (EDPRS) 2008-2012 designed to facilitate this. Both frameworks identify agriculture as a key driver of economic growth and poverty reduction.

### ***Gender and agriculture***

Gender issues within the agricultural sector are increasingly recognised by the Government of Rwanda, culminating in the launch of the Gender in Agriculture Strategy which presents a policy

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<sup>89</sup> National Institute of Statistics of Rwanda (NISIR), 2008 Agriculture Survey , NSIR, 2009

<sup>90</sup> Masanganise, P., and M. Nizeyimana, 2010, 'Strategic Framework for Promoting Gender Equality in the Agriculture Sector: Draft', Ministry of Agriculture and Animal Resources, Kigali.

<sup>91</sup> Republic of Rwanda, Ministry of Agriculture and Animal resources, Strategic Plan for the Transformation of Agriculture in Rwanda – Phase II, Final Report, February 2009

framework to mainstream gendered concerns into the work of MINAGRI.<sup>92</sup> According to data presented in the strategic document:

- Women make up almost 53 percent of the population and participate in subsistence agriculture more than men - statistics also show that 86percent of rural women are primarily employed in agriculture and fisheries, compared to 71percent of men<sup>93</sup>. The recognition and remuneration of women for their work is therefore a key issue.
- In Rwanda, the poorest section of the population are likely to be women, widowed, rural dwellers or engaged in agricultural activities and this result in women being in the poorest segments of the population<sup>94</sup>.
- This situation is compounded by women's lack of control over and access to productive resources and household income.
- Women in the rural areas are also largely unrepresented in social, economic and political decision making structures.

The new strategy is not the first policy document to make explicit reference to gender issues: the 2004 NAP acknowledges the relationship between gender and agricultural production, proposing to strengthen the ability of women to enable them to become economically independent and facilitate access to credit, land ownership, appropriate technologies, training and employment, as well as facilitating greater representation in decision-making structures. The integration of gender issues in policies and programmes of agricultural development is recommended.<sup>95</sup>

More widely, Rwanda's consideration of gender in policy frameworks is commendable:

- Gender dimensions are integrated in Rwanda's Vision 2020 and regarded as first crosscutting issue in all sector policies and programming.
- Rwanda is a signatory to the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) and adopted the Protocol to the African Charter on Human and Peoples' Rights on the rights of women in Africa.
- The National Gender Policy (NGP), established in 2009, has institutionalised efforts to address challenges of achieving gender equality and women's empowerment at central level through gender mainstreaming and positive discrimination, overseen by the Gender Monitoring Unit.

## **B. Headlines: Impact and Inclusion**

The evaluation examined the RIU potato and cassava platforms which sought to improve the supply of disease resistant crop seeds and improve agricultural practice to improve yield. Headline findings are as follows;

- Farmers are experiencing increased yield due to both new farming techniques and the acquisition of more seed. This has meant that some have been able to move away purely from subsistence farming to selling some of their crop.

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<sup>92</sup> Masanganise, P., and M. Nizeyimana, 2010, 'Strategic Framework for Promoting Gender Equality in the Agriculture Sector: Draft', Ministry of Agriculture and Animal Resources, Kigali.

<sup>93</sup> Gender Profile for Rwanda, 2009

<sup>94</sup> EICV II, NISR, 2006

<sup>95</sup> National Agriculture Policy (page 32), MINAGRI, MARCH 2004

- The RIU programme has led to new constellations of relations, a reconfiguration of existing relations, and an underlying feeling of self-confidence amongst participants. In particular, platform meetings have provided spaces for women to engage with others in a way they would not have done before.
- Many platform members report having found a greater voice with local authorities, within the wider community, and with representatives of the international community. For some women, this has translated into the desire and ability to become community leaders, as well as seeking to be elected as a local representative.

### C. Description of the intervention through a social development lens

Over 15 years after the 1994 genocide which saw 800,000 Rwandans killed, more than two million people fleeing as exiles to camps in neighbouring countries run by UN agencies and NGOs, and some 350,000 Rwandans becoming internally displaced, the Rwandan population still feel the memories of the tragedy at close range. The Government of Rwanda's reconciliation policy has meant that social, cultural and ethnic differences remain largely unspoken as the divides which one caused violent conflict have now – at least in theory – been consigned to history. The implications of this for the RIU programme are two-fold: a) 'social exclusion' is not discussed in terms of specific ethnic groups, resulting in a lack of disaggregated data and, we could posit, little will to collect and present data in a disaggregated way; b) the country programme possesses an implicit function to contribute to national reconciliation through the promotion of peaceful, inclusive interaction between different actors. An assessment of the Rwanda programme must appreciate the possible undesirability of emphasising social exclusion in a context where the government is making explicit attempts to overcome inter-group tensions by encouraging national unity.

With that in mind, there is little evidence that gender and social exclusion issues have been systematically considered throughout the Rwanda country programme despite the programme's strategic objectives directly concerning 'resource-poor' people<sup>96</sup>. As indicated, there are reasons to think that an explicit focus on issues relating to social exclusion may not have taken a central stage in the country programme due to a desire not to emphasise social cleavages, tensions or potential conflict. The downside of this is that issues relating to social exclusion may have been overlooked.

Whilst the programme presented clear strategic outputs relating to the inclusion of marginalised and poor people<sup>97</sup> and to enhancing the capacities of individuals and groups<sup>98</sup>, crucially no baseline data was gathered to enable the Country Office to monitor progress in these areas<sup>99</sup>. Subsequent monitoring data was also not collected. Assertions relating to gender, social exclusion and empowerment therefore lack a comparative measure to which to refer. What we know is that the programme did intend to give preference to platforms that 'effectively involve traditionally excluded groups such as vulnerable households or people in harsh physical environments or remote locations'<sup>100</sup>. The 2009 Annual Workplan also contained output indicators for Output 1 - *Poverty-*

<sup>96</sup> Rwanda Country Strategy and Programme Design Team (CSPDT)/National Innovation Coalition (NIC), 2008, 'RIU Implementation Plan for Rwanda', Version 8 as submitted 31<sup>st</sup> March 2008, CSPDT/NIC, Kigali, p. 25.

<sup>97</sup> Country Strategy and Programme Design Team (CSPDT)/National Innovation Coalition (NIC), 2007, 'RIU Country Strategy in Rwanda', CSPDT/NIC, Kigali, p. 8.

<sup>98</sup> RIU Country Coordinator Office, 2007, 'The RIU Programme: Report on the Progress in Rwanda', RIU, Kigali, p. 5

<sup>99</sup> For instance, the Rwanda statistical baseline the section on social, economic and cultural data has large gaps and no disaggregated data.

<sup>100</sup> Country Strategy and Programme Design Team (CSPDT)/National Innovation Coalition (NIC), 2007, 'RIU Country Strategy in Rwanda', CSPDT/NIC, Kigali, p. 8.

*reducing innovations taken up as a direct result of RIU intervention in Rwanda* - that gave a target of 30percent of women being beneficiaries of each of the platforms. Tellingly however, reporting on the programme's progress did not refer to the women.<sup>101</sup>

According to the Country Office Director, this relative lack of explicit focus is in part due to the initial demands of DFID, who were more interested in the institutional aspects of the programme.<sup>102</sup> The office is not resourced with anyone tasked to undertake social analysis or monitoring specifically, but this should not – the Director asserts – be seen as a total neglect of gender and social exclusion issues. In terms of gender, it is hard for an awareness of gender not to form an integral part of activities on the ground, even if this is not reflected in programme documentation. As an office, gender balance in platform membership and training opportunities is a key consideration and attempts are made to ensure this balance. Similarly, with reference to social exclusion, the promotion of social cohesion is described as an *implicit part of the programme* and therefore programme staff are very aware of the social dynamics within communities<sup>103</sup>. Making these concerns - which are arguably inevitable, expected and integral in the eyes of programme staff - explicit in documentation would seem to have been a major weakness in the country programme.

## **D. Evidence and Findings using the *i*-Innovation Model**

### ***Incentives***

#### ***Inputs***

RIU-Rwanda provided a series of one-off inputs, which were either provided free of charge or were to be paid back in-kind to Community Facilitators who were directly involved in the platform. 'Second level' of farmers had to pay in order to receive inputs.

Initial inputs include:

- Potato seeds (based on a repayment of 50 percent of the crop)
- Cassava cuttings
- Fertilizer
- Trainings provided through field schools, which focused on simple messages on how to do things differently.

Inputs were consciously given to both men and women. However, there were implicit preconditions for accessing inputs, including:

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<sup>101</sup> RIU Rwanda Country Team, 2009, 'Rwanda Country Programme Annual Report 2008/9', RIU Rwanda Country Team, Rwanda, pp. 13-14.

<sup>102</sup> Interview with Interview, Augustin Mutijima Mutijima, RIU Country Office Director, 18/11/10, Kigali. Interviewed by John Wyeth and Allyson Thirkell.

<sup>103</sup> 'We do not have any definition of social exclusion as a programme. We clearly know what social exclusion is. We cannot do anything which can lead to social exclusion. The country was destroyed due to social exclusion. So any programme has this in it. We have to consider that. The platforms are a way of promotion inclusion because you encourage people to come together' – Interview, Augustin Mutijima, 18/11/10.

- Owning land and having access to labour
- Being connected to someone in the programme and to networks of other farmers in order to train others
- Having time available
- Having the ability to make decisions in household and to control assets;
- Capacity to travel and to actively take part in meetings.

### ***investments***

There were no examples of financial investments made in relation to RIU platform activities. However, there was evidence that financial institutions present in platforms were lending money to individual farmers, because they were participating in the platform.

### ***insurance***

Innovations are arguably always accompanied by a degree of risk. However, crucially risks had not been assessed in any detail for particular groups participating in platform activities and safety nets have not been established for poor farmers.

### ***Institutions***

#### ***Individuals***

There were two sets of key individuals involved in the delivery of the RIU platform and related activities, namely: community facilitators and demonstrators. Community facilitators had been identified as 'model' farmer and are seen as possessors of important knowledge and are therefore consulted on a range of agricultural matters.<sup>104</sup>

#### ***inclusion***

##### ***Representation and Participation***

In accordance with the programme's stated intention to promote inclusion, it would certainly appear that women are represented in the platforms, although far from equally. Data regarding 'other' excluded groups (e.g. ethnic group, age) was not available and therefore the primary point of reference here is gender. Data concerning the gender balance of community facilitators indicates that 41 out of 102 community facilitators in the Potato Platform<sup>105</sup> and 35 out of 100 in the Cassava Platform<sup>106</sup> (including one-third of the principal facilitators in the Cassava Platform<sup>107</sup>) are women. A similar level of representation is found in the Cassava Platform's Executive Committee, where three out of the seven members are female, and the Auditing Committee, which consists of one woman and two men.<sup>108</sup> However there is evidence that aside from attaining the status of Community Facilitators, women have become interested in participating in groups associated with the RIU programme. For instance, the number of women joining the Twozozanye Cooperative in Rugarama has increased from 10 members to 17 over the course of the cooperative's participation in the programme. This increase is higher than that of men, who have increased their membership from 13

<sup>104</sup> It is not clear whether this refers to being consulted more frequently, on a wider range of issues, or by a wider range of people. The extent to which this is a continuation of their previous role is also unclear.

<sup>105</sup> Interview with Alex, Head of Office, CARITAS Byumba, 19/11/10.

<sup>106</sup> Interview, Modesta Sebazungu, Cassava Platform Chairman, Gatsibu District Office, 25/11/10. Interviewed by Anthony Mugisha and Emma Broadbent.

<sup>107</sup> Focus group, Community Facilitators, Gatsibu District, 26/11/10. Interviewed by Emma Broadbent.

<sup>108</sup> Interview, Modesta Sebazungu, Cassava Platform Chairman, Gatsibu District Office, 25/11/10. Interviewed by Anthony Mugisha and Emma Broadbent.

to 15. This has been directly attributed to the perceived success of the platform as a networking mechanism and the (largely economic) benefits it brings.<sup>109</sup>

However, the decision-making structures within the cooperatives themselves would seem to be varied. The Twozozanye Cooperative's Executive Committee is comprised only of men, whilst the head of the Jujakakure Cooperative in Kabarore is a woman. In the case of the latter, this has meant that opportunities available to Executive Committee members in the form of training are only available to the male-dominated Committee. Whilst women are formerly included in the cooperatives, there is a likely issue of adverse incorporation into such groups. Indeed, although government policies supporting greater membership of women in cooperatives may have led to increased participation<sup>110</sup> the quality of this participation poses questions that this case study was not able to probe.

#### *Requirements for participation*

In order to receive the first wave of training, Community Facilitators are selected. In Gichumbi District, CARITAS (service provider) worked with a group of agronomists and community members to select Community Facilitators based on the following criteria: residency in the district; exemplary farmers; literacy; and willingness to help others. In the Gatsibu District, those who would become one of the 25 principal facilitators was 'obvious': only a limited number of people were successful farmers with enough land to use to grow the cassava.<sup>111</sup> In order to receive the first wave of training, therefore, individuals required land, a degree of social 'kudos' and respect as a farmer, and literacy. This first wave of Community Facilitators were clearly not the poorest in society, nor the most marginalised.

However, a look at the second wave of facilitators indicates that Community Facilitators were able to include a number of women who headed households<sup>112</sup> in the Gichumbi District. In the case of this group, which also sold as a group, becoming a trainee was not a matter of being 'selected' but of being an Irish Potato grower. The RIU programme was seen as simply supporting an already-existing group containing both men and women. Requirements for participation in the RIU programme could therefore be seen – at the level of the 'second wave' trainees/facilitators – as highly dependent on the group (in the form of a cooperative) participating in the platform, who effectively mediate the participation of community members.

Membership of a cooperative is not a prerequisite to accessing training, however. Those who will receive training from the 'first wave' of facilitators in the Kyiramurozi sector say that once training has been received by 'neighbours' there is no expectation that the new trainees will join the cooperative each of the 14 Community Facilitators in the sector are member of. 'Neighbours' are not defined strictly in terms of geography but rather in relational terms (i.e. those closest to the

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<sup>109</sup> Interview, Twozozanye Cooperative Executive Committee, Rugurama Sector, Gatsibu District, 23/11/10. Interviewed by Emma Broadbent.

<sup>110</sup> Eric Ntukabumwe, Rwanda Development Organisation, Gatsibu District, 26/11/10. Interviewed by Anthony Mugisha and Emma Broadbent

<sup>111</sup> Focus group, Community Facilitators, Gatsibu District, 26/11/10. Interviewed by Emma Broadbent.

<sup>112</sup> Focus group, Female Trainees (8 trainees; 1 Community Facilitator), 22/11/10, Yaramba Sector, Gichumbi District. Interviewed by Emma Broadbent.

facilitator). The implication of this is that the dissemination of knowledge hinges upon individual facilitators who ‘choose’ the second wave of trainees.<sup>113</sup>

**Table 1: Summary of the factors which prevent people benefitting from the RIU programme**

- Not having the right contacts with existing facilitators
- Not being member of a cooperative
- Lack of collateral against loans (largely land)
- Access to information (despite the existence of a radio show operating in the Gatsibu District)
- Not having free land which is well-prepared
- Lack of extra labour in household<sup>114</sup>
- Barriers to the market: once training is received and the crop cultivated, selling the crop still presents a number of barriers.
- Some farmers do not want to join the programme: they benefit from existing interventions
- Some of the poorest farmers are ‘out of the agricultural production schemes’ due to lack of land and financial resources. They are instead targeted by safety net schemes provided by the UN.<sup>115</sup>

#### ***Intergenerational investments***

One of the principal risks in agricultural interventions is that they inadvertently encourage children to leave school in order to work on farms. At programme level the country office is – in accordance with government directives – actively trying to ensure that the programme does not lead to children being prevented from attending school. Instead, the country office has attempted to teach children vegetable farming in schools in order to help children teach their parents about the importance of eating vegetables.<sup>116</sup> The programme is also thought to be encouraging children to view agriculture as a viable livelihood option, and in doing so preserving the agricultural techniques learned from their parents and stemming the flow of young people to urban areas.

#### ***institutions***

The main institutions are the potato and cassava platforms themselves. These are new institutions which bring together a range of stakeholders, including farmers, government, agricultural traders and dealers.

Platform members meet every six months to discuss issues, however, there was little evidence of any effort to address power differentials within the platform or to monitor issues relating to voice. If any members are unhappy with the platform or any of the issues discussed, their only option is to leave. There are no mechanisms for redress and only punitive measures are in place.

<sup>113</sup> Focus group, Community Facilitators, Kyiramurozi Sector/Ibakwe Cooperative, 26/11/10. Interviewed by Emma Broadbent.

<sup>114</sup> Interview, Augustin Mutijima, RIU Country Office Director, 18/11/10. Interviewed by John Wyeth and Allyson Thirkell.

<sup>115</sup> Interview, Augustin Mutijima, RIU Country Office Director, 18/11/10. Interviewed by John Wyeth and Allyson Thirkell.

<sup>116</sup> Interview, Augustin Mutijima, RIU Country Office Director, 18/11/10. Interviewed by John Wyeth and Allyson Thirkell

Another set of key institutions are farming cooperatives. Unlike the platforms, these cooperatives are existing institutions which were introduced in Rwanda in order to form mixed ethnic groups in order to improve cohesion and cooperation. Mentioning ethnicity within the groups is not allowed so it is difficult to investigate the extent to which ethnic mixing is actually happening. Nevertheless, there was some evidence that these cooperatives had been strengthened as a result of membership of the RIU commodity platforms.

### ***influence***

Local Government representatives sit on the platform and are witnessing a set of governance relationships emerging. It would be interesting to understand whether platform performance or relationships therein have impact on wider governance relationships.

**Table 1: Summary table of i-Innovation in the Rwanda Innovation Platform**

<b>The I's</b>	<b>Commentary</b>
<b>1. Incentives</b>	
Inputs	<ul style="list-style-type: none"> <li>• Potato seeds (based on a repayment of 50 percent of the crop)</li> <li>• Cassava cuttings</li> <li>• Fertilizer</li> <li>• Trainings provided through field schools</li> </ul>
Investment	<ul style="list-style-type: none"> <li>• Financial institutions lending to individual farmers involved in the platform</li> </ul>
Insurance	<ul style="list-style-type: none"> <li>• No details analysis or safety nets to mitigate risk</li> </ul>
<b>2. Institutions</b>	
Individuals	<ul style="list-style-type: none"> <li>• Community Facilitators</li> <li>• Demonstrators</li> </ul>
Inclusion	<ul style="list-style-type: none"> <li>• Strong representation of women</li> <li>• Inability to openly discuss ethnicity</li> </ul>
Institutions	<ul style="list-style-type: none"> <li>• Potato and cassava platforms</li> <li>• Existing farming Cooperatives</li> </ul>
Influence	<ul style="list-style-type: none"> <li>• Local government sit on platform</li> </ul>

### ***Impact***

Although it is early days in the life of the RIU platforms, interviews with stakeholders revealed some clear benefits so far. In particular, these include improved yields and improved individual status/capacity, for example of the VBAs.

### ***Gaining new knowledge***

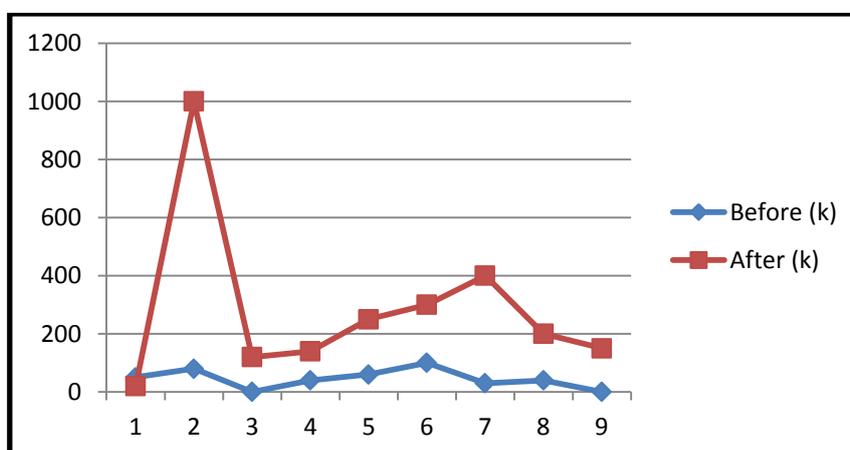
Despite the potentially negative social impacts of adopting new technologies (such as jealousy from other community members and the increased burden of cultivating land in a different way along with the added responsibility of training others) the positive benefits would seem to outweigh any negative impacts. The fundamental benefit which participation in the programme has brought was the intrinsic and instrumental value of the knowledge gained through the Farmer Field School

training. The value of the skills training was seen as both empowering in itself and as providing an instrumental means to an end (e.g. increased production and income).<sup>117</sup>

### ***Yield and income***

The most tangible impact is the increase in both crop yield and the income from the yield where a harvest has been experienced. Data from beneficiaries participating in the potato platform in two areas of the Gichumbi District indicate significant change in both potato yield and income obtained from the yield. Amongst one interview group of female adopters in the Yaramba sector belonging to different teaching groups, the changes in potato yield (due to both new farming techniques and the acquisition of more seed) had meant moving from a subsistence yield to being able to market a large portion of the yield.<sup>118</sup> Community facilitators in Nyankenke reported that the increase in yield led to a seven-fold increase in income.<sup>119</sup>

**Figure1: Changes in potato yield (kilos) amongst female adopters, Yaramba, Gichumbi District:**

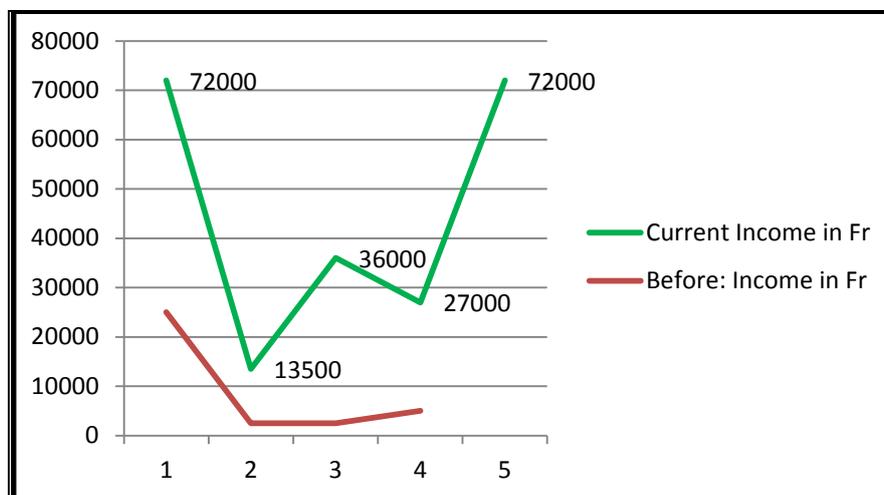


<sup>117</sup> Focus Group, Community Facilitators, Gatsibu District, 26/11/10. Interviewed by Hope Kabuchu and Emma Broadbent.

<sup>118</sup> Focus group, Yaramba, Gichumbi District, 22/11/10. Interviewed by Hope Kabuchu.

<sup>119</sup> It should be noted that price of potato per kg has also increased from 50 Fr per kg to 90 Fr per kg.

**Figure 2: Changes in income (Rwandan francs) amongst 5 farmers (Community Facilitators), Nyankenke, Gichumbi District:**



The social aspects of this increase are most profound amongst those who were not producing enough food for their families to eat due to bad farming techniques. Amongst these poorest families were a number of female headed households. The following impacts resulting *from the end of a period of low agricultural production and famine* were seen:

- **Savings in expenditure:** Money which had been spent on foodstuffs had been saved because some of the new harvest had been used to feed the household;<sup>120</sup>
- **Increase in pride:** The end of shame within the community and tension in the household due to hunger. For one woman, the money saved was used to buy tea (a luxurious item) which she wants to offer visitors to her house to show her success;<sup>121</sup>
- **Nutritional benefits:** This includes significant weight gain<sup>122</sup> and an increase in children's nutrition<sup>123</sup>;
- **Ability to plan:** The end of famine has meant that people are able to look to the future rather than be concerned only with daily survival.<sup>124</sup>

<sup>120</sup> Focus group, Kyiramurozi Sector facilitators (14)/Ibakwe Cooperative, Gatsibu District, 26/11/10. Interviewed by Emma Broadbent.

<sup>121</sup> Focus group, Kyiramurozi Sector facilitators (14)/Ibakwe Cooperative, Gatsibu District, 26/11/10. Interviewed by Emma Broadbent.

<sup>122</sup> Focus group, Kyiramurozi Sector facilitators (14)/Ibakwe Cooperative, Gatsibu District, 26/11/10. Interviewed by Emma Broadbent.

<sup>123</sup> Interview, Augustin Mutijima Mutijima, RIU Country Office Director, 18/11/10. Interviewed by John Wyeth and Allyson Thirkell.

<sup>124</sup> Focus group, Kyiramurozi Sector facilitators (14)/Ibakwe Cooperative, Gatsibu District, 26/11/10. Interviewed by Emma Broadbent.

The increase in income for many participants has led to both actual and projected investments in children's schooling, with examples of individuals funding children from other households. Importantly, this is a change that is valued greatly by participants, who view education as their most important investment.<sup>125</sup> Other investments with social benefit include the building of two shelters for widows and their children with collective income generated through the cassava harvest.<sup>126</sup>

In terms of the acquisition of concrete assets, the RIU programme has enabled participants to purchase both agricultural and non-agricultural assets. Those of the Tuzuzanye Cooperative in Gatsibo offer a case in point. With the income generated from the cassava harvest<sup>127</sup>, cooperative members have been able to acquire assets such as bicycles, new farm implements, iron roofing, mobile phones, extra land, and farm animals such as goats and cows. Significantly, the female members had all taken the decision to acquire new assets which in themselves provided greater freedom and autonomy (such as mobile phones and a bicycle).<sup>128</sup>

### ***Plans and aspirations***

As indicated, improving household food security has had the effect of allowing participants room to consider not only what changes they want to make in their lives, but how to make them. This largely comes in the form of some type of investment, such as planning to rehabilitate a house with iron sheets, obtaining more land or extra animals. One female head of a household described a list of things she wants to be able to do to improve the lives of herself and her family. Many of the items had been crossed off, and her next aim was to buy her four children new clothes.<sup>129</sup> There are a number of critical points to be made about plans and aspirations: things to note about the type of planning identified:

- Children form a central part of the aspirations articulated, particularly in relation to sending them to school and providing them with food and clothes.<sup>130</sup> Interestingly however, little reference was made to wanting to invest in agricultural livelihoods for their children to inherit. This suggests that parents are not yet envisioning their children working in agriculture, even if the aspirations of children themselves are changing.
- In some cases, planning is based upon expectation of future income rather than actual income. There is an issue here relating to unrealistic expectations and whether the programme could lead to a level of frustration, competition and disappointment from those who are unable to produce and sell as much as other participants. Indeed, some plans require new investments (e.g. labour, technology) which are not always easily-obtainable. This may serve to reinforce feelings of facing (social, political, economic) barriers.
- Some plans could be seen more as aspirations. However it is hard to say whether involvement in the programme has led to changes in plans/aspirations, or whether

<sup>125</sup> Focus group, Tuzozanye Cooperative members, Rugurama, Gatsibo District, 23/11/10. Interviewed by Hope Kabuchu. It is not possible however to assert whether this attitude towards education represents an attitudinal change as a result of the programme.

<sup>126</sup> Interview, Twozozanye Cooperative Executive Committee, Rugurama Sector, Gatsibo District, 23/11/10. Interviewed by Emma Broadbent. However, the existence of these shelters has not been verified.

<sup>127</sup> However it is likely that income generated from harvesting other crops (such as maize) will have been used.

<sup>128</sup> Focus group, Tuzozanye Cooperative members, Rugurama, Gatsibo District, 23/11/10. Interviewed by Hope Kabuchu.

<sup>129</sup> Focus group, Community Facilitators, Kyiramurozi Sector/Ibakwe Cooperative, 26/11/10. Interviewed by Emma Broadbent.

<sup>130</sup> Focus group, Tuzozanye Cooperative members, Rugurama, Gatsibo District, 23/11/10. Interviewed by Hope Kabuchu.

involvement in the programme has provided the means to achieving these. There is certainly more a sense in which the programme has provided people with the bridge by which they are able to reach existing goals, rather than 'raising the bar' and enabling new aspirations to emerge.

- Not all of the planned investments will benefit the household or community. For instance, a number of men indicated that they would buy motorbikes which their wives would not be allowed to use.<sup>131</sup>
- In male-headed households the extent to which women have a say in household planning is unclear, therefore. One male participant said that he did not need to consult with his wife regarding the purchasing of new assets because as an 'equal decision maker' she was always in agreement with him.<sup>132</sup>
- Female aspirations which express a wish to be respected by men in the community and/or household are ambiguous. At face-value this would appear to be an articulation of a desire to see and participate in social change, yet also raises questions relating to how men are still conceived as a woman's reference point. This reinforces male ownership of the 'rules of the game'.

### ***Changes in relations***

The RIU programme has led to new constellations of relations, a reconfiguration of existing relations, and an underlying feeling of self-confidence amongst participants. However, two interpretative issues need to be pointed out:

- A major question is whether the programme has empowered and enhanced the status of people who already had it (and with what effect) or whether people who previously lacked power have gained as a result of the programme. Clearly, those who become Community Facilitators already possess a degree of status within the agricultural community as a quasi-condition of their selection/appointment.<sup>133</sup>
- Changes in the relationship between men and women may – at face value – appear to have changed but this is not necessarily attributable to the RIU programme but rather broader changes in Rwandan culture.

Some of this change in influence within the community has arisen due to the facilitation of new (or different) relations between different actors which – given Rwanda's socio-historical context - is considered important.<sup>134</sup> The platform is thought to offer a space in which community members can interact away from the diktats of established relations and the rules which govern these engagements. According to the RIU programme director, this has been one of the enduring changes

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<sup>131</sup> Focus group, Community Facilitators, Kyiramurozi Sector/Ibakwe Cooperative, 26/11/10. Interviewed by Emma Broadbent.

<sup>132</sup> Focus group, Community Facilitators, Kyiramurozi Sector/Ibakwe Cooperative, 26/11/10. Interviewed by Emma Broadbent.

<sup>133</sup> For instance, the female head of the Jujukakure Cooperative in Kaborore is extremely 'empowered', but this cannot be attributed to RIU – she was a prominent community member prior to the project as a Sector Council member and Vice President of the Group of Cooperatives.

<sup>134</sup> Interview, Augustin Mutijima, RIU Rwanda Country Programme Director, 18/11/10. Interviewed by John Wyatt and Allyson Thirkell.

the programme has contributed to: women are able to have ‘the floor’ at platform meetings and farmers are able to engage with businessmen in a way that they would not have done before – mutual trust and respect between these different people has been developed. Platform members have spoken of now feeling less inferior to richer, more powerful community members<sup>135</sup> and now being seen as a valuable part of the community in both economic and social terms<sup>136</sup>. The platform has, to an extent, ‘levelled out’ relations between farmers and more economically-powerful members of the community, such as bankers, who see personal and communal gain to be had from supporting them.

As a platform the members have also found a greater voice with local authorities, within the wider community on the radio (as part of the cassava platform’s outreach activities), and with representatives of the international community.<sup>137</sup> Particularly on the part of women, it has also translated into the desire and ability to become community leaders<sup>138</sup>, as well as seeking to be elected as a local representative<sup>139</sup>. Much of this can be attributed to an increase in self-confidence and belief in one’s ability to effect meaningful actions. At household and group, too, there is evidence that the RIU programme has helped women gain the willingness, ability and space to make livelihood decisions<sup>140</sup>, as well as having the ability (and financial capital) to travel outside of their community to visit friends or relatives<sup>141</sup>.

## E. Conclusions and lessons

The platform presents a new and innovative model for bringing people along the value chain together to discuss issues, share concerns and agree solutions. Within the meeting, relationships are being formed that have wider benefits to individual groups and poor farmers. However the stakeholder groups present in the platform have widely different interests, different power relations and knowledge and capacities to take advantage of the opportunities or risk presented by the platform. Platform brokers or innovation agents need to monitor and potentially regulate platforms in order to ensure that they are abiding by agreed principles such as transparency, open competition and ‘fair trade’.

Clearly, the evaluation data shows a profound impact on income and expenditures, particularly for women, leading to greater investments in livelihoods, children, and other household items. Amongst cooperatives and training groups, participation in the RIU programme has led to a bonding and strengthening of such groups (‘bonding social capital’), as well as a perceived change in status *vis-à-vis* other members of the community, generated by and resulting in the brokering of new relations

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<sup>135</sup> Interview, Tuzozanye Cooperative Executive Committee, Rugurama Sector, Gatsibu District, 23/11/10. Interviewed by Emma Broadbent.

<sup>136</sup> Eric Ntukabumwe, Rwanda Development Organisation, Gatsibu District, 26/11/10. Interviewed by Anthony Mugisha and Emma Broadbent.

<sup>137</sup> Interview, Augustin Mutijima, RIU Rwanda Country Programme Director, 18/11/10. Interviewed by John Wyatt and Allyson Thirkell.

<sup>138</sup> Focus group, Tuzozanye Cooperative members, Rugurama, Gatsibu District, 23/11/10. Interviewed by Hope Kabuchu.

<sup>139</sup> Focus group, Female Trainees (8 trainees; 1 Community Facilitator), 22/11/10, Yaramba Sector, Gichumbi District. Interviewed by Hope Kabuchu and Emma Broadbent.

<sup>140</sup> <sup>140</sup> Focus group, Tuzozanye Cooperative members, Rugurama, Gatsibu District, 23/11/10. Interviewed by Hope Kabuchu.

<sup>141</sup> Focus group, Female Trainees (8 trainees; 1 Community Facilitator), 22/11/10, Yaramba Sector, Gichumbi District. Interviewed by Hope Kabuchu and Emma Broadbent

within the platform ('bridging social capital'). However the role of the 'group' as the potential gate-keeper to the benefits the programme brings presents risks relating to the potential reinforcement of social exclusion and social tensions. Questions also remain over the extent to which the programme has empowered people with existing social and financial capital. Lastly, while the testimonies of female participants indicate a level of increased empowerment, this needs to be read within existing 'rules of the game' and the government's own efforts to support gender equality.

## Social Exclusion, Gender and Empowerment: Analysis of the Farm Inputs Promotions (FIPs) Best Bet Country Evaluation Data

### A. Background

Kenya is estimated to have about 3 million agricultural holdings, composed of mostly smallholder farms averaging about 2-3 hectares of land, and who contribute about 70% to the agriculture market<sup>142</sup>. About 95% of the small holder sector is said to be the dominant supplier to the food crops, vegetables and dairy production in Kenya, and the large scale farms are dominated by large estates of tea, sugarcane, sisal and coffee, with an estimated 4.4 million households involved in crop farming (Ibid). According to the Kenya Gender Profile Report, despite the fact that Kenyan women contribute 80% of agricultural labour in food production and 50% of cash crop production, they only own about 1%-5% of titled land, with the majority of them having no ownership at all. About 40% of the small holder farmers are estimated to be managed by women.

The Ministry of Agriculture policy on agriculture is operationalized through the Strategy for Revitalising Agriculture (SRA) (2004-14) and the National Policy for Steering Development in the Agriculture Sector, with the objectives “to raise incomes, create employment and ensure food and nutrition security, empowerment of farmers through organizations accessing inputs, services and output markets, promotion of value addition and agro-processing and provision of financial services”(Ibid). Maize comprises of 98% of agricultural production covering 48% of the cultivated land, and produced by 78% of the farmers (ibid).

The agricultural extension system in Kenya is gendered, with extension services provided mainly to male farmers. Likewise, extension workers tend to be men with few women involved. According to the ADB/ADF report (ibid) “*use of quality inputs and equipments such as hybrid seed, fertilizer, pesticide and machinery is very low*”, and adds “*due to lack of access to credit and other resources, women also find it difficult to buy inputs such as fertilizers, and quality seeds, resulting in low productivity levels, and – yield obtained by women farmers could increase by more than 20% if they were given the same level of agricultural inputs and education as male farmers*”(ibid, pg 28).

Crop Production in Kenya		
	Crop farming activities	68.8% households
	Maize production	90% of agriculture production, uses 48% of all cropped area
	Beans	61% of households
	Cow Peas	14% of households
	Potatoes	14% of households

<sup>142</sup> ADB/ADF 2007, Kenya Country Gender Profile. October 2007, Human Development Department

The role of women in poverty reduction and creation of wealth has not been recognized as important in poverty reduction strategy in Kenya, while policy gaps in the national frameworks including the National Poverty Eradication Plan (1999-2015), divert benefits away from the poor<sup>143</sup>.

Concluding from the above, any gender responsive socially, inclusive agriculture programme in Kenya ought to have some of the elements of the following interventions:

- Access to credit by the poor and the women
- Provision of quality inputs (fertilizer, quality seed, machinery, pesticides) to the majority of small holder households
- Advocacy for pro-poor and gendered national agricultural policy framework
- Promotion of women's decision making over access and control of productive resources, especially land
- Strengthening women's access to agricultural extension
- Improving women's access to agricultural knowledge and technology

## B. Headlines: Impact and Inclusion

### C. Description of intervention through a social development lens

The relationship between Farm Input Promotions – Africa (FIPs) and RIU dates back to 2002 when FIPS participated in the DFID funded Crop Protection programme through the RNRRS. The original proposal of FIPs to Best Bets was to focus on activities to develop “*networks of village based advisors who will also retail inputs to farmers*”<sup>144</sup>. FIPS planned to establish 10 networks with 150 village based advisors (VBAs) to benefit 1.5 million farmers.

The RIU Best Bets funding supports a network structure of VBAs to ensure that as many farmers as possible are targeted. The VBAs provide advice to farmers on modern methods of farming and carry out demonstrations to identify the best varieties at their own sites or at the farmer's homes. The demonstrations they have include Sweet Potatoes, Cassava, and Maize. The farmers targeted are generally individuals and not groups and demonstrations are village based in an attempt to include the poorest rural farmers.

Training has been offered to VBAs on a range of topics, including soil management, water harvesting, crop varieties and crop diversification (away from maize), according to FIPs reports. According to the RIU Report, FIPs has reached up to 150 000 small holder farmers. FIPS aims to connect researchers from NARIs to small scale farmers, support small holder farmers operating “below subsistence level”, support small holder farmers in the absence of an effective state

### Gender concerns of the Ministry of Agriculture (MoA)

Between 1996 and 1998 the MoA conducted a gender analysis of the Agriculture Sector Investment Programme and found that gender imbalances were rooted in values, norms, myths, taboos and traditions widely accepted by both men and women, and that they resulted in distorted decision making, unequal access to and control over resources (land, capital, agricultural inputs, income), placing a major work burden on women. In fact out-migration of men has led to the paradoxical situation that ownership and decision-making remain in men's hands while the cultivation and management was done by women.

<sup>143</sup> Njambi-Kimani and Kombo: 2009. Gender and Poverty Reduction: A Kenyan context.

<sup>144</sup> FIPS Best Bets Update/June 2010

extension services, and address the lack of interest of input supply companies in the small holder farmers (ibid).

### Value for Money

- DFID' investment in the project through the RIU was £366,850 over 18 months commencing January 2010<sup>145</sup>, which is £20,380 per month.

## D. Evidence and Findings using the *i*-innovation Model

### Incentives

#### *inputs*

FIPS has provided farmers with easy access to research technologies that they normally do not have by providing small packets of high yielding hybrid seeds accompanied with training. The small pack samples open opportunities for the farmers to experiment with high yielding hybrid seed varieties that can increase their production. The innovation by FIPS in the small packages is also affordable by farmers.

VBA's also provide on-site training to farmers. FIPS has increased farmer knowledge on good farming practices such as plant spacing, use of fertilisers, tillage practices, weeding and pest management and post harvest crop handling which has an impact on production.

The inputs are provided to farmers by VBAs but there is an intention that after harvest the farmer pays back the VBAs in kind. For butternut, they have to give back two pieces of butternut to the VBAs after harvest. The butternut cannot be replanted, but farmers have to buy seed to plant it again. There are a few exceptions where the farmers who received the Sweet Potato Vines have to give back some vines to other farmers.

#### *investments*

The FIPs potential and capacity to reach the small farmers in very remote areas is one of the attractions of the private sector and public sector research institutions to develop partnerships with FIPs. The private sector is unable to reach small and poor farmers who are not seen as viable farmers to use the research products. Pannar Seed (Kenya) Ltd. and Athi river Mining Ltd, in separate interviews, said that their partnership with FIPs is based on the fact that FIPs is able to reach poor farmers, in very remote areas, which the private sector is unable to penetrate, and would otherwise consider, not viable. FIPs was also the only organization/NGO, according to the companies, that they work with, that has a network of people on the ground, working for the small farmers.

The private companies interviewed, ARM Ltd and Pannar Seed (Kenya) said they have been motivated by FIPs to the extent that they were able to subsidize costs for the small packages of technologies, requested by FIPs for the grassroots farmers. While FIPs provides an opportunity for the private sector to reach out to a wider group of farmers, the organisation also provides an opportunity to farmers to access the technologies from the private companies, hence serving as a catalyst for putting research into use.

FIPs partners hold them in high esteem, and consider the FIPs approach unique. FIPs has helped to increase visibility of the products of the private sector, and also reach sections of society, the private sector has been unable to reach in the past by influencing them to package in small packs that are affordable to the small-scale farmers. Thus whilst the private sector targets commercial farmers they

<sup>145</sup> RIU Brief for the DFID Cadres Learning Event 2010.

have been convinced to begin targeting small holder farmers through small packs thereby increasing their outreach. For some private sector actors e.g. Athi River Mining, the fertilizer component which FIPS assisted in setting up is now going to be a fully fledged company this year with an annual production of 120,000 tonnes per year.

### ***insurance***

The concept of providing farmers with small trial size packets means that, not only are they affordable, but they also need only a small investment from the farmers in terms of time, resources and land and therefore do not constitute a big risk to small famers. However should farmers take up the new varieties there is potential for dependency of farmers on hybrid seeds. This raises the issues as to whether farmers have sufficient information on the various varieties to make informed choices in the matter and what choices are available for good indigenous seed.

An issue for FIPs's is the potential economic and environmental impact on farmers of using hybrid seed and the sustainability of livelihoods, in the longer term. In Siaya district, some NGOs and the District agriculture promote organic sustainable agriculture approaches as the means to improving livelihoods. FIPS approach in the promotion of high inputs and hybrid seed seems to be in contradiction with this approach.

Farmers said that they know of many other farmers who are not part of the project, even when announcements for participation were made in public and people are free to join. It has not yet been established why other farmers did not in, however, the farmers interviewed said some farmers were more sceptical and take long to participate until they are sure of the benefits.

## **Institutions**

### ***individuals***

The FIPs approach relies on a network of Village Based Advisers (VBAs) who provide farmers with agricultural products or technologies commercialized by the private sector or tested by the National agricultural Research institutes (NARI)s for experimentation by farmers. By June 2010, FIPs reported that they had recruitment of 109 Village based advisors (VBAs) in 7 districts, and had established 7 networks (ibid).

The VBAs also distribute the inputs (seed and fertilizer). They monitor varieties given to farmers and keep records of the findings. The VBAs are paid Kshs. 3000 per person per month as an incentive for involvement in providing advice to farmers. The VBAs are establishing a network of self employed hard working farmers. The new thinking at FIPs is to create an incentive mechanism for VBAs that supports them to move from FIPs workers to be self-employed and financially self sustaining. In order to achieve this , the VBAs would give the seed to famers and get back fruit, or part of the harvest for sell.

FIPs Grassroots level mobilisation is unique. FIPs's VBAs are based at the grassroots, to ensure easy reach to farmers. The VBA demonstration plots and explanation to the farmers helps to transmit the technologies faster. According to the VBAs, each VBA covers between 4-5 villages, starting with their own neighbouring areas and expanding coverage to the agreed targets. A new approach to expand the reach of the VBAs is through another tier of farmers known as Contact Farmers. The Contact Farmers help the VBAs to mobilize the farmers, in the communities, target other farmers for inclusion and hold meetings in the villages. The Contact Farmer is a new approach in FIPS. They have a total of 150 Contact Farmers, with each expected to mobilize up to 300 farmers. Some contact farmers interviewed in Siaya district had mobilized up to 150 farmers each to participate in the FIPs project.

### *inclusion*

FIPS has reached communities at grassroots level that are not reached by other agencies in similar business. The evidence from the farmers interviewed during the evaluation, the private sector companies and public institutions such as the research institutions indicates that FIPS priority target group is the small farmers. It is still early in the programme to assess how or whether people have been empowered because of the programme. Most Farmers interviewed had not harvested their first crops from the seed supplied by FIPS. Other farmers were still at the experiment stage where they had planted the sample seed from the small packets and had not bought more for expansion.

FIPS targets *individual* farmers, while the government extension and other NGOs use the *group* approach. The advantage with FIPs approach is that the individual farmers tend to be those excluded out of groups and tend to be poor, and not involved with groups, and therefore cannot afford to buy inputs or technologies in bulk or larger quantities. The farmers also had small pieces of land. The majority of farmers in Siaya district for example are small holder farmers with farming land between 1-3 acres for entire households, according to VBAs and the government agriculture staff interviewed.

On the ground, there has not been a deliberate strategy to focus on gender, nor was there any evidence of exclusion or discrimination, of men or women in the programme. Both male and female farmers have been reached by FIPs, with the majority of farmers reached being women, according to the perception of VBAs and farmers interviewed. The larger focus on women is mainly, by default, because of the structure of the agricultural farming system in the areas visited in Kenya where women work more in small, include both men and women.

According to CIP, FIPs pioneered the *small potatoes packages* because the conventional packs of potato seed were too big for the small farmers. The farmers working with FIPS have very low income and cannot afford the 50 kgs. Seed bags. FIPS targeted 5000 farmers, for example, and distributed 22 tons – 50%. FIPS packaged 50% in 5kg bags and 50% in 10 kg bags. They sold all the bags, and needed more, but it was not available. The 5000 farmers were expected to multiply the potato seeds themselves and distribute to other farmers. Seeds in smaller quantities are more affordable and thus more accessible to poorer famers.

FIPS approach to *demonstrations* is also said to be innovative and “powerful”, according to one of the private sector companies. Accordingly, people see the product and the company sales go up. The organisation is also thought to have technically competent and knowledgeable staff director. FIPs is said to reach the ground, and have built trust with the company. FIPS has built the infrastructure to work with the farmers and reach the private sector, and hence consider themselves as facilitators of the process.

Mobilisation for participation in FIPs programme was done during community meetings, asking interested farmers to participate in the programme. Some farmers were approached by VBAs, mainly because they were already known in communities as good farmers. The farmers working with FIPs are mobilised in different communities based on the location of the VBAs. All the farmers were approached the programme individually had had direct contact with the VBAs and therefore have individual benefits. Because the VBAs use their gardens for demonstration, farmers are clustered around the VBAs. The farmers and VBAs have come to meet with each other during the process of interaction with VBAs and contact farmers, hence increasing their opportunities for social inclusion and visibility.

**Table 1. Summary Table of *i*-Innovation in the FIPs Case Study**

The I's	Commentary
<b>Incentives</b>	
Inputs	<ul style="list-style-type: none"> <li>• Small packets of high yielding hybrid seeds</li> <li>• Fertiliser</li> <li>• Training and demonstration</li> </ul>
Investment	<ul style="list-style-type: none"> <li>• Small packet production Panner seeds</li> <li>• Fertiliser production, Athi River</li> </ul>
Insurance	
<b>Institutions</b>	
Individuals	<ul style="list-style-type: none"> <li>• Village Based Advisers (VBAs)</li> <li>• Contact Farmers</li> </ul>
Inclusion	<ul style="list-style-type: none"> <li>• Small packets</li> <li>• Individual farmers not groups targeted, women and men</li> <li>• Demonstration</li> </ul>
Influence	<ul style="list-style-type: none"> <li>•</li> </ul>

**Impact**

VBAs see their work with FIPS as increasing their potential for job creation. According to the VBAs, their status has improved in the community. They also noted increased respect between the VBAs and the community. Their image and regard by the community has improved, and they are sought after by NGOs and Government. For example, the government agriculture staff has selected some of them for training in vaccination of chickens and they will be able to do it in the communities.

The potential for the FIPS approach to mitigate risks related to food security is high. FIPS deals in “Orphan Crops” –or non-commercial crops meant for food security, which according to private sector companies, are of less interested to them. Examples include cassava, sweet potatoes, potatoes and butternut etc. The farmers said that the butternut planted was tasty, and the children liked it, while the potatoes are high yielding and said to be better quality. Some VBAs had harvested potatoes and sold some. They take a shorter time to yield.

The current benefits are still the seed and fertilizer, which the farmers received. The farmers planted in the August/September season and none of them have harvested yet. The noticeable difference is that the seed distributed by FIPS seems to grow faster than the local seed they have. The size of crop from FIPS is bigger in the garden, and the farmers expect a better yield than they have previously had. The farmers have also used fertilizer on local seed, but the local seed doesn't seem to do as well as what FIPS has given them.

FIPS is interested in farmers to be food secure, and hence, has distributed cassava cuttings, sweet potatoes and potatoes and established demonstration farms with farmers. According to CIP, FIPS have more impact on food security issues because of the concern of the smallholder farmers. In

Taita for example, FIPS distributed 3 tons of potatoes from Kasita farm, which has been supported by CIP to set up aeroponics laboratory for potato production. FIPS distributes the seed at low cost of Seed.

There are challenges caused by the FIPS approach. While farmers appreciate the FIPS packages, they also said that the seed and fertiliser packages distributed are too small to have meaningful impact on their production. It was too early to know if farmers would adopt the technologies, although some mentioned that if they had money, they would invest in bigger packages. Furthermore, the FIPS as an organisation does not work directly on ground, and beyond distribution of technologies.

Furthermore, the high breed seeds distributed by FIPS from research requires high input high care agricultural practices. The farmers targeted by FIPs may not have the income or capacity to continue depending on high inputs, which makes their production patterns vulnerable. With the exception of the tubers, the seed from the maize and other crops distributed cannot be replanted. Where there is no money for fertilizer, the farmers said they were unable to plant large hectares because they cannot afford the fertilizer, or the labour for weeding such large acreage.

It is still too early to assess the extent to which the programme has created empowerment for farmers. The project deals with each farmer as an individual, and the benefits are expected to be direct to the individual households. Farmers interviewed in Siaya said a few of them had started having discussion to organize themselves into a group – KODEP Self Help Group. FIPS already (although intended) seems to stimulate farmers to become active and interested in working together. Maintaining an individual farmer approach causes challenges for increasing farmer voices. It would be cheaper and easier for farmers to purchase big quantities of hybrid seed and fertilizer when they are in a group and they would also have easy access to credit, or strengthen their collective voice to advocate on their issues. FIPS could use a combination of both the individual and the group approach in order to reap benefits from both and expand opportunities for increasing the farmers voice strength in unity.

### **E. Conclusions/Lessons**

The focus of FIPS on extending agricultural inputs to rural based, small holder farmers provides them with an opportunity to access new technologies, which hitherto they did not easily access. FIPS approach has been more inclusive of farmers not “normally” targeted by extension workers by input supply companies, and has repackaged the products into small packages “affordable” by farmers. Furthermore, FIPS provides a mix of products, for example seed and tubers potential for cash production and for ensuring household food security.

The FIPS strategy offers “too little” in terms of inputs for “experimenting” to have significant impact in the short run. Sustainable use of the products by the farmers will depend on their capacity to raise sufficient income from their farm produce to buy the inputs. Furthermore, while FIPS innovation is in the linking of farmers to the input suppliers and improving their knowledge of research technologies, paradoxically, the programme increases farmer dependency on hybrid seeds, some of which cannot be replanted by farmers, and according to famers, is susceptible to disease, requires fertilisers and pesticides and sufficient funds to purchase the products.

## Social Exclusion, Gender and Empowerment: Analysis of the Shujaaz Best Bet, Kenya Country Evaluation Data

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### A. Background

Well Told Story (WTS) was started in 2009 with support from the DFID funded Research into Use (RIU) programme who currently provide 25% of their income until June 2011, when the funding is due to finish. As part of the RIU, Well Told Story is an entirely different instrument for getting research into use than the other case studies reviewed in the evaluation. It uses multimedia to transfer technologies to people through print media and radio.

Shujaaz was originally partnered by Farm Inputs Promotions Africa (FIPs), when the proposal was presented to the RIU in November 2009 as part of the Best Bets selection process. The plan was for the Shujaaz Youth Communications Initiative (SYCI), developed by Well Told Story Ltd, to transfer technologies using 3 forms of powerful and accessible youth focused media; i) nationally distributed monthly comic books (300,000 every month), ii) daily syndicated FM radio programmes, and iii) interactive SMS to provide youth with ideas for generating income through agricultural technologies. FIPs would be a source of information for the agricultural technologies as well as provide contact and networks for youth to follow-up. However it was recommended at the proposal review stage, that FIPs and Shujaaz be funded separately, but maintain close links. It was anticipated at this stage that *“the SYCI will address the problem of chronic lack of information and lack of engagement of youth in agricultural activities in rural areas”*<sup>146</sup>.

Today, Shujaaz uses 2 main media forms; comics and radio and is planning to expand into television this year. So far, they have published 13 comics over 13 months and been broadcasting for nearly a year. A total of 220,000 comics are distributed through the Saturday Nation (once a month) and a further 380,000 comics<sup>147</sup> are distributed through Safari-com agents to M-Pesa kiosks. The Nation predicts a circulation of 250,000 a day with an estimated shared readership of 10-15 people per paper. This would give an estimated reach to around 2 million readers. The comics are not for sale and both distribution methods have been negotiated on a no-cost basis.

In addition the stories are told through short 5-minute radio programmes running daily, Monday to Friday. WTS have again negotiated for 12 radio stations to play the programme on a no-cost basis. This is the first programme, which runs simultaneously through a syndicated radio network broadcasting in Nairobi and Kisumu, Rift Valley, Mombasa Eldoret and other areas.

### B. Headlines: Impact and Inclusion<sup>148</sup>

#### Exposure to Shujaaz

- 6% of all respondents or around 700,000 Kenyans and 9% of 25-29 year olds;<sup>149</sup> spontaneously named Shujaaz as a Kenyan **comic**;

<sup>146</sup> Section 3, RIU contract with Shujaaz, 2010.

<sup>147</sup> The number of comics distributed through Safaricom varies depending on the funding available for production and was only expected to be around 80,000 in March 2011.

<sup>148</sup> Data is from the Shujaaz Impact Study; prepared for GTZ, Synovate Kenya (November 29<sup>th</sup> 2010)

<sup>149</sup> Synovate used 2 main survey methods. First to test *exposure* to Shujaaz, a telephone interview of 4001 respondents using a random sample of the population aged 18-35 years. Second, to understand *effect* of reading Shujaaz, the 5 areas of Nairobi, Mombasa, Eldoret, Nakuru, and Meru were selected where a random household survey was carried out with an initial sample of 910 households. A total sample of respondents was set at 400 from the telephone survey and 352 from the household survey.

- 7% of people between 18-35 years could recall the **radio** programme which corresponds to a total number of 820,000 Kenyans, with a higher recall for rural populations of 8%, men and women are nearly equal;
- 51% of readers get their **comic** from the Nation newspaper, 27% from friends and family and 14% from M-Pesa kiosks;
- Estimated readership according to reports from readers is 5 readers per comic with 3 from the same household.

#### **Impact of Shujaaz**

- 32% of all readers said that they discussed some of what they read mostly with friends (69%), family members (51%) or colleagues (21%);
- 117 readers said they took action after reading the comic
- Results of reading Shujaaz were; standing up against tribalism; a different way of speaking to authorities, working on a business plan and recognizing early signs of conflict;
- Early indicators show that simple stories are the most effective. Boys of 13-18 are the most likely to acquire knowledge from reading Shujaaz.

#### **C. Description of intervention through a social development lens**

Shujaaz was established as a medium to deliver messages to Kenyan youth nationally. Well Told Story have a clear vision of their target audience which is the young un- and under-employed Kenyan men and women. As a principle Shujaaz has a banner on every Shujaaz cover of 'Inspiring Kenyan Youth' but their core principle has now moved beyond inspiration to empowerment of youth. While there is no explicit social or empowerment strategy the way that WTS do business shows that empowerment is part of their corporate DNA.

WTS invest time and resources in focus groups with their target audience in order to understand the context, illuminate current youth issues and ensure that the products are contemporary and relevant. Talking to experts, they manage to translate stories into simple pictures and speech relaying knowledge through demonstration in picture form. Unlike the other evaluation case studies the demonstration methods are not performed by your neighbour, but by getting the social context right, the characters become virtual neighbours and friends.

The media used by Shujaaz ensures that it establishes direct links with its audience, such as SMSs Facebook and their website. It is current, immediate and enables fans to form a direct associational link in order to maintain, relevance and respond to feedback and issues.

An early evaluation of impact undertaken by Synovate on behalf of GTZ attempted to measure exposure and effect which also looked at gendered and generational impact. This is discussed further in the impact section.

#### **Value for Money**

- If the comic and radio station have an estimated reach of 700,000 and 820,000<sup>150</sup> respectively then Shujaaz reaches an estimated 1,520,000 poor Kenyan youth per month (comics and radio).
- DFID's investment in the project through RIU was £220,000 over 16 months, which is £13,750 per month.
- Through this project DFID is reaching young Kenyans at a cost of less than 1p per head every month.

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<sup>150</sup> Synovate Survey, 2010

## D. Evidence and Findings using the *i*-Innovation Model

### Incentives

#### *inputs*

Well Told Story is unlike other RIU case studies, as it does not rely on the injection of inputs into farming communities, but on the spread of agricultural technologies through its media. While the Shujaaz products of comics and radio broadcasts are free to the public, Shujaaz itself has considerable fixed costs and commitments as a business, in order to generate daily radio shows and over half a million comics monthly.

Every Shujaaz comic runs 4 stories through its 4 comic characters every month. Each of these stories is usually funded through separate donors or funders. This approach relies on donors or funders such as Twaweza supporting general development stories or other like the RIU commissioning Shujaaz to deliver particular thematic messages. Twaweza support Shujaaz as it delivers empowerment stories to youth, which aligns with its own mandate. *“We seek to enhance citizen agency by which we mean the ability of men, women and young people to get better information more quickly, cheaply and reliably; monitor and discuss what’s going on; speak out and act to make a difference. This is important for its own sake, because every person should feel a sense of empowerment or control over their own lives”* Twaweza website.

RIU covers around 25% of the costs, which pays for one agricultural story every month. Maintaining a mixed funding base is a strategy of Shujaaz to prevent financial dependency on any one funder and maintain editorial independence, but it has proved hard to coordinate and streamline donor funding in order to ensure that costs are covered for each issue. This has resulted in a variation in the numbers of comics printed and wide differences in the amount of comics passed to M-Pesa agents.

Shujaaz also relies on technical inputs in the form of advice from FIPs, and other agricultural experts. Shujaaz has built up a network of agricultural experts who give pro bono advice and support to Shujaaz. The agricultural stories covered to date are listed in the table below and are a reflection of technical inputs from FIPs, RIU and other experts.

**Table 1. Agricultural Technology Stories covered to date**

Shujaaz Edition	Date	Agricultural Topic
Chapa 1	February 2010	Dying chickens pink-to stop poultry being susceptible to predation by hawks
Chapa 2	March 2010	Using termites as chicken feed
Chapa 3	April 2010	Manual box baling of maize stover as animal fodder
Chapa 4	May 2010	Solar drying techniques for fruit and improved sweet potato vines
Chapa 5	June 2010	Chicken vaccines – treating Newcastle disease
Chapa 6	July 2010	Seed priming / seed soaking for better germination
Chapa 7	August 2010	Pheromone traps for army work prevention
Chapa 8	September	Selecting good seeds for stronger crops

	2010	
Chapa 9	October 2010	Improved maize varieties
Chapa 10	November	Seed selection

However as inputs to stories continue, this may put some experts within their networks under pressure to deliver.

### *investments*

Shujaaz has been able to secure ‘investment’ from the 2 biggest media giants in Kenya namely; Safaricom, the number one telecom provider and The Nation the largest daily newspaper. They have both agreed to distribute the Shujaaz comics using their distribution networks, which probably have the widest geographical reach in Kenya.

The Nation receive 220,000 comics at their printing press in time for the first Saturday edition every month. At the Nation’s printing press, a team of 30 women are employed (paid for by Shujaaz) to flattened the comics and slide them into the individual newspapers. These are then distributed and sold through the Nation’s normal distribution outlets as a Saturday supplement.

Safaricom contract 2 companies to recruit and manage a network of 120 TVR’s or agents who each visit between 150-200 M-Pesa outlets every month checking the merchandising and phone records. As part of the merchandize that they carry, they are now also required to carry and distribute Shujaaz. The comics are carried by a private courier company to the TVRs (paid by Shujaaz). The TVRs are then required to take the comics to the individual outlets as a free product for M-Pesa agents. Shujaaz has recently started dropping the comics at 3 locations specified by the safaricom TVR so that the comics are located over a wider area of coverage for the TVR, to encourage greater dispersion of the comics.

It is hard to say how the safari-com distribution networks are operating. At best it is patchy and less reliable than the ‘Nation’. Some M-Pesa shops are delivering regularly and those shops have a reputation for carrying the comic; others have a broken, irregular pipeline. Some outlets insist on customers making a transaction before giving over a comic. Few outlets, in our experience, have them on the counter for customer pick-up.

Interviews with senior executives in both corporations revealed that they valued the comic, as they believed it targeted the youth effectively with a relevant product which added value to their brand. Neither corporation had effectively started commissioning work or sub-contracting Well Told Story, for stories or advertising. However WTS is obliged to advertise Safaricom within its comic as product placement as part of the deal for using their distribution networks. However both corporations were aligning their brands with the comic in order to improve market reach to the youth for their media products. The Nation was in negotiation to bring the Shujaaz characters into the main body of the paper on the 3 Saturdays that the comic did not appear. This development would signal an even greater collaboration and commitment to Shujaaz and, in part, greater ownership of the brand. However the Nation may seek Shujaaz to print in English, not sheng<sup>151</sup> to conform to its mainstream readership, which will challenge the principles of Shujaaz.

Like the Nation, Safaricom was pleased with the Shujaaz association and was thinking about greater alignment and investment in the brand particularly through merchandising; bags etc. for its TVRs. Safaricom have 17.4 million active<sup>152</sup> users and M-Pesa has 13 million subscribers in Kenya, but they have little in-depth knowledge about them. Some data generated by Safaricom indicates that their

<sup>151</sup> Sheng is a blended language of English and Kiswahili, popular amongst young Kenyans.

<sup>152</sup> Wangari Muruki Murugu; Head of Marketing and Communications; Interview, 23.03.11

network covers 80% of the addressable population, over the age of 15. There is no data on gender but they have in the last month, completed psychographics, which reveal that the socio-economic band of C1, which covers middle income and labourers, is their mass market, many who spend less than Ksh.100 per month<sup>153</sup> on airtime. This is the target demographic for Shujaaz. Therefore Shujaaz comics are a relevant product for the Safaricom mass market and provides incentives for younger people and potential future customers to cross the threshold of Safaricom outlets. Safaricom see the comic as creating leverage for their products, but also forming a better relationship with M-Pesa outlet staff. This is a secondary strategy for the corporation.

Radio broadcasts are an effective means of technology transfer and complement the comic well. Actors play the characters in the comics and tell the stories to their radio audiences. This is an effective medium for improving transfer of technologies to remote communities where comics do not reach and also to groups who may be excluded from print media such as some women where mobility, literacy or awareness of the availability of comics may be an issue, and young people.

### Key Points for Radio Coverage

- 89% of Kenyan adults get news and information from the radio on at least a weekly basis.<sup>154</sup>
- In a study 9% mentioned Qfm as one of the 3 most listened to radio stations.
- Radio is an important means of communication for reaching women.
- The radio stations have a wide national coverage reaching the main cities and population concentrations as well as more remote northern populations.
- 3 of the 12 radio stations that broadcast Shujaaz target Nairobi urban dwellers with 2 focused on large slum communities, and the third, the university campus reaching very diverse audiences.
- The programme runs for 5 minutes every weekday and 2 stations play it twice in the day. This results in a cumulative total of 350 minutes of airtime across the different stations, which is nearly 6 hours of broadcast time per week.
- A total of 7 stations run the Shujaaz broadcast between 6.00pm-7.00pm before the news at 7.00 pm. This hour is considered to be peak time by the radio stations and attract the highest audiences.

**Table 2: Radio Stations broadcasting Shujaaz, coverage and listenership.**

	Radio Stations	Frequency	Time Shujaaz Broadcast	Geographical Coverage/target audience	Potential Listeners
1	Pamoja-The voice of Kibera	99.9mhz	8.30 am	Community radio station for Kibera in Nairobi.	1.5 million
2	Koch FM	99.9 FM	4.30 pm	Community radio station for Korogocho, Nairobi	150-200,000 people
3	KU Kenyatta	99.9 FM	6.30 pm	Students in Nairobi	24,000 <sup>155</sup>

<sup>153</sup> Khs. 100 is approximately 75p per month of airtime.

<sup>154</sup> Radio Use and Access in Kenya; [www.audienceScapes.org/countryprofiles/kenya/media-and-communications/radio](http://www.audienceScapes.org/countryprofiles/kenya/media-and-communications/radio)

<sup>155</sup> 24,000 students in 2009.

	University				
4	Qfm Kata Kiu	94.45 FM	4.00 pm	Mombasa, Kisumu, Nakuru, Eldoret, Kissii & Nyeri	
5	Wajir FM	101.7 MHz	6.55 pm	Wajir	
6	Hossana FM	89.5 FM	6.55 am & 7.55 pm		
7	Maata FM Lodwar	101.9 MHz	6.55 pm	Lodwar, Turkana	
8	Sifa Lamu	101.1MHz	6.55 pm	Lamu Island, northern and eastern coastal Kenya	
9	Radio Lake Victoria	91.1FM	6.30 pm	Lake Victoria, Nyanza province, western province, parts of Rift Valley	4 million
10	Marsabit FM	101.1 MHz	6.55 pm	Marsabit, North Eastern Kenya	
11	Mandera FM	100.7 MHz	6.55 pm	Mandera	
12	Star FM	105.9 FM	11.10 am	Marsabit, North Eastern Kenya	

### ***insurance***

The areas of risk for Shujaaz fall into 3 main categories. First to the young people who may adopt technologies, illustrated in the comics, second, the business risk to Well Told Story and third the wider political, contextual risk within which Shujaaz operates.

User risk is similar to other case studies, in that the technologies encourage people to invest time and resources in trying new technologies. The risks of failure are not fully explored and there is a risk of loss to some users. In this way the simpler stories that illustrate technologies with what you have, rather than committing to investing in new products or investments are more accessible, less risky and likely to be more successful than entirely new ventures e.g. the creation of fish ponds in a recent comic.

In terms of corporate risk, Shujaaz is coming to the end of its start-up funding and while successfully getting a new product, developed, adopted and distributed, has now got to secure ongoing funding quickly, in order to ensure continued production. Whilst Best Bets were funded on a cocktail of entrepreneurship and good ideas, less attention has been paid to business support to the Best Bets with the exception of FIPs, which has a business and data manager recruited, at the suggestion of RIU. The model of selling good ideas must be backed up with developing the business model and capacities of the directors to run the projects as going-concerns. This is highly ambitious at the beginning of any new business, particularly where new products and ideas are trying to penetrate the market.

Risk is further exacerbated by the short funding horizons of the RIU forcing projects to prove themselves at a very early stage and self-fund, using either corporate profits, commissions or other donor funds. Many of the current funders and investors interviewed saw financial stability as a key risk for Shujaaz. It seems that the more successful the experiments, in the first phase and the steeper the growth trajectory, the greater the need to secure early on-funding and the greater the risks of a funding hiatus, which is hard for start up companies to bear.

The last area of risk is the political context within which Shujaaz is situated. Whilst the company has not engaged with government formally, the stories that it carries are political in nature. The comic characters highlight positive government schemes, and how to access funds, as well as political corruption and malpractice by officials and leaders. One interviewee thought that the political sensitivity of its stories could affect corporate support as investors shy away from criticizing government or governance structures. WTS has not associated itself with government and can maintain a politically independent position, but it does not operate in a politically neutral space, which carries its own risk.

## Institutions

### *individuals*

Unlike other case studies, the individuals in Shujaaz are not real people but the portray of real youth in the form of the 4 main characters illustrated in the comics and on the radio. The individuals are 2 boys, 2 girls and they have different relevance to different parts of their audience.

- Boyie or 'DJB' is an unemployed male youth;
- Maria Kim is 17 and lives in an urban slum;
- Malkia is 11 years old and in primary school;
- Charlie Pele is young boy who loves football player and lives in a rural area with his father.

The artists and team have worked hard to craft believable characters, and have made sure that the female drawings portray women in a different way. The 2 female characters are strong, have principals and do not wear suggestive clothing. Both male and female characters are role models for young people and portraying women as individuals and empowered is important to the production team.

### **Danex - a fan from Oyugis**

Danex collects Shujaaz from his friend, a Nation seller who slips one out from the paper so that he does not have to pay the Ksh.50. It's easier to get the magazine from the nation as you can only get it from m-peza if you make a transaction. He has collected all 13 chapters and got his last one on Sunday. He has 2 boys and a girl aged 5, 3, and 2. Him and his wife read the comics-the kids are too young.

Danex works at the bus station as a casual labourer, carrying boxes, bags and loads for very low income. Danex was impressed by the story in one comic where the character Malkia talks about youth coming together and formed a saving group – it is a merry-go-rough. Each person puts in every week and takes turns to have the full amount. Danex's saving scheme is 6 months old. He used the 1<sup>st</sup> payout to pay dowry to his in-laws to formalize his marriage of 3 yrs. The second time he used it for school fees. The savings group of men remains intact.

He likes the character 'DJB' best as they don't talk about gangs and he likes hearing about making money. He appreciated the story on avoiding being recruited by politicians for their own ends. There is a bit of tribalism as there are 3 tribes in the area but in his groups they have mixed membership (Kissii, Nyanza, western) – Shujaaz led to this.

He thinks the comic should feature orphans and widows –there has been no feature, no focus on this. His mum died when he was young and his dad in 2000 when he was 16. Danex is now an orphan and his only remaining family is his grandmother who lives in the rural areas.

The individual comic characters portrayed share the life challenges, emotional relationships and economic barriers that young Kenyans face today. Fans of Shujaaz find them believable and they trust them. This has created a medium for technological transfer of ideas and many of the fans interviewed had tried some of the technologies or had their views changed on issues of ethnic difference, conflict or corruption.

### ***inclusion***

The comics and radio aim to highlight issues concerning Kenyan youth. They focus on simple agricultural technologies; ideas for income generation, rights awareness, accessing government schemes, including funds and utilities, corruption, scams, resisting ethnic violence, and social problems e.g. alcoholism.

The messages come from 2 main sources; the experts and people. WTS take the technologies to discuss with community-based focus groups and these groups identify the issues around the story and refine the details of the story so that it maximizes its relevance to Kenyans. WTS work hard to achieve a fusion between new technologies and ideas that could generate income, and, a believable social, environmental and political context, that is the reality of poor people's lives in Kenya today. Ideas for stories also come from focus groups and the readership suggesting issues from the realities facing them. Recent examples of ideas for stories, include bullying, drugs, and child neglect.

The writers draft the stories and Audrey, one of WTS staff writes the radio plays from the stories, (comic telling over the radio). They record 8 weeks of scripts in one go. They try hard to achieve what they refer to as a 'complete story'. They describe this as one, which has a strong moral or technical message told within a realistic social or emotional relationship. One example of this is when Malkia plants seeds with her grandmother. The technical side of the story revolves around seed soaking and planting to achieve better crops. But left on her own, by her neglectful mother, Malkia has to turn again to her grandmother for emotional support and care. This story was very popular with the fans as it seemed to capture the realities of social relationships for many young people.

Simple technical stories have had the best absorption as they don't need inputs and can be adopted into normal practices. The comic illustrates techniques and invites people to make investments and commit resources. The more ambitious stories carry more risk and could come with a health warning. It seems fans of the comic relate strongly to the characters and share their virtual lives, struggles and aspirations. They trust them to give them the accurate information, to do the right thing, provide guidance and solutions. This is a big technical responsibility with huge moral underpinnings. Poor people have made the 'Heroes' their champions showing them the way out and it seems that the less people have, the more it means.

As a strategy to promote inclusion Shujaaz asks fans to text in. A dedicated team member in Shujaaz manages SMSs as the office receives on average 80-85 every day. SMSs received rise around the comic release, when up to 200 can be received on the Monday after the comic comes out in the Nation.

The SMS comes in on a computer programme and get an instant response on an automated system. David, the SMS coordinator looks through all the questions coming in and answers some of the tricky ones personally. There are many sensitive topics; mothers ignoring children, drug abuse and bullying are just some of the stories recently received. One message that David relayed, was from a boy who had failed his exams. His parents wanted him to retake the year but he was thinking of running

away. David said it would discuss this one with the team before responding, as it was a tricky and difficult SMS. David stated that between April 2010 to date he has received 40,000 SMSs.

Shujaaz has also set up a Facebook page but it had reached the maximum of 5000 friends in the first few months with a further 1009 requests to be friends. So they switched to a Facebook 'fan site' which has a lot more capacity and they don't have to 'approve' fans to join. This site is 7 months old and already has 5538 fans. David explains that they took a while to reach 2000 fans and then it accelerated. Fans can access Facebook on their phones and post messages. It is clear that some texting fans do not have access to Facebook and this enables them to interact between the sites posting problems coming in on SMSs on Facebook for fan-led solutions.

One fan John Okuth (based in Nairobi) had posted a message on Facebook (15/3/11) stating "*After reading your story about dying chickens pink, in my rural areas, I got Ksh. 10,000 and we split it, me and my grandmother*". As Audrey states "Facebook enlightens people".

### ***influence***

Well Told Story has not made any official links with government or has an explicitly stated advocacy strategy. However many of the stories directly confront issues around political corruption, elections, conflict and governance. There is evidence that fans are influenced by the stories of changing behavior but also there is evidence of these issues being discussed on other broadcasts in radio programming. Pamoja, the community radio station in Kibera, Nairobi stated that it was planning a Sunday follow-up programme to discuss the issues raised by Shujaaz and get responses directly from the community. In addition they dedicated 15 minutes of programming a day to corruption issues and brought in political figures or officials to question them and hold them to account for conduct in Kibera<sup>156</sup>.

Shujaaz does not have an official advocacy strategy and examples of policy change are more implicit than explicit. So for example, when the armyworm pheromone traps story and disease resistant cassava sticks stories were published the technologies were not available on the market. A decision was taken to print the stories anyway in consultation with CABI as it was hoped that it could drive the government to act.<sup>157</sup>

**Table 3. Summary Table of i-Innovation in the Shujaaz Case Study**

The I's	Commentary
<b>Institutions</b>	
Individuals	<ul style="list-style-type: none"> <li>• 4 comic characters and radio actors who relay stories.</li> </ul>
Partnerships/inclusion	<ul style="list-style-type: none"> <li>• Community focus groups</li> <li>• Experts network</li> <li>• Youth inclusion through sheng language</li> <li>• Socio-economic context in stories enable people to relate to characters and share issues and life challenges.</li> <li>• Groups forming among peers</li> </ul>
Institutions	
Influence	<ul style="list-style-type: none"> <li>• Some evidence of influence on radio station expanding audience feedback programming on</li> </ul>

<sup>156</sup> Philip Muhatia, Head of Programmes, Pamoja, 20/03/11

<sup>157</sup> Quarter 3 report, ShujaazFM Best Bet; p. 3

Shujaaz issues.	
<b>Incentives</b>	
Inputs	<ul style="list-style-type: none"> <li>• Funding from donors, funders</li> <li>• Advice from experts</li> </ul>
Investment	<ul style="list-style-type: none"> <li>• Comic distributed in Saturday Nation</li> <li>• Safaricom allowing</li> </ul>
Insurance	<ul style="list-style-type: none"> <li>• No risk analysis or insurance strategy in place</li> </ul> Identifiable risk includes: <ul style="list-style-type: none"> <li>• Shujaaz securing funding where there is high fixed cost and variable funding streams,</li> <li>• risk of failure of adopted technologies by Shujaaz users,</li> <li>• Political interference</li> </ul>

### Impact

Shujaaz prides itself as having an empowerment message at its core. However empowerment as a concept has not clearly defined within Well Told Story and strategies or objectives for empowerment are not articulated. If empowerment is a guiding concept for Well-Told Story it is important to set out a vision for empowerment of men and women so that stories can be assessed against a shared vision and tangible strategies. It also becomes a value for the company which potential investors must sign up to in order for WTS to accept work or commissions. However despite not having an explicit empowerment strategy there have been a number of impacts on inclusion and empowerment.

### ***Nurturing Youth Voice and Engagement***

Shujaaz promotes an active relationship with its readers and listeners. Radio broadcasts and comics carry an SMS number so that fans can communicate with Shujaaz directly on stories. Responses on agricultural stories can occur immediately or sometimes even, after a harvest when people come back with the results some months after the story has run. Other communication channels between Shujaaz and its fans is their website and Facebook page. Using popular and interactive means of communication around youth relevant issues has enabled people to express opinions and voice around the very things that concern them today in Kenya. Shujaaz has already received thousands of SMSs and has a Facebook fan club of nearly 6000 people. Website hits grew from 8764 in June 2010 to over 20,000 in September 2010, an increase over 125% in 4 months.

Most importantly, Shujaaz is revealing more about the informal and formal rules and systems that govern and shape how organisations and official bodies behave, known as 'the rules of the game'. Printing 'how to' access government funds and services promotes inclusion and access to basic services. Using simple stories and how to boxes that summarize necessary steps to get access to resources, people have information to be able to interact with government schemes and bodies. Also Shujaaz has improved the common knowledge and understanding of common tricks or scams by individuals and corrupt conduct by officials or leaders, equipping people to tackle the malpractice that traps them in poverty. Ken, a fan in Kisumu, said *"I loved the old man character that sold fake seedlings in the market and other families were complaining because he was getting quick money. I learned how people are tricky"*.

It is this combination of access to information and awareness of corruption that is so powerful and appealing to audiences. The issues and ideas are relevant to their situations describing simple solutions. Difficult topics are glazed with humour making giving a lighter dimension to sensitive and difficult issues.

### ***Youth Inclusion through language***

Shujaaz is written in Sheng, an emerging blended language mixing English and Kiswahili used by the youth. It has added relevance and appeal of Shujaaz as a Kenyan youth medium.

The adult fans interviewed were ambivalent about the use of sheng. Whilst they were comfortable to engage in it, many were less happy for their children to read, listen and learn it. Some saw this as potentially being detrimental to learning languages of English and Kiswahili.

The Media corporates including The Nation and the radio stations in Kisumu had similar concerns. Each company wanted the comic or radio broadcasts to appear in the language it uses for communication. In the case of the Nation, they felt that Shujaaz should mirror the print language of the paper, namely English. Indeed they had overcome the perceived linguistic disconnect between the 2 publications by insisting that WTS put a logo on the front of the comics stating 'A WTS production'. In this way they could establish a disassociation with Shujaaz, while carrying it in their paper. However The Nation's plans to bring Shujaaz inside the paper may lead to greater pressure to use English in the cartoon narrative.

In the Kisumu radio stations, they stated they broadcast in Luo and felt that a Sheng programme in the middle of Luo broadcast could be 'shocking' for their listeners and they might switch off. Like the Nation they would like the radio programme to mirror their broadcasts and be in Luo.

However WTS maintains its relevance to young people by insisting that the stories be in the vernacular of sheng. It uses the common language among youth that is accessible and current. A common language helps to carry messages against ethnic divides and build bridges between youth from different social groups and backgrounds. Using ethnic languages, English or Swahili would reinforce difference, rather than build on commonalities between youth. The language feeds into the comic's overarching message as it aids the building of social capital between young Kenyans through communication.

### ***Building Social Capital***

One of the key indicators in social and behavior change is that the recipients discuss what they read or have seen with others in their proximity. This carries the messages but it also signals that the discussant processes the learned information more deeply. The Synovate survey found that across the 2 surveys an average of 35% of people discussed the issues raised by Shujaaz with boys of 13-18 years being the most likely to discuss the stories (48%). Of those that discussed the stories, 69% did so with friends. This would have an impact of strengthening the *bonds* between peer groups and building social capital.

Another form of social capital being build is *bridges* between Shujaaz and their fan base through SMSs and Facebook. Many of the fans said that this was an important relationship and if they received an SMS back from Shujaaz that this would be shared and discussed amongst their friends and networks. It is also a channel for getting comfort, moral guidance and advice. As the fan base grows, personal responses to fans may become difficult to deliver.

There is evidence of a number of other relationships being built which have not been measured. A number of fans said that they had applied for certification of groups, or for funds from government bodies or schemes. These would be examples of new *linking* social capital formed as a indirect impact of Shujaaz. It is this form of social capital, which is particularly empowering and important for poverty reduction.

### **Gender Impacts**

Synovate estimates that the comic's readership is split 60-70% male and 30-40% women<sup>158</sup>.

Shujaaz does not analyse its stories or feedback by gender but understand that some stories lines are more sensitive to girls. One example of this is that they have had a strong response from girls and women on the alcohol stories taking about brothers, fathers, boyfriends who are having problems with alcohol. Other sensitive issues such as domestic violence or teenage pregnancy have not yet come up or been covered by Shujaaz.

In terms of media, it appears that the radio programme maybe listened to more by women, who are likely to be at, or near home with children at the time of broadcast. Also some women claimed that they had not seen or could not get hold of comics and that the text was hard to read, but they listened regularly to the radio programme (women in Kibera). Men, particularly working men who are not at home during broadcasts, seem to favour comics.

A further positive impact of Shujaaz is their portrayal of young Kenyan women and their role in the household and community. The 2 characters of Maria Kym and Malkia are forming role models for young men and women. In particular the moral stand that Maria Kym often takes against violence and corruption is inspiring for men and women. One interviewee indicated that it may also have an impact on changing male opinion of women as strong, moral characters that are empowered and to be taken seriously. Hezbon in Owigis says *"I likes the characters and can trust Maria Kym. I feel that she can teach young girls about behavior and morals. I do not like the people around here,- drug taking and loose sexual morals."*

Some of the outcomes of the Synovate study highlight that changed behavior was identified in that young women were developing business plans. A positive impact is also that many young women have reportedly responded to the Women's Fund issue on how to apply for funds although there is no aggregated data on this. In interviews it was seen that one of the most common forms of adopted behaviour for young women and men was the formation of small, close-knit, single-sexed saving groups. These groups loan money to members or form what is known as a merry-go-round. Each member puts in a fixed amount and then one-member benefits form the whole pot on a rotational basis. Access to big amounts is important as poverty alleviating funding as it allows investment by individual members to happen on income generating activities. Forming savings groups indicates the evolution of relationships where trust is built and common poverty reduction strategies can be pursued. This could be one of greatest impacts of Shujaaz.

### **E. Conclusions/Lessons**

1. Understanding the changing context and reflecting current issues and problems in the solutions provided is critical in establishing acceptance for transferring innovation.
2. Individuals who transfer knowledge on innovation can be virtual, not real as long as they are believable and realistic and have an ongoing relationship with potential users.
3. There is an enormous appetite for consuming new ideas amongst young people, if delivered in creative formats;
4. Simple, low risk innovations have the greatest uptake and potential influence for poor people;

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<sup>158</sup> Synovate, 2011

5. An early entry point for corporate investment is in the area of cost sharing for mutual benefits e.g. expanding their market share with the innovation product. However once value has been established, corporate relationships should be considered for income earning in order to shift funding streams onto a more commercial footing.

## Social Exclusion, Gender and Empowerment: Analysis of the Nepal Country Evaluation Data

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### A. Background

Most farmers in Nepal are still using poor quality seeds of decades-old crop varieties, which have low productivity and high susceptibility to diseases and pests. There is limited government investment in the seed sector and seed supply is not adequate to meet replacement needs. In addition, due to lack of irrigation and poor soil fertility, about 0.4 million hectares of land remain fallow after harvesting rice in the Nepal's southern Terai region.<sup>159</sup> The Nepal FORWARD Crop Intensification project aims to increase farmers' access to quality seed of new crop varieties developed and tested using client-oriented breeding (COB) and Participatory Varietal Selection (PVS) approaches, through which farmers test the varieties produced in their own fields. The project also aims to promote rainfed rabi cropping – that is, introducing new varieties of high-value legumes such as kidney bean, lentil and mungbean, which are short duration crops and can be used in fields left fallow after the rice harvest. They are also adapted to drought and low soil fertility conditions, and considered to be higher-yielding; more disease- and pest tolerant; superior in grain quality; and of higher market value. Many varieties are aromatic so they can be sold at premium prices.

The project also intends to scale up and out the new crop and legume varieties. A principal way of doing this is by strengthening the technical, managerial and marketing capacity of community-based seed production (CBSP) groups for the production and marketing of rice and legume varieties. These CBSP enterprises provide seed as well as technical services to farmers, and the project aims to help them develop into profitable and sustainable enterprises. The project has also established a private sector plant breeding and Seed Company for producing and marketing of seeds. The project recognises that lack of demand for seed in the case of new varieties often results from lack of information and awareness about their benefits. The project therefore uses a wide variety of approaches for scaling out, including seed distribution with information, interactive meetings, workshops, advertising on FM radio and television, and farmer field schools. CBSP members are also offered group level trainings in seed production technology and marketing, and sesbania demonstrations.<sup>160</sup>

### B. Headlines: Impact and inclusion

- Seed sales and fees from group members have enabled CBSP groups to build up group funds, which provide working capital, allow for the purchase of collective assets, and constitute a fund for loans to members.
- Adoption of the improved seeds has led to bigger yields and increased incomes for individual farmers, both CBSP members and non-members. This has resulted in further social impacts, in terms of nutrition, education, and empowerment outcomes.
- The social capital of CBSP groups has increased. Groups are better organised, and work better together. They have better linkages to Groups have become more professional and market oriented, with better linkages to seed labs and the market (for example, interaction with agrovets is increasing). CBSPs also now have links to banks and can take loans. CBSP groups also have better links to the seed labs, agrovets, Village Development Councils (VDCs) and the district agricultural development office (DADO)
- Through its awareness creation activities, the programme has managed to spread the

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<sup>159</sup> FORWARD RIU proposal, 2008

<sup>160</sup> One aspect of the programme aims to promote fast-growing agro-forestry trees, so that cattle dung can be used for manure rather than fuel. They have established multi-purpose nurseries and trained people to run them.

cultivation of mungbean across all the districts in the Terai in a period of three years.<sup>161</sup>

### C. Description of the innovation from a social development perspective

#### **Objectives**

According to the Programme Manager, the aims of the project at the beginning were three-fold:

1. to make CBSP groups more self-reliant, independent and sustainable;
2. to improve the quality and quantity of production of seed; and
3. to build CBSP capacity in business skills, marketing and networks, and hence support their sustainability through profitability.<sup>162</sup>

The focus of the project is to promote crop intensification on rainfed land in the Terai. The proposal states that farmers cultivating rainfed land live predominantly in the most marginal, risk-prone and poverty-stricken regions in the country, often “*locked into a subsistence-farming situation, presenting few opportunities for enterprises and income diversification*”.<sup>163</sup> Lack of availability of good quality locally adapted seed is a particularly pronounced in remote areas with the result that resource-poor and disadvantaged communities suffer most. The underlying theory of change seems to be that the availability of better quality seed will lead to higher levels of production, which will result in increased food security for these farmers and more business opportunities throughout the seed value chain. Rainfed lands also suffer from low soil fertility, as well as deficiency of various micronutrients. Growing a crop, and particularly a legume, after the rice harvest provides farmers a bonus crop where nothing grew before. This further enhances food security and increases household nutrition levels. It also has beneficial effects on soil fertility and soil health (i.e. breaking pest and disease cycles) that could enhance the long-term sustainability of the main rice-based production system. By utilising their land better, therefore:

*“...resource-poor farmers... would benefit from food self sufficiency due to improvement in the overall production system, increased cash income, more legume consumption, better health care, and increased schooling of children, a reduced hunger gap, better animal health and village hygiene conditions.”*<sup>164</sup>

#### **Analysis**

Gender inequality and social exclusion are important challenges in the Nepal context, where there exists a persistent legacy of interconnected caste, ethnic and gender-based exclusions. Social identity thus affects individual and group access to assets, capabilities and voice. The social order is dominated by male Brahmins (Bahuns) and Kshatriyas (Thakuris and Chhetris) from the hills, and the urban-based and generally well-educated Newars. Particularly marginalised are women, *Dalits* (formerly ‘untouchable’ castes) and *Adivasi Janajatis* (tribal or indigenous groups).<sup>165</sup>

The project has access to baseline socio-economic data from three districts collected at the beginning of the RNRSS seed production projects. These studies disaggregated data by gender and social groups. Poverty data was also included, including: landholding family size; sources of income; educational level; demographic data; and migration data. This baseline data influenced the programme’s identification of project locations. The districts in the Terai can vary greatly in terms of socio-economic context, and the project districts have above average, average and below average indicators. However, poor farmers across these districts face common constraints to their livelihoods

<sup>161</sup> Ibid.

<sup>162</sup> Krishna Joshi Meeting, 11.01.11

<sup>163</sup> FORWARD RIU proposal, 2008

<sup>164</sup> FORWARD RIU proposal 2008

<sup>165</sup> *Unequal Citizens; Gender, Caste and Ethnic Exclusion in Nepal*, DFID/ World Bank

due to their small landholdings and lack of access to irrigation water. Thus, the eight project areas selected by the project have maximum upland, unirrigated areas.

Over 100 ethnic groups, castes, religious and linguistic groups also live in the Terai, for example, Tharus, Musahars, Bote, Chhantel, Dhimal, Darai, Dhobi, Dusad, Chamar, Kumal, Kusunda and Muslims. Many of these groups experience exclusion and marginalization, and the proposal states that discrimination against Dalits is much worse in the Terai than in the hills. The proposal also highlights that a major underlying cause of poverty in the Terai is the greater number of landless people (many of whom are from socially excluded groups) living there, which ranges from 14 to 60% depending on district. Only about 1% of the population has more than 4 ha.<sup>166</sup>

However, the programme itself does not explicitly target poorer people, and recognises that that it will only benefit those who are directly involved:

*“From the outset, the programme recognised that it would only benefit farmers, not labourers and the landless. The only way it can benefit them is through increased employment, and reduction in the price of commodities”.*<sup>167</sup>

However, project staff pointed out that in Nepal, landholdings are very small – on average about 0.8 ha. 47% of all farmers in Nepal have less than 0.5 ha, and less than 80% have less than 2 ha.

*“Most are small farmers. Even if the programme were to distribute randomly, it would not hit rich farmers.”*<sup>168</sup>

In addition, once a village is chosen, small and marginal farmers are targeted to receive the informal research and development (IRD) kits – seed mini-kits designed to increase awareness and demand beyond the project’s direct beneficiaries. In addition, the proposal outlines the aim of working specifically work with women’s groups, however a breakdown of these is not available in subsequent reporting. In terms of implementation, CBSP groups are also instructed that a third of participants in any events, trainings, exposure visits, etc. should be women.<sup>169</sup>

Before implementation began, the project also organised inception meetings in the villages with communities, local government, Agriculture Service Centres, Department of Agriculture (DoA), agrovets, etc. There is no evidence that any social scientists were involved at this stage.

### **Monitoring and Evaluation**

The project distinguishes between direct and indirect beneficiaries. Direct beneficiaries are those who are members of the CBSP, or those receiving IRD kits. Indirect beneficiaries are those who benefit from contact with direct beneficiaries, in terms of knowledge of technologies, or buying improved seed. Given the relatively complex nature of the project, there are a wide range of indirect beneficiaries, including individuals, groups of individuals, businesses, organisations and institutions. Project staff have expressed reservations about the extent to which they will be able to measure, and classify by gender and social group, all the possible indirect beneficiaries. Currently, the project is able to disaggregate direct beneficiaries by gender and ethnic group - and 35 per cent of the total beneficiaries are female.<sup>170</sup> About 30-38 per cent of the participants of training undertaken by the project to date have also been women.<sup>171</sup>

<sup>166</sup> Ibid.

<sup>167</sup> Krishna Joshi Meeting 11.01.11

<sup>168</sup> Ibid.

<sup>169</sup> Ibid.

<sup>170</sup> FORWARD Annual Report 2008

<sup>171</sup> Krishna Joshi Meeting, 11.01.11

There is no routine collection of data on social impacts – it is considered to be too early for this.<sup>172</sup> However, there is ongoing monitoring of certain activities. Every season (there are two in a year) the programme conducts a CBSP monitoring survey two months after harvest of the rice crop. Technical staff are expected to monitor CBSP group activities against 16 indicators, including composition of group, net savings, ethnicity and gender of the group members, etc. An outcome assessment of IRDs is also conducted, by randomly sampling 2% of the total households covered in a season of IRD distribution. Two such assessments have taken place so far but the findings are yet to be written up. These assessments use house type (roof) as one of the proxy indicators for poverty, amongst other indicators.

FORWARD have had limited contact with RIU CRT. They met with Andy Hall once in October 2009, and Rashid Soliman visited when the project was being reshaped into a Best Bets. These were special visits and FORWARD did not have advance warning of them. There were plans for CRT to visit to document processes and learning, and to provide FORWARD with feedback but this has not yet happened.

### **Staff expertise/ mandate**

None of the members of staff in the three organisations has a specific mandate to ensure that social exclusion, gender inequality or empowerment issues are addressed and no additional staff were recruited to conduct the social analysis for the project. However, the three implementing partners FORWARD, LIBIRD and SUPPORT Foundation all have considerable experience of working in the Terai, and are considered to have a strong track record in working on social exclusion issues, working with marginalised groups and ensuring participation of women.<sup>173</sup> In the project proposal, FORWARD states that its “*focus is on children, women, marginalised people and ethnic minorities*”. FORWARD is also perceived to operate in areas where farmers cannot organise themselves, and to work with very poor farmers.<sup>174</sup> LIBIRD have a focus on policy and social research on gender, social issues, policy advocacy, which they consider to cut across their agricultural programmes. Unfortunately, at the time of our visit, the LIBIRD staff that work on this area were overseas.

The Asia country programme does not have the equivalent of country coordinators as in Africa, and so country projects receive limited guidance and mentorship generally. Apart from the MIL impact assessment of IRD distribution, there was no evidence that FORWARD have received any direction from RIU on poverty, gender and social exclusion. Technical backstopping is provided by the University of Bangor, however this centres on research issues rather than uptake.

## **Incentives**

### **inputs**

The programme aims to address the lack of formal capacity in Nepal to provide enough seed to meet demand. At the same time, it aims to increase knowledge about newer varieties of seed that can provide higher yields, are better quality than the local seeds and more affordable than the hybrid seeds commonly available in the market:

*“At the moment, the most available seed are hybrid seeds. Hybrid seeds are very expensive and local seeds are cheaper. Hybrid seeds only last for one season – farmers cannot get seeds from the harvest and have to buy new seed every year. Hybrid seed*

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<sup>172</sup> Ibid.

<sup>173</sup> Krishna Joshi Meeting, 17.01.11

<sup>174</sup> National Grain Legume Research Programme (NGRLP) Meeting, 12.01.11

*also needs chemical fertiliser and decreases quality of the land. The crop from hybrid seeds also has fewer calories.”<sup>175</sup>*

The DADO in Kapilvastu also identified access to seed as one of the most pressing problems for agriculture in Nepal, along with lack of irrigation and fertiliser, and highlighted that farmers find it difficult to maintain hybrid crops because they need irrigation and more fertiliser.<sup>176</sup> The quality of local seed is also an issue for small farmers.

Thus, the programme provides foundation seed of different improved crop varieties to CBSP groups so that they can be multiplied by member farmers and sold on to other farmers, and to agrovets, who sell on to farmers. Many of the farmers we spoke to agreed that the CBSPs provide good quality seed with high levels of germination and yields.

Nevertheless, it has been difficult to establish the extent to which farmers are using improved seed, particularly in relation to hybrid seed. The Extension Officer at the DADO in Kapilvastu suggested that 95% of farmers in the district were using improved varieties for wheat, but hybrid seeds were still preferred for growing rice crops.<sup>177</sup>

#### *Testing new varieties*

A key feature of the new seed varieties promoted in the programme is that, under the RNRRS programme, they were tested in the rice-based systems of the *Terai* over a period of four consecutive years, using participatory approaches such as COB (client-oriented breeding) and participatory varietal selection (PVS), where farmers test varieties in their own fields.

The validation process also included participatory post-harvest evaluation of the cooking and eating qualities of the new varieties, and their market potential. This process ensures that the varieties being introduced are appropriate for the growing conditions in question. Project staff consider this critical to the sustainability of the project:

*“Without PVS, such projects can’t work, as the supply of foundation/ source seed of well adapted varieties is a key component of a sustainable system”.*<sup>178</sup>

#### *Capacity building*

The programme also provides CBSP groups with capacity building support. This can be through providing funds, equipment, and mostly, training. Training for CBSP members focuses mainly on the technical aspects of seed production of the different varieties. Depending on availability of funds, there are plans to conduct further field schools. The programme also facilitates exposure visits for non-CBSP member farmers to CBSP production plots. Farmers are also offered trainings in rainfed rabi cropping of lentils, chickpea and mungbean<sup>179</sup>.

*“I saw other people in the village growing the improved varieties. I went to the CBSP group and they told me about what varieties they had, and what the attributes of the varieties were. Often when we buy local varieties, the seeds are of mixed quality. I knew that they remove the bad quality seeds from their packages. I already knew about the varieties but I knew that FORWARD seed is better quality, and it gives higher quantity, so I bought them from them. They also advised me about the correct planting seasons for different seeds... I paid Rs. 30 per kg of mungbean, and Rs. 15 per kg for the rice varieties. If I had bought hybrid rice seed in the shop. I*

<sup>175</sup> Bolbam CBSP, Kapilvastu. 13.01.11

<sup>176</sup> Extension Officer Meeting, DADO Kapilvastu, 14.01.11

<sup>177</sup> Extension Officer Meeting, DADO Kapilvastu, 14.01.11

<sup>178</sup> PIPs interview with Krishna Joshi 11.01.11

<sup>179</sup> Annual report Best Bets March 2010

*IRD kits*

The project also provides Informal Research and Development (IRD) kits – small packets of improved seed - to CBSP groups for large-scale distribution to poor farmers in their villages. IRD kits are a principal way of scaling out and increasing demand for the new varieties. They are given free of charge, and contain 1 kg of seed of varieties of rice and legumes (lentil, chickpea and mungbean), as well as information on the characteristics, maturity days and quality of the grain. A kit allows the farmer to test the seed, but is not enough to cover the entire area. Kits are targeted primarily at poorer, disadvantaged communities. The purpose is two-fold: to test the suitability of the variety in a particular area; and to create demand.

There are also more informal ways of promoting uptake. Many of the non-CBSP member farmers we spoke to had seen their neighbours growing from improved seed<sup>180</sup>.

Once farmers use the seed (that they have either bought from their local CBSP group or received through IRD kit distribution), this allows them to experience the benefit from growing improved seed, namely higher yields, and in the case of mungbean and legumes, benefits to soil fertility.

***investment***

The rationale of the programme is to take RNRRS technologies forward by involving the private sector in seed production and supply – namely by helping CBSPs to develop into profitable and sustainable enterprises. There is evidence that many CBSPs are investing in themselves, by using accumulated capital to purchase land for farming, offices and storage space, as well as equipment, such as seed grading machines. Some CBSPs have also been able to secure funding from other donors.

The implementing partners have also recently set up two seed companies, Global Agritech Limited and Anmolbiu. These companies will be responsible for ensuring the provision of high-quality foundation seeds to CBSPs, continuing variety development, and processing seeds produced by the CBSPs. CBSPs also have a small stake in these companies. The companies are currently in the process of developing business plans. However, there is no evidence that these activities have attracted investment from any third parties.

***insurance***

Introducing new varieties of crops is not considered to require significant departures from farmers' normal agricultural practices. The Programme Manager also explained that the varieties in the IRD kits are proven and tested, and their planting serves as a re-verification. The main risk is with mismatching domains, and so a printed leaflet included in the kit provides detailed information about the seed varieties, and the conditions needed to grow them. During seed distribution, farmers are also given a brief orientation about crop variety. Farmers are also told that they are taking some risk. However, no compensation is given for failed crops, and there are no other risk mitigation measures in place:

*“There is a lack of safety nets for poor farmers. Farmers can keep their receipt from an agrovet purchase, and if the crop fails, they can go for litigation. The farmer can bring receipt to agricultural dept office and fill in a form, and the department will take it up on the farmers’ behalf. But this hardly ever happens.”<sup>181</sup>*

<sup>180</sup> We were able to speak to only one group of non-CBSP members. It may be that the household survey has been able to pick up more information on the impact of IRD kits on uptake and adoption.

<sup>181</sup> Extension Officer Meeting, DADO Kapilvastu, 14.01.11

It could be argued that the location of CBSPs groups within the communities they sell to results in greater levels of trust and transparency, and greater accountability. The agrovets present at the discussion with the Adarsha CBSP suggested that he bought seed from the group because he knew and trusted them<sup>182</sup>. However, we uncovered no instances of when farmers may have taken up issues around the seed sold to them with the CBSPs.

## ***Institutions***

### ***individuals***

The programme has developed local resource persons, some of whom attached to CBSPs, and help with technical aspects such as seed production; seed packaging; disease, etc. However their role was not very apparent during the evaluation team's visit, and rarely mentioned by the various stakeholder or project staff.

Apart from this, there are no individual intermediary or brokering roles in the programme. Responsibility for knowledge dissemination, through publishing or broadcasting information, or providing training lies with project staff, who, along with the Programme Manager are also responsible for identifying strategic opportunities, and making connections within the value chain.

### ***inclusion***

#### ***Participatory trials***

As mentioned above, the new seed varieties that are promoted were validated through participatory trials under the preceding RNRRS programme, where farmers test varieties in their own fields, in order to select those varieties that are most appropriate for their needs. The proposal states that both men and women farmers representing all ethnic and income groups were involved in the testing exercises, with a particular focus on resource-poor, smallholder farmers.

#### ***Creating knowledge and awareness***

The project considers that its key innovation is packaging information and experience from RNRRS programmes and providing it to beneficiaries, and value chain actors. This is achieved through bringing together major stakeholders from the value chain and engaging them at different points in the process. For example, the project organises seasonal Variety Stakeholder Meetings to which farmers, members from the CBSP groups, millers, wholesalers, extension agents, government officials, researchers, media representatives, and agrovets are all invited. They are provided with information on the advantages of the seed, the risks, and the necessary precautions - and shown the performance of new varieties in standard conditions, as well as samples of the seed. Some events also offer meals/ preparations made out of the crop varieties so that participants can test for taste. The meeting is considered a promotional event for new varieties.

Annual planning meetings are also held, to which are invited project staff from the three implementing partners, and officers from District Agriculture Development Office (DADO) across the Terai; regional and central offices of the Department of Agriculture; and the Nepal Agricultural Research Council (NARC) research programmes. Community representatives and beneficiaries are not included in planning meetings.

Information about the new crop varieties is also disseminated via FM radio broadcasts across the Terai - in regional languages as well as Nepali. Close to planting season, there are various broadcasts on new technologies, which are aimed to help people access them. However, the project has not conducted listener surveys, or any other form of monitoring to determine the effectiveness of these approaches in promoting uptake.

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<sup>182</sup> Adarsha CBSP group, 13.01.11

### *Improving affordability of seed*

The price range of the improved seed varieties is set by the government, and there is limited evidence that sellers vary the prices they charge according to type of customer, i.e. poor farmers. Project staff suggested that too much flexibility would make the business model unviable.<sup>183</sup> The Adarsha CBSP group suggested that did not know of anyone who could not afford to buy seed of the new varieties.<sup>184</sup> The practices of agrovets vary. Some do not offer any credit, while others allow flexible payment methods for regular customers (for one agrovet this was to about 10-15% of his customers. He does not charge interest either).

### *Identifying CBSPs*

The first step in identifying CBSPs for inclusion in the programme, was to target low-income districts as highlighted by the baseline study. Once this was done, existing agricultural organisations in these areas were identified through the partner organisations' own networks. The main criteria for selection was willingness to partner; the existence of some capital (project staff speculated that organisations needed on average about Rs. 100,000 to qualify as this is what is needed now), and experience of producing good crops and seed. These are difficult conditions to meet, although it would seem that they were imposed in light of the short duration of the project which would mean that there was limited scope for the programme to undertake basic capacity development.

Although the proposal states that efforts would be made to include women-only groups, only one of the current 43 groups is a women's group. There is no evidence that the project aimed to target groups that were particularly representative of marginalised groups.

### *Membership of the CBSP groups*

There is evidence that CBSP groups have taken on new members since their involvement in the project. The general profile of CBSP groups varies, in terms of their socio-economic and gender composition: *"One group includes people with PhDs and illiterate farmers."*<sup>185</sup> However, it is also clear that the financial conditions needed for joining are much more stringent than they were for the original members, or for those who became members earlier on during the project. For example, it appears that new members now have to pay an entrance fee equal to that of the members' current share of the group's accumulated funds in order to join a CBSP group. So to join the Bolbam CBSP group, a new member would need to contribute Rs. 20,000. This represents a significant financial barrier to lower income farmers who are expected to pay a full share of the fund while existing members have had their share significantly subsidised by the RIU programme. A monthly membership fee is also required. This can vary depending on the CBSP group in question, but has also increased over time. For example, when the Bolbam group was started in 1999, they collected Rs. 5 from 16 members. Now they charge a membership fee of Rs. 100.

There are other conditions also. When the Shreeram group opened up their membership, they only approached 'good decent farmers', i.e. those who have good land which can produce good seed, and those who respect rules and regulations.<sup>186</sup> The Bolbam group hope to increase their numbers to 25 members this year. They are looking for people who are honest, cooperative, work hard, and can work together as a group. They should have an average living standard – and be neither rich nor poor.<sup>187</sup> All of the CBSP members also own land: in the Adarsha group, the minimum amount is 0.25 ha, and the maximum 2 ha.

<sup>183</sup> First interview with Krishna Joshi about CBSPs, 11.01.11

<sup>184</sup> Adarsha CBSP group, 13.01.11

<sup>185</sup> Krishna Joshi Meeting, 11.01.11

<sup>186</sup> Shreeram CBSP, Chitwan 12.01.11

<sup>187</sup> Bolbam CBSP, Kapilvastu. 13.01.11

In terms of the gender balance of membership, this also seems to vary. The Shreeram CBSP has a gender balance of 50/50 men and women. Their Managing Committee is made up of seven people - six men and one woman. The Adarsha group has 18 members - 10 men and 8 women. The Bolbam group, which is much smaller, has 11 male and four female members. Additionally this group includes one Dalit, two Adivasis and two members from the Tharu community. In answer to most of our questions about the inclusion of women and minorities, respondents referred to the constitutional amendment which now guarantees at least 33% representation to women and all ethnic groups in all sectors, and in all formal gatherings/ groups. The membership of the Bolbam group seems to correspond precisely to the minimum gender and ethnicity quotas.

There is, however, no monitoring of the extent to which these groups are able to turn formal representation into meaningful participation and inclusion. While members are free to voice opinions and take votes there has been no recognition of the ethnic and gender constraints present in the group or any attempts to promote voice from lower castes and women. Responding to a participatory empowerment tool with the women in Kopuwa village, women did not identify decision making within the groups as a recognisable benefit of group membership and when asked about their role in decision making within the group stated: *“we are not allowed to leave the meeting until it's finished.”*<sup>188</sup> In this regard there seemed to be little difference between the female members and female onlookers who attended the meetings in terms of voice and decision making.

There is some evidence that CBSP groups, particularly successful ones, may operate as exclusive clubs. Bolbam CBSP group meetings, for example take place in the open, where non-members can only look on. Whilst they become more aware of the benefits that the membership offers, they are unable to afford it for themselves. A female non-member who has been buying improved seed from the group from some time said:

*“I want to become a member of the Bolbam CBSP because I want to learn more – in terms of technical skills in different areas. I will make an application to join. I believe that being in the group will help me make money by selling seed. This would mean that my family would eat better. If I gain in terms of knowledge, then I will be able to bring a change to my family. Specifically, my children will be better educated.”*<sup>189</sup>

### **Selection of farmers for receipt of IRD kits**

IRD kits are distributed through the CBSPs, and to a lesser extent, through agricultural service centres and DADOs. As the villages are closely knit, it is expected that the CBSPs will be best informed about the well-being status of households and use their knowledge to identify poor and marginalised farmers. However, the CBSPs can add additional, sometimes somewhat subjective, social criteria for selection: recipients must be ‘good’ farmers; possess land; have good irrigation; and demonstrate discipline and the ability to follow instructions.<sup>190</sup> The Adarsha group selects “active farmers who are curious”.<sup>191</sup>

*“We select farmers based on type of land; whether the person is hard-working or not; whether the land has irrigation; or boreholes. We try to help poorer farmers, and find farmers through our networks. We look at how farmers spend their income, i.e. whether they spend it on themselves or on their children’s education. We want to make sure farmers spend on children’s education. We don’t distinguish between those with more or less land – they just want the farmer to be hard working.”*<sup>192</sup>

<sup>188</sup> Women's groups meeting, Kopuwa Village 17.01.11

<sup>189</sup> Interview with female adopter of CBSP seeds (Bolbam CBSP) 13.01.11

<sup>190</sup> Shreeram CBSP Chitwan 12.01.11

<sup>191</sup> Adarsha CBSP

<sup>192</sup> Bolbam CBSP, Kapilvastu. 13.01.11

When distribution is being carried out in an unknown village, the project uses proxy indicators to identify poor households, namely the type of house. The target groups are those with a thatched roof, or at the most, a tin roof. Those with concrete roofs are considered better off. The project also turns to key informants (e.g. the DADO) for information about poor farmers.

The FORWARD contact office in Kapilvastu estimated that, to date, around 8,000 IRDs have been distributed in Kapilvastu district and 10,000 in the neighbouring district also covered by the contact office. Project staff are present when CBSP-led distribution takes place and keep records of distribution. This includes information on district, village, quantity, crop, variety, gender (of the person collecting the kit), ethnic group, and socioeconomic composition of household. The 2009 FORWARD Annual Report states that more than 10,500 farmers comprising Dalit, Janajati and women farmers received seeds through IRD kits in Year One of the project.<sup>193</sup>

*“The focus (of the distribution) was on women, ethnic groups, Dalits, as it is mostly these groups who are most disadvantaged. CBSPs are not given targets but the general guidance is that majority of IRD kits should go to women, Dalits and ethnic groups.”<sup>194</sup>*

It could be argued that by enabling established better-off farmers to distribute seeds to poorer, more disadvantaged groups there has been a reinforcement of existing power relations rather than an attempt to change them. The project could have developed an alternative model through which organisations or groups representing poor and marginalised farmers were given responsibility for distribution – this would have allowed for distribution that was based on stronger knowledge and analysis of the needs of poor farmers.

There has also been no recent monitoring of how IRD kits are affecting uptake of the new seed varieties outside the CBSP groups. A MIL study of IRD distribution was carried out. Project staff indicated that MIL had conducted an impact assessment of IRD distribution<sup>195</sup>, however we have not been able to locate this. Various impact studies of case studies in South Asia that were related to research on rainfed agriculture funded by DFID’s Plant Sciences Research Programme (PSP) were undertaken in 2008-2009 and are available on the RIU website.

### ***The role of women***

In the context of large-scale labour migration to India, the Middle East and Southeast Asia, women are increasingly involved in agricultural activities in Nepal. One woman farmer told us:

*“The men in the district go abroad a lot, and it is women who do most of the work. Women do have an increased burden – often we get labour in to help with the farming. I make the time to fulfil all my jobs by sharing responsibilities with other household members. I sell the crops myself. Buyers come to the house to buy them – I do the negotiation myself.”<sup>196</sup>*

There is some classification of labour involved in agricultural work in Nepal. Ploughing is the responsibility of men, and picking and threshing is generally carried out by women. Women members of the CBSP groups have reported increased participation in communal work on collective group. For example, the Bolbam CBSP group in Kopuwa village has bought some land which they farm communally. Female members of the group are responsible mainly for planting the seeds.

<sup>193</sup> FORWARD Annual Report 2009

<sup>194</sup> Krishna Joshi Meeting, 11.01.11

<sup>195</sup> Ibid.

<sup>196</sup> Interview with female adopter of CBSP seeds (Bolbam CBSP) 13.01.11

An expert at the National Grain Legume Research Programme (NGRLP) argued that introducing legumes has more impact on women – as it is they who cook pulses and do field work. Extra pulses means women are more affected, as they do most of the work.<sup>197</sup> In the case of mungbean, extra costs to households include the cost of seed and some additional labour, including extra sowing, planting, ploughing and harvesting. The incorporation of biomass is done by men – but this is after the picking of the pods which, it is assumed, is done by the women. There are a maximum of three pickings – farmers can harvest nearly 85% of total pods, and the remainder are incorporated into the soil. The majority of mungbean is sold – nearly 90%. According to FORWARD’s calculations, even after including this extra burden, the estimated cost benefit ratio of adopting mungbean for rice fallows is 1:3:

*“Mung beans seen as an opportunity not a burden - it provides comparable employment to migratory employment. It also improves family welfare.”<sup>198</sup>*

Project staff told us that marketing and selling responsibilities depend on ethnicity. Chaudhry, Magar, Gurung women are household leaders and do the selling. For most other ethnicities, e.g. Brahmin Chhetris, the men are responsible for selling.

However, it was suggested by female non-CBSP members in Kopuwa that they struggled to find the time to manage all the groups that exist in their village: *“There are so many groups, some are selling groups, some are women’s groups.”<sup>199</sup>*

#### ***institutions***

The main focus of the programme is the development of CBSPs groups and their seed production and marketing capacities. All the groups have benefited from support from Practical Action (an international NGO which works with poor communities to develop appropriate technologies) which trained the office bearers. Each CBSP has also developed a Business Plan and three-year vision. There are currently 43 groups, with an average membership of about 25. Most groups include both men and women. These CBSPs are producing and marketing certified, improved and truthfully labelled seeds of various crops, including rice, wheat, and grain legumes.

Please the section on ‘inclusion’ above on how inclusive the selection and operation of these CBSPs is.

#### ***influence***

CBSP groups have established some links with the VDCs, and agrovets. However, formal links between the groups and the district agricultural development office (DADO) are still weak. Whilst occasional meetings do take place there has not been a conscious strategy to nurture greater group/government relations or to create a sustainable forum where farmers can proactively bring issues before government for discussion and resolution. To some extent, this is due to lack of capacity at the government level. The Kapilvastu DADO accepted that FORWARD is able to offer a higher intensity of support to the CBSPs than the DADO can provide to their seed groups. In principle, there are about 500 groups in the district, to about 20-25 DADO staff in the HQ and agricultural service centres. However, the DADO believes that it has not been adequately involved in the project:

*“They (DADO officers) should have been given a clear role, and they should have been involved in the training as they have training officers. They should also have*

<sup>197</sup> National Grain Legume Research Programme (NGRLP) Meeting,

<sup>198</sup> Ibid.

<sup>199</sup> Women's groups meeting, Kopuwa village, 17.01.11

*been involved in forming the groups. There should have been a comprehensive strategy to get the villagers together to talk about the problems that they face. If this had been done, they would have known that irrigation is the main problem no matter what your seed is.*<sup>200</sup>

**Table 1. Summary table of *i*-Innovation in the Crop Intensification case study**

The I's	Commentary
<b>Incentives</b>	
Inputs	<ul style="list-style-type: none"> <li>• Provision of foundation seed to CBSPs for multiplication</li> <li>• Distribution of IRD packs to poor and marginalised farmers</li> <li>• Provision of information about new seed varieties to various stakeholders</li> <li>• Training to CBSP members and exposure visits for non-member farmers</li> <li>• Some funding and equipment grants to CBSPs</li> </ul>
Inclusion	<ul style="list-style-type: none"> <li>• Seed varieties validated through farmer trials under RNRRS programmes</li> </ul>
Institutions	<ul style="list-style-type: none"> <li>• Capacity building of CBSPs to become profitable and sustainable enterprises</li> <li>• Better links of CBSPs with agrovets and VDCs</li> </ul>
Influence	<ul style="list-style-type: none"> <li>• No formal links with district-level agricultural offices</li> </ul>
<b>Institutions</b>	
Individuals	<ul style="list-style-type: none"> <li>• Local resource persons</li> <li>• No other brokers or intermediaries</li> </ul>
Investments	<ul style="list-style-type: none"> <li>• No external investment has been attracted. Self-investment by CBSP members in their own groups, and by the implementing partners in a seed company has occurred.</li> </ul>
Insurance	<ul style="list-style-type: none"> <li>• Some risk analysis but no mitigation strategies.</li> </ul>

## Impact

### ***Increase in CBSP income and assets***

Seed sales and fees from the group have enabled CBSP groups to build up group funds which provide working capital and a fund for loans to members at low interest rates. In this way, the project has increased access to credit for member farmers. The Bolbam CBSP, for example, has extended loans of up to a maximum of Rs.15,000 to its members. At the time of our visit, almost all members reported having received a loan. This is perceived as a notable and important benefit of CBSP membership by non-members.

The CBSPs have also increased their collective assets. Once groups are formally registered they can apply for district and VDC funding. The Bolbam group bought a seed grading machine with support from FORWARD, the Village Development Council (VDC), and local agrovets. The group has also bought land for an office from a local farmer. Since becoming a group, they have bought an additional 0.2 hectares of land. Collectively the group farms 0.133 hectares. They also have a bank account.<sup>201</sup>

<sup>200</sup> District Agricultural Office Meeting, DADO Kapilvastu, 14.01.11

<sup>201</sup> Bolbam CBSP, Kapilvastu. 13.01.11

### **Increased yields and incomes for farmers**

There is clear evidence that adoption of the improved seeds leads to bigger yields and increased incomes for individual farmers, both CBSP members and non-:

*"The yield has increased. If before, there was a yield of 5 quintal of rice, the FORWARD varieties result in 8-10 quintals. I have worked in other villages, where more than 60% are using FORWARD seed."*<sup>202</sup>

*"All farmers from East to West in the project locations had the same answer "Mungbean" in the question of what is the best product/technology you got from the project. Those farmers who were reluctant even to test mungbean crop in 2009 increased area under mungbean seed production by 2-10 fold across the project districts especially where spring fallow with access to irrigation*

There is growing demand for the improved varieties coming from outside project the villages, and farmers from these villages are approaching CBSPs to buy new seeds. The main drivers for uptake and adoption are financial. With new varieties farmers are able to grow enough crop to meet their subsistence needs and to take to market, often selling back to the CBSP group. Project staff highlighted that farmers have reported that when they have grown mungbean, subsequent rice crops have yielded more than 30% extra rice because of the incorporation of the biomass (i.e. foliage) into the soil.<sup>203</sup> The FORWARD Annual Report 2009 states:

*"A recent study has shown that legume- based cropping patterns are more remunerative than leaving land fallow after rice. We analysed the costs and benefits of growing new mungbean varieties relative to the farmers' local variety and they were considerably more profitable than the local variety."*

This has resulted in far-reaching social impacts, in terms of nutrition, education, and empowerment more generally. The women of the Shreeram CBSP group told us:

*"At first we had little to eat – only 'daal roti' (bread and lentils). Whilst we had land before, the production was not good. Now the yields are better and coupled with the increased income, we have more food, and eat sweet things. While Saraswati's (one of the women in the group) children used to go to school before the programme, now they go to private school. We spend the extra money on clothes. We also have greater status and prestige in the village. Before we used to travel by foot, now we have bicycles."*<sup>204</sup>

Of the six empowerment domains (assets, knowledge, participation, decision-making, mobility, and aspiration) all three women ranked 'assets' as the area of change that they most valued. In terms of aspirations, women's hopes for their children through access to better education was a key and recurring theme in most of our discussions. One of the women also hopes to build a storehouse like that of the CBSP of her own. It is important to note that the two districts that we visited - Chitwan and Kapilvastu districts – are ranked above average in a 2003 poverty and deprivation index cited in the FORWARD proposal. In addition, the Shreeram CBSP group is a particularly well-established group, lying on the outskirts of the city of Rampur. The women from the poorer, relatively more rural Kopuwa village, did not report a great deal of difference in terms of their assets change,

<sup>202</sup> Interview with non-adopter farmers, Kopuwa village, 15.01.11. This quote is from a landless labourer.

<sup>203</sup> This 30% figure has been measured through a controlled trial. They still need to look at combined data from all trials to get a final figure but it is clear that there is definite benefit from growing mungbean.

<sup>204</sup> Adopter CBSP women members – Shreeram CBSP, 12.01.11

reporting only slightly higher income, which was enough to buy grading machines, but not enough to make a difference at the household level.

The project's expectation that it would benefit landless labourers by bringing down the price of commodities has also not been borne out. In principle, with the increase in supply, prices should have dropped, but this has not happened. A weak government and the lack of strong regulatory mechanisms have resulted in an imperfect agricultural market, and the project has found that once prices increase, they seldom come back down.

### ***Building organisational capacity***

The project has made a significant contribution to bringing groups together and developing their social and human capital. The project-supported CBSPs are now better organised, produce and market seed of new rice and legume varieties in good volumes, have started producing business plans, and have increased their funds. The group members have also realised the value of seed in improving income as well as crop productivity. In addition to rice and legume varieties, most of the CBSPs have started diversifying the crops (wheat, maize) in seed production. Programme staff are confident about the sustainability of most groups:

*“We are quite confident that they will continue, they have knowledge to continue. Some of the groups have purchased land and have built their own seed store. Out of three groups in the Kapilvastu district two of them will definitely survive without FORWARD influence. The third one we are not confident of its sustainability – this group has no savings so far and seems to be less active.”<sup>205</sup>*

CBSPs are also more bonded as a group. The project has helped to build the skills and knowledge to form stronger organisations:

*“Amongst the social changes is a culture of participation. Even after the programme, farmers will be going back to the CBSPs and the culture of looking for new varieties will remain. This is the biggest asset left behind. Capacity development has provided long lasting knowledge about participatory variety selection, business skills.”<sup>206</sup>*

The women of the Bolbam CBSP group rated changes in knowledge and participation as the most important outcome of their participation in the group, referring to trainings provided through the programme, as well as participation exposure visits to observation farms, and the DADO. In fact, exposure visits were identified as one of the principal benefits of membership in a CBSP by non-members in the same village. Changes in the domain of ‘participation’ were described by the women group members as communal work on land and then attendance in monthly meetings. The women of the Shreeram CBSP unanimously ranked ‘participation’ as the third most important area of change. They stated that had developed “the habit” of working in a group.

### ***Promoting institutional change and voice***

Some CBSPs have evolved and are technically, financially and socially transformed. All the groups are DADO registered, and some are registered as cooperatives (some during the duration of the project). Groups have become more professional and market oriented, with better linkages to seed labs and the market (for example, interaction with agrovets is increasing). CBSPs also now have links to banks and can take loans.

<sup>205</sup> Nepal, FORWARD Contact Office 13.01.11

<sup>206</sup> Krishna Joshi Meeting 11.01.11

*“The programme has also empowered people. Knowledge is power, and now people have knowledge about so many things. This has given them confidence - they go to government offices and demand for linking with enterprises. The CBSP in Mornag district managed to get £2,500 from the government, and contributed £1,000 to purchase a house which will be renovated into a seed store and office. Project staff helped three CBSPs to get \$35,000 from a World Bank funded project – for strengthening the business aspects.”<sup>207</sup>*

CBSP groups also have better links to the agricultural development office, VDCs, agrovets, and the DADO. Once groups are registered they can apply for district and VDC funding. As mentioned earlier, the Bolbam group has received funding for a seed grading machine and at the time of our visit, had a grant application for a seed storage facility pending. Registration (even though it is an onerous process - forms for registration are 46 pages alone and formal registration costs amount to an estimated Rs.1,000) results in official recognition, access to resources and greater inclusion in governance. Five other CBSP groups in Saptari, Kanchanpur, Kailali and Banke districts have also purchased or received (from government agencies or the community) land, and are now heading towards building storage structures<sup>208</sup>. The members of the Bolbam CBSP group told us:

*“With the help of the group, we can contact other organisations, including the government, VDCs, agrovets, other farmers, district level offices, cooperatives to get support. Before the group, the farmers used to meet for individual purposes, now we meet on behalf of and represent the group. As a result, leadership development has increased. We also get financial help; and have increased in knowledge on seeds.”<sup>209</sup>*

CBSP members also hold monthly meetings where issues are discussed and decisions taken. Agrovets, as well as representatives from the VDC attend these meetings, thus creating a progressive environment for farmer voice to be heard:

*“The most important benefit is group work. Before we used to work alone, now we help each other with farming, and work gets done faster. If any farmers face difficulties or emergencies, the group can provide financial help.”<sup>210</sup>*

## **E. Conclusions and Lessons**

The crop intensification programme’s experience of strengthening seed supply systems in Nepal, and promoting knowledge and uptake of new varieties provides important lessons for future efforts to achieve poverty reduction through promoting innovations. These lessons emerge from the both the strengths and successes of the programme as well as from the challenges that it has encountered. Key lessons include:

- 1. Analysis is needed to understand the needs of poor and marginalised groups, and to develop the most appropriate mechanisms for reaching them.** The project aims to reach poor and marginalised farmers through distribution of IRD kits, and particularly prioritises excluded groups. However, the use of CBSPs and district agricultural offices as the channels for distribution reflects a limited understanding of how poverty and power relations operate at the community level, with CBSP groups often imposing further subjective conditions on who should benefit from IRD kits.

<sup>207</sup> Krishna Joshi Meeting 11.01.11

<sup>208</sup> Combined Best Bets Annual Report, RIU, 2010

<sup>209</sup> Bolbam CBSP, Kapilvastu. 13.01.11

<sup>210</sup> Bolbam CBSP, Kapilvastu. 13.01.11

2. **Addressing gender and social exclusion issues must go beyond targeting women and excluded groups to receive inputs, and promoting their representation in institutional structures, to addressing their meaningful participation and ensuring that their voices are heard.** It is clear that the CBSP groups have led to the development of social and human capital between members, and with other actors, such as local government institutions, banks, etc. Due to recent constitutional developments all the CBSP groups include women and excluded groups. However, there has been little learning about group dynamics and the extent to which women and minority group members are able to make their voices heard within the groups.
3. **In order to understand adoption, monitoring must assess the outcomes of input provision, and seek to capture what is needed for sustainable adoption of innovation, and how farmers themselves can adapt new technologies to their needs.** Currently, the project's monitoring efforts only go so far as to assess the numbers of individual women and members of social excluded groups directly benefiting from membership in CBSP groups, participation in events or trainings, and receipt of IRD kits. There is little monitoring of the impact of the project's activities on uptake by women and excluded groups. For example, there is no analysis of the impact of IRD distribution on uptake and adoption by poor farmers. Learning could for example centre on the calculations, and innovations, that poor farmers make when deciding whether to use local, hybrid or improved varieties. This would depend potentially on the amount and type of land they have, the crops that they choose, the distribution and availability of labour, etc.

## Social Exclusion, Gender and Empowerment: Analysis of the Bangladesh Country Evaluation Data

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### A. Background

Managed by the Association for Integrated Development – Comilla (AID-Comilla), the ‘Rat Management for Rural Communities’ Programme is one of four projects funded by the RIU in Bangladesh through the Asia Innovation Challenge Fund (ICF). The ICF funds those projects which aimed to significantly up-and out-scale technologies, practices and policies generated by RNRRS research.

In many villages in Bangladesh, rats often live inside or nearby houses, where they have easy access to villagers’ post-harvest grain stores. They eat the grain, leaving hairs, urine and faeces behind. Analysis by the preceding RNRRS project showed that farmers could expect average losses of 30 kg after 90 days of storage, or about 4% of their entire grain store volume<sup>211</sup>. The rats also contaminate other food and water, cause damage to property, including houses and other possessions, bite villagers when they are asleep, and transmit diseases.

Local awareness and knowledge about methods and tools for rodent control is often quite low. Mostly villagers use poisons and traditional traps, which are not particularly effective – as rats can often become shy of the bait, or develop a resistance to it. In addition, poisons can be expensive, and hazardous to health and the environment. As a result, villagers often believe that they must live with the problem. Community knowledge about rats and their impact also tends to be anecdotal and in particular, does not take account of the health problems they can cause. Without a good understanding of the damage that rats can cause, people are not able to make informed decisions about the kinds of investments they should be making in rat management.<sup>212</sup>

The AID-Comilla programme aims to promote ecologically-based rat management (EBRM) amongst rural communities by combining training with promotion of various technology-based solutions, namely improved kill traps that have been locally adapted from a US-made model. Villagers trap using a community-based rotation system, through which they rotate traps between them in cycles. The strategy is to work with four groups per village, with each group setting the traps for one week. Trapping continues year round. After one year, the project moves on to other villages. After observing the effects of trapping, this is expected to create demand amongst communities, and the communities are expected to buy their own traps and operate independently.

### B. Headlines: Impact and Inclusion

The project’s outputs and impacts have included:

- Training provided to 13,825 farmers in 142 communities across five districts, including 13,806 women
- 20,000 traps produced, with approximately 8,000 traps distributed to farmer households, and 10,000 sold to farmers in other districts
- Greater community awareness about rats, their associated health risks, the damage they can cause, and how they can be effectively managed
- Establishment of community rotation systems for collective trapping
- Decreases in rodent populations in all districts

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<sup>211</sup> Belmain et al (2005)

<sup>212</sup> AID-Comilla Annual report 2009

- Greater demand for improved traps in intervention districts, and evidence of demand more widely

### **C. Description of intervention through a social development lens**

According to the ICF Operational Guidelines, the ICF will provide support to initiatives which “will contribute to RIU’s purpose by delivering significant use of RNRRS (...) outputs for the benefit of poor men and women”. This also appears as the purpose in the AID-Comilla project logframe. The Guidelines also make clear that poverty and marginalisation, particularly among women is considered by RIU to be a major social and economic issue in the South Asia context. Applications to the Fund were also required to demonstrate how the proposed interventions would contribute to the evidence base of how gender impacts development.

#### *Objectives*

The objectives of the AID-Comilla project are to: train farmers on rat management techniques so that they ‘buy in’ to the concept and eventually carry on at their own cost; and establish a commercial manufacturing base in Bangladesh of improved rat traps, which are marketed through the national network of the Bangladesh Rodenticide Manufacturers Association (BRMA).

The project is implemented in the five rural districts in Bangladesh that the project partners (AID-Comilla, LDRO, Shushilan, Arban and Mukti-Nari) are based in. These are Comilla district in the east, Bogra and Netrokona districts in the northern region, Kushtia in the west, and Satkhira in the southwestern region. Kushtia and Satkhira have particularly poor socio-economic indicators.

#### **Analysis**

The design of the programme has been mostly informed by earlier research carried out under the RNRRS programme. This found that it is normally the village women who are responsible for catching rats in the house, while men work mostly in fields. Thus, the project focuses on training women to understand rats, and how to implement rat trapping. Because rats do not remain within individual property boundaries, the project also recognises that whole communities must be engaged in order to effectively control rodents<sup>213</sup>. Therefore, the project aims to target all households in a village. From our discussions, there was no evidence that households ever refused permission to trap rats on their property, or were left out of the programme.

The proposal states that the impact of rats is similar across social groups, however rat management is more of an issue for poor farmers, in that they are less equipped with the knowledge to effectively deal with the problem. The project has also adopted a community rotation strategy so that poor farmers who cannot afford to buy traps individually can benefit from communal traps. However, in terms of targeting of beneficiaries the project design does not have a particularly strong pro-poor focus. The villages were selected on the basis of a range of criteria, which included certain proxy indicators of poverty (such as number of schools, size of average landholding, number of mud houses) but not income level. Certainly, the villages that we visited in Comilla district seemed to be fairly well-off, and our findings should be understood in this context.

#### **Monitoring and evaluation**

Baseline studies and Participatory Rural Appraisals were conducted in each of the selected villages and collected information about income and social groups. However, this baseline data was intended for comparative purposes only, i.e. to measure progress at the end of the project. Farmer diaries also capture monitoring information about the socio-economic status of households, rat damage, number of rats trapped, and who is setting the traps. However, this information is not systematically analysed and it does not seem that any analysis of trends is being documented or

<sup>213</sup> AID-COMILLA responses to reviewers’ comments

communicated back to farmers. There is also no provision to monitor and support groups once the one-year intervention has ended, and project staff rarely visit these villages.

### ***Staff expertise/ mandate***

None of the members of staff in AID-Comilla has a specific mandate to ensure social exclusion, gender inequality or empowerment issues are addressed. All the field staff are also male, however they do employ village-based female workers to coordinate the community rat management groups. The implementing partners also all have experience of working with women and vulnerable groups on social issues. Thus, they consider themselves, and are perceived by the government, to be well-placed to address issues of gender and social exclusion.

One of the original implementing partners, Promoting Participation and Training (PromPT), specialises in monitoring and evaluation (M&E), assessment methodologies and participatory M&E strategies. PromPT was originally responsible for the overall monitoring and evaluation of the project, and for providing the project Data Manager. However, PromPT's involvement with the project seems to have ended after the initial data collection phase, and AID-Comilla now provides the Data Manager.

The Asia programme does not have the equivalent of country coordinators as in Africa, and so country projects receive limited guidance and mentorship generally from RIU. There was no evidence that AID-Comilla have received any direction from RIU on poverty, gender and social exclusion. They seem to rely mostly on Dr Steve Belmain, who was the original researcher on EBRM under the RNRRS, and is an advisor to this project, for technical advice.

### ***Value for money***

The proposed budget for this project was £385,000, over a period of 3 years. As of December 2010, actual spend was £350,000, including £95,500 for NRI costs. This has covered providing training for 13,825 farmers, and involving them in community-based trap rotation systems – a cost of roughly £18 per head.

## **D. Evidence and findings using the *i*-Innovation model**

### **Incentives**

#### ***inputs***

The provision of training and improved traps (further details on these are given in section C above) are the cornerstone of the project. Villagers do have access to other methods of rat control. These include poisons, as well as traditional traps. All of the groups we spoke to (farmers, DAE, project staff) agreed that these methods were not particularly effective, and certainly not as effective as the improved traps. The improved traps have proven more effective, easy to use, and safer than rat poisons, and other models of kill traps. Everyone we consulted, farmers, project staff and the DAE – agreed that this was the case. It is clear that people seem to adopt rodent control with improved traps because they have increased awareness about rat control, have seen what it is like to live without rats and have access to improved traps. It is also clear that the role of the paid village coordinator is key to maintaining collective trapping. However, as the improved traps are not available in the market, it is difficult to assess actual adoption. The project also only monitors the number of people trained, and traps sold by BRMA. There is no systematic assessment of the number of households still actively trapping after the one-year project intervention ended.

*“Compared with other methods, the rat population was really reduced with this trapping. As a result no food was damaged, no clothes were*

There is also evidence that village communities consider the improved traps an investment worth making. Some women said that rats were such a big problem, they would consider buying expensive traps:

*“We would buy traps even for 80-100 Tk, as rats eat even more than that. I had a sari that cost 2,000 Tk that was destroyed – in comparison traps are cheap. We don’t keep track of how much food a rat eats. The main issue is the property damage”.*<sup>214</sup>

However, there are questions around affordability of the traps for poor farmers, and the extent to which they would be willing to invest in rodent control. Project staff from the other districts suggested that price was a key consideration for their farmers, particularly considering that the traps may need to be replaced every eight months or so. The implementing partner from Kushtia pointed out that traditional trapping methods there that are more popular, such as bamboo and pot traps. These are home-made and don’t incur any cost.<sup>215</sup> There is little documented evidence that the project has analysed the calculations that a poor farmer might make in terms of adopting the improved trap. Does he store enough grain or have enough high value clothing for rats to constitute a real problem? What would make a farmer choose to buy a trap when he can use cheaper methods, such as poison and pot traps? Also, now that villagers in the intervention areas have become aware of the risks that rats present, how much would a poor farmer now be willing to pay for the traps if they were available in the market? Would poor households be able and willing to replace broken traps every eight months or so? Our limited discussions revealed that village households would spend between 50 to 200 Tk, but there should be some systematic research on this.

#### ***investment***

The improved trap used in the project is a locally-produced version of a US-made trap that was introduced in Bangladesh by the RNRRS project. AID-Comilla then identified MAWTS (a commercial firm managed by the NGO Caritas) to produce these improved traps against advanced payment by the project. The project allocated 10,000 traps to the Bangladesh Rodent Management Association (BRMA) to sell in non-project areas, and these were all sold. We also spoke to a retailer in Comilla city who had managed to sell 600 traps easily and claimed he would be able sell many more.

It was clear from our discussions with farmers that there is high demand for the new traps. However, AID-Comilla has not been able to ensure supply, and the improved trap is not actually available in the market, as the firm (MAWTS Institute of Technology) only produced on order from RIU. In all of the villages we visited, most of the traps were broken, and so village-wide trapping had come to an end.

The sustainability of the project is thus its major limitation. MAWTS requires advance payment for an order of at least 100,000 traps in order to produce more. DAE staff in Dhaka, and FAO, seemed to think that identifying alternative commercial entities should be relatively easy, but this could not be verified. AID-Comilla also accept that that they have limited experience working with the private sector, and a principal challenge has been balancing demand and supply for the traps. They have not been able to produce a market analysis to estimate how many traps could be sold potentially. Nor is the project set up to link potential manufacturers to sources of capital (e.g. bank loans).

#### ***insurance***

The introduction of improved kill traps does not represent a significant change on existing practices of using traditional traps and rat poisons. The traps had also already been tested under the RNRRS

<sup>214</sup> Mirjanagar village meeting, 22.01.11

<sup>215</sup> Implementing partners’ meeting, 26.01.11

project. The project did require the investment of some time and effort by village communities - to attend trainings, set the traps, and monitor impacts. The greatest risk was that once demand was created, adequate supply would not be ensured. This risk has materialised and is discussed in section 2.2 above. There were no risk mitigating measures in place. As the project's monitoring does not extend beyond the one-year intervention phase, it is not clear, once awareness about the dangers of rats has been created by the programme, what measures farmers, and particularly poor farmers are resorting to, given the lack of traps in the market - and whether these are more or less risky.

## **Institutions**

### *individuals*

To the extent that brokering activities are occurring within the project, i.e. around knowledge dissemination and providing training, identifying opportunities, making connections within the value chain, etc. – these are all functions that are fulfilled by the implementing partner staff, and AID-Comilla. AID-Comilla's senior management and advisory staff are responsible for designing the training curriculum, liaising with the DAE, identifying private sector opportunities and problem-solving. There are no formal roles for intermediaries and brokers in the project.

### *inclusion*

#### *Selection of villages*

To identify the project areas, AID-Comilla worked with the Department of Agricultural Extension (DAE) to select those upazilas in each district considered to be most affected by rats. Within these upazilas those villages were selected which had: natural barriers to keep rats from surrounding villages out; at least 200 houses; fewer schools; small landholdings and more mud houses. However, income level was not explicitly considered. For AID-Comilla staff this is about how they characterise the project: *"If we were doing social development, we would target poor people. Poor people do not have enough food or goods for rats. So we have to target everyone – we cannot differentiate"*.<sup>216</sup>

As mentioned above, most of the villages we visited in Comilla district seemed to be economically better-off. For many of these women, the cost of the traps was not an issue, and they were less concerned about the loss of grain, and more about damage to property. Many of them cited damage to expensive saris as being a major annoyance. However project staff pointed out that this was because we were visiting those villages that were located close to the city centre. The more remote villages that they work in have higher levels of poverty.

#### *Including poor farmers*

At the beginning of the programme, the price of the traps was also considered to be an important issue. During the project design phase, the AID-Comilla team visited Netrokona, Satkhira, and Kushtia. At the time, the price of traps was set at 80 Tk. While the villages in Comilla are wealthier and could afford this, it was considered too high for these poorer districts. As a result, the community rotation strategy was adopted and in year 2, the price of the traps was reduced to 50 Tk<sup>217</sup>. However it is not possible to say what impact this has had, as the traps are not available in the market.

A specific problem related to community-level rodent management which was identified by the project proposal is the concept of "freeloaders", i.e. those individuals within a community that benefit from rodent control carried out at the community level despite not having been actively participated in the rodent management programme. Certainly, project staff see the community as a self-regulating mechanism which ensures collective trapping:

<sup>216</sup> AID-Comilla staff meeting 25.01.11

<sup>217</sup> Implementing partner's meeting, 26.01.11

*“When the number of rats reduced, some people lost interest. Then we went to households that were trapping and told them to ask their neighbours to trap otherwise their rats would come to their houses.”<sup>218</sup>*

In addition, many of the villagers in the discussions we had were quite confident in the ability of their neighbours to buy their own traps. In the event that someone couldn't afford it, they said that they would help:

*“If someone doesn't have the money for a trap, we will have to buy one for them or lend our traps to them, because if they are not trapping, we will be affected. But everyone can buy – nowadays 100 Tk is nothing.”<sup>219</sup>*

The project proposal highlights that while a certain degree of freeloading may be beneficial in contexts where poorer households that cannot afford to participate, this could lead to social exclusion if the wider community begins to feel non-participating households are not doing their bit to manage the rat problems (e.g. poor hygiene standards).<sup>220</sup> This may be an important issue in the other districts, however it did not come in up in our discussions in Comilla.

#### *Reaching village households*

At the beginning of project implementation village meetings are organised to which farmers from across the village are invited. There are told about the project and shown how to use the traps, the traps are distributed, and a coordinator is appointed from amongst the village women. The villages are then left to trap for two to three months, and once they have seen the benefits of trapping, training is then provided to one woman from each household. Training lasts two days, and includes sessions on the life cycle of rats; their reproductive habits; the type of damage they can cause; health risks; how to manage damage; trap management; what kind of bait to use, etc.

At the preliminary meetings, effort is made to ensure maximum attendance, either through invitations by field staff who go door to door, or through word of mouth. The meetings are attended mainly by farmers, and mostly by women. Several meetings are organised in each village, so that everyone has a chance to attend. It was commonly stated about attendance at these meetings - that 'everyone' attended.

#### *Including men*

As mentioned above, the programme focuses on managing house rats, and hence works mainly with women. Women are sometimes also taught other methods of controlling rats which may be relevant to field rats, such as putting water in burrows. The expectation is that they will transfer this knowledge to their husbands. In one village, we were told that the men were invited to the training to be shown field control methods also. However, this is not done systematically or regularly. Men are considered to be in charge of controlling field rats, which is mostly beyond the scope of this programme. They rarely get involved in the AID-Comilla project, where trapping is done mostly by women and children.

### ***institutions***

#### *Community rotation*

As mentioned above, villagers trap using a community-based rotation system, through which they rotate traps between them in cycles, overseen by the village coordinator. It is clear that whilst the project intervention is still ongoing, and the village worker (who is paid) is still working, this

<sup>218</sup> AID-Comilla staff meeting, 25.01.11

<sup>219</sup> Mirjanagar village meeting, 22.01.11

<sup>220</sup> AID-Comilla project proposal 2008

approach works well in terms of keeping the rotation going, monitoring data and ultimately resulting in a decrease of rats. Once the project year ends, the villagers are asked to pool their remaining traps and form small groups with a coordinator. AID-Comilla then divides the traps amongst the groups for them to rotate. However, there is only limited evidence that, without the sustained involvement of a paid coordinator, this model has worked, and many households (in those villages that still have traps) are trapping individually, and others not at all. AID-Comilla believe that: *“The problem is not with the people, it is with the traps. When the traps break, the group is broken.”*<sup>221</sup>

Indeed, it is difficult to know how effective the community rotation system could have been, and in fact to understand real uptake and adoption, i.e. those people adopting the technology after the project has phased out, because there are no traps available in the market. However, AID-Comilla’s own monitoring<sup>222</sup> has found that, working with the small numbers of traps that are still functioning, community trapping has continued in some form after the project has phased out in 71% of communities. However, there are significant variations between regions, with the lowest numbers in Kushtia and Satkhira, the two poorest regions. AID-Comilla suggest that the reasons for this are complex, and can include:

*“...personality conflicts, a breakdown in community communication or management, a belief that the rodent problem has been solved, people become tired of trapping when they catch very few rodents, lack of supply of more traps, etc. In some cases, communities cease to trap after a few months because the problem has been temporarily solved, with agreement that the community programme should resume when the problem reappears. However, resuming the intensive trapping programme after 3-4 months can be difficult for communities to organise.”*

One issue may be the capacity and experience of communities in working together on various issues. There is limited evidence that, even though PRAs were carried out in each village at the beginning of the project, that the capacity and experience of the villagers to work together was considered. Project staff stated:

*“When you go to a village you can see how welcoming people are, how willing they are to work with you. It was more intuitive. There was no formal study.”*<sup>223</sup>

AID-Comilla admits that their ‘one size fits all’ approach has worked in some villages and not in others. The villages we spoke to said they didn’t understand the reasons for rotation, for example, that rotating traps keeps rats from learning to avoid those places where the traps are set. It may be that this needs to be made clearer in training. Once rotation had ended, villagers felt it was ‘impolite’ to ask those households which had traps to pool them together for community use.<sup>224</sup>

*“We are not interested in rotation. We rotated when the project was running. Once it ended, those who had more rats kept the traps. Others were lost. We don’t want traps for free – we are happy to buy them. Just make them available in the market.”*<sup>225</sup>

There has not been any systematic monitoring or support to the groups after the project has phased out and so there is no knowledge on what is needed to make them continue with rotational

<sup>221</sup> AID-Comilla staff meeting, 25.01.11

<sup>222</sup> AID-Comilla Quarterly Report, December 2010

<sup>223</sup> AID-Comilla staff meeting, 25.01.11

<sup>224</sup> Haripur village meeting, 24.01.11

<sup>225</sup> Ibid.

trapping, or what (if any) alternative models they have developed in response to the rat control problems. The most recent Quarterly Report<sup>226</sup> suggests that addressing these issues is a priority of the project. However, with limited time left until the end of the programme, no traps available, and a small budget, it is difficult to see how much progress can be made on this. In Comilla, there was no evidence that AID-Comilla is actively working with those communities who are not trapping.

When we asked AID-Comilla staff to recommend an alternative model which would be more sustainable based on their learning from the programme, project staff suggested a 'rat club' which would bring together the coordinators of the existing rat management groups, together with the DAE's Agricultural Officers and local leaders. The club would collect funds, buy the traps, manage rotation, etc. The rat club would also provide the financial resources needed to order or purchase traps. However, it does not look like this learning has been fed into RIU.

### *influence*

#### *Strengthening linkages with government*

The project proposal recognises that knowledge dissemination is key to effective rodent control, and this is borne out by the experience of the project. The project has thus produced a range of training materials, including manuals and presentations, and makes use of a number of videos on rat management that were produced under the RNRRS programme. Local DAE officials are invited to community trainings, and there is awareness at the local government level about the project (some of the local level DAE officials we visited had seen or been given AID-Comilla's training materials). However, there is little evidence that the project has been able to influence or support the DAE, the only actor with the mandate and the coverage to provide village-level awareness and advice, to scale out the project's activities across other districts and regions.

A particular problem is the under-representation of women in the DAE extension officers cadre. In one of the urban upazilas in Comilla district, 4 out of the 56 agricultural staff are female. Many upazilas have no female staff at all. Female DAE extension officers also have the same job descriptions as the men. They are not specialists so there is no scope for them to work with female farmers on issues specific to them. The women of Haripur village are familiar with the DAE officer who comes regularly to the village:

*"But he is more concerned with field rats. If he was a woman we would have asked for help with our problems. For now, we can only approach AID-Comilla with our problems."*<sup>227</sup>

In Comilla district the government does not have programmes specifically targeting women. The DAE officers we spoke with felt that NGOs have specific capabilities and resources to target women, which government does not ("*NGOs can work with specific communities, on specific issues and so their results are much better*"<sup>228</sup>). As a result the role of NGOs is considered complementary to that of the DAE and there is no opportunity for DAE to do what is currently being done by NGOs due to resource issues.

*"We are encouraging AID-Comilla's programme because we do not have enough staff to work with women. Our extension officers mainly deal with field rats. When AID-Comilla leaves the village, then there is a gap"*<sup>229</sup>

<sup>226</sup> Quarterly Report Oct-Dec 2011

<sup>227</sup> Haripur village meeting, 24.01.11

<sup>228</sup> DAE Additional Director meeting, 23.01.11

<sup>229</sup> Ibid.

However AID-Comilla also only has male staff – they work through hiring village coordinators on a short-term basis on the rat management projects. AID-Comilla has a long track record of working with women, and while there may be ways in which AID-Comilla could support the DAE’s interaction with women, there is no evidence that AID-Comilla have sought to influence the DAE in this way.

**Table 1. Summary table of *i*-Innovation in the AID-Comilla case study**

The I’s	Commentary
<b>Incentives</b>	
Inputs	<ul style="list-style-type: none"> <li>• Training to village women</li> <li>• Distribution of traps</li> <li>• Appointment of village coordinator (paid by the project)</li> </ul>
Inclusion	<ul style="list-style-type: none"> <li>• Almost all beneficiaries are women</li> <li>• Representatives from all households in project villages involved in training and trapping</li> </ul>
Institutions	<ul style="list-style-type: none"> <li>• Community rotation of traps established under facilitation of paid village coordinator</li> </ul>
Influence	<ul style="list-style-type: none"> <li>• Awareness of the project at local government level</li> </ul>
<b>Institutions</b>	
Individuals	<ul style="list-style-type: none"> <li>• None</li> </ul>
Investments	<ul style="list-style-type: none"> <li>• Local production of US-made trap by MAWTS, but no interest from them or other commercial enterprises to manufacture more traps without advance payment</li> </ul>
Insurance	<ul style="list-style-type: none"> <li>• No risk analysis or strategy. Identifiable risks include farmers resorting to risky rat control behaviour in the light of increased awareness, and lack of availability of improved traps in the market</li> </ul>

### **Impact**

#### *Saving time and money*

The project’s monitoring demonstrates that the use of improved traps has resulted in a decrease in rats in all districts. There is also clear evidence that this has led to reduced loss of grain and damage to property. The women of Baraipur village estimated that they saved between 4,000-5,000 Tk a year which they were able to put to general household uses.

The project proposal also points out that the earlier RNRRS research showed that women also benefited in terms of the amount of work saved, as they were expected to spend less time on repairing damaged walls and floors, cleaning the house and repairing clothes and blankets. This was not mentioned as a key benefit in our village discussions, but may be the case in the other villages or districts.

### *Increased knowledge*

One of the most noticeable impacts of the programme has been greater community awareness about rats, the damage that they cause and how they can be successfully controlled. This awareness has been directly provided by the training.

Increased knowledge about the health risks from rats has been particularly remarkable. Certainly, in the non-intervention village that we visited, the villagers said they didn't know any health risks from rats<sup>230</sup>. In one village, the women said that they had noticed a noticeable reduction in disease – that there was less jaundice and less diarrhoea. However, there is no evidence that AID-Comilla is monitoring the actual impacts of the project on health outcomes.

### *Building bonding social capital*

Collective trapping is another important element of the project. Before AID-Comilla's intervention, farmers worked individually to control rodents. They now understand that it is important to trap collectively as rats pushed out from one property will simply start living in a neighbouring property. All of the village discussion groups also commented that their social interaction with other villagers, in terms of training together, washing traps, sharing traps and exchanging stories, had increased. Implementing partners suggested that this was occurring across income groups in the project's poorer districts<sup>231</sup>. An additional benefit is that the project has enabled villagers to develop a sense of agency - that they are doing something about their problem themselves. The villagers we spoke to reported seeing trapping as 'hunting' – an activity that involved the whole family. Their social interaction also had a added dimension:

*"It was a competition. So if someone caught five rats in one night, she would go around telling everyone. In the beginning we even showed off the tails of the rats we collected."*<sup>232</sup>

Certainly, the existence of sufficient numbers of functioning traps and the work of the village coordinator keeps rotation going, and ultimately results in a decrease in rats. However, as discussed in section 1.3 above, this has not translated into more sustained community organisation. Most of our village discussions showed that communities were reluctant to continue with rotational trapping, with most expressing a preference to trap individually.

### *Empowerment*

Analysis about various empowerment impacts has already been detailed above. There is strong evidence that women have benefited from the training provided in terms of knowledge and awareness, and the project has resulted in greater social interaction.

In terms of additional empowerment impacts, it is again important to note that the villages we visited were situated close to Comilla city centre, and fairly well-developed. The women we spoke to were very confident, and did not believe that the project had brought about any noticeable changes to their mobility, decision-making or aspirations. However, our discussions with them are not

*"Awareness is the main thing we have got out of it. We did not know how much damage a rat can do in a year. Now we have learnt to quantify it. Our knowledge base has increased – about health issues, killing rats, what damage rats do. Before the project people used to keep water open and didn't know that rats also drink out of it. Now everyone is covering their water".*

<sup>230</sup> Krishnapur village meeting, 24.01.11

<sup>231</sup> Implementing partners meeting, 26.01.11

<sup>232</sup> Haripur village meeting, 24.01.11

representative of the programme's beneficiaries as a whole. Project staff from Netrokona district highlighted that the project had had considerable impacts on women's empowerment:

*"When we first went to the villages, women were shy. They didn't go out of the house, they didn't attend meetings. Now things have changed, they go out more, they regularly attend meetings. The gender difference is narrower – at the beginning, men questioned why women needed training. Now they accept it"*<sup>233</sup>

As we did not travel to these districts, it is difficult to know to what extent this is the case. Certainly, our experience of visiting the non-intervention village in Comilla, where although both women and men were present, the men did most of the talking, might bear this out. However, it is impossible to generalise. The men in this village stated they believed that women should attend training on controlling household rats, because they are the ones who are in the house – also, because killing rats is a 'silly matter'. It does seem that even in Comilla district, women feel considerably empowered when it comes to the specific issue of rat control.

*"We now have a bit of practice in decision-making. We have group discussions amongst the women. AID-Comilla people mostly speak to the women, and regarding rat control, the women are the decision makers. We work in a group and meet, know each others' opinions, can discuss and listen to each other. This has changed."*<sup>234</sup>

One of the benefits outlined in the proposal is that women will become less dependent on men for the purchase of poison. However, in most of the villages we went to, women are still dependent on men to purchase the traps. This is also not a one-off expense, as the traps need to be replaced at least once a year, possibly sooner.

## E. Conclusions and Lessons

There are various lessons that can be derived from the successes and challenges of the AID-Comilla programme that would be relevant to future efforts to address the needs of poor people through promoting innovations. Key lessons include:

1. **Knowledge dissemination and demonstration of the benefits of new technologies can be very effective in promoting uptake.** The project's model of providing training about the realities of living with rats, and methods of controlling them, as well providing traps for communities to use has had clear success in creating awareness about the dangers of rats and demand for safe, durable control technologies. However, where this is not accompanied by wider institutional transformation, the issue of maintaining awareness levels, and momentum must be considered. In order to monitor adoption, monitoring must be sustained beyond the limited time-frames of projects.
2. **Understanding and monitoring the changing context and developing solutions to emerging developments is critical to ensuring that innovations are relevant to the needs of poor people, and therefore more likely to be adopted.** Therefore ongoing monitoring, lesson learning and self-adjustment with regard to emerging understandings of barriers to uptake, implementation challenges, and emerging models of organisation are needed. The project's rotation strategy seems to have been based primarily on the need to ensure that farmers in the poorer implementing districts can access improved rat traps. However there has been little learning on the calculations that poor farmers make in investing in improved rat traps vis-a-vis cheaper,

<sup>233</sup> Implementing partners' meeting, 26.01.11

<sup>234</sup> Baraipur village meeting, 22.01.11

traditional methods of rodent control. Even though PRAs were carried out at the beginning of the project, there is also limited evidence that, during the design stage, the social dynamics around collective rodent control were analysed, or the capacity and experience of the villagers to work together was systematically considered. Further, while AID-Comilla have collected evidence that community trapping is still ongoing in many villages after the project has phased out, and many traps have broken, there has been no monitoring of the kinds of models that have been developed by communities to collectively manage and use the remaining traps. This lack of systematic analysis, for example around the prices that farmers, and the wider market, are willing to pay for improved traps has meant that the project has not been able to translate the demand it has identified into a market analysis that can be used to leverage interest from potential manufacturers of the improved traps.

- 3. Creating buy-in at the community level and commercial level, and ensuring demand and supply requires multi-disciplinary approaches.** The project has had clear success in creating awareness about the dangers of rats and how they can be controlled. The use of improved traps has resulted in a decrease in rats, and this has resulted in income savings, decreased property damage and, anecdotally, better health. The project's understanding of the poverty barriers to uptake and adoption, as well as of how to support sustained collective community action would have benefited from the ongoing involvement of a social scientist. Similarly, private sector expertise is needed in order to help the project create supply channels for the improved traps.

# Annex 9

## Institutional Evaluation of DFID's Research Into Use (RIU) modalities and experiments

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## List of Acronyms

AGRA	Alliance for a Green Revolution in Africa
ARCN	Agricultural Research Council of Nigeria
BB	Best Bet
CA	Conservation Agriculture
CAADP	Comprehensive African Agriculture Development Programme
CBAF	Community Based Armyworm Forecasting
CBO	Community Based Organisation
CBSP	Community-Based Seed Production
CGIAR	Consultative Group for International Agricultural Research
CIP	Crop Improvement Programme (Rwanda) AND International Potato Centre
CORAF/WECARD	Conseil Ouest et Centre Africain pour la recherche et le développement agricoles / West and Central African Council for Agricultural Research and Development
CP	Country Programme (of RIU)
CRT	Central Research Team (of RIU)
DAE	Department for Agricultural Extension (Bangladesh)
GATE	Global Agri-Tech Nepal private Ltd.
GDP	Gross Domestic Product
FARA	Forum for Agricultural Research in Africa
FIPS	Farm Input Promotions Africa Ltd.
ICF	Innovation Challenge Fund (of RIU)
ICUC	International Centre for Under-utilised Crops
IFDC	International Fertiliser Development Centre
ISAR	Institut des Science Agronomique du Rwanda (Institute of Agronomic Sciences)
KEPHIS	Kenya Plant Health Inspectorate Services
Minagri	Ministry of Agriculture (of Rwanda)
MoU	Memorandum of Understanding
NARI	National Agricultural Research Institute
NGO	Non Governmental Organisation
NIC	National Innovation Committee (Rwanda)
PAID	Partnership in Agricultural Innovation for Development (Sierra Leone)
PETRRRA	Poverty Elimination Through Rice Research Assistance
PCI	Participatory Crop Improvement
PI	Principal Investigator
PPB	Participatory Plant Breeding
PVD	Participatory Variety Selection
RDC	Rapid Demand Creation
RIUP	Research Into Use Programme (of DFID)
RNRRS	Renewable Natural Resources Research Strategy (of DFID)
SCP	Smallholder Commercialisation Programme (Sierra Leone)
SLARI	Sierra Leone Agricultural Research Institute
USAID	United States Agency for International Development
VBAA	Village Based Agricultural Adviser (FIPS)
WAAPP	West Africa Agricultural Productivity Program
WB	World Bank
WTS	Well Told Story

## 1. Introduction

### 1.1 Objectives

There is widespread recognition that existence of agricultural technologies does not necessarily mean that they will be used. Consequently, one of the key interests of the RIU programme is to try out, and learn about, different institutional processes for getting research into use. This report focuses on these aspects of RIU and thus constitutes the specific evaluation of institutional outcomes of RIUs experiments within the programmes three modalities: the Africa Country Programmes, the Asia Innovation Challenge Fund and the Best Bets.

This paper draws on information gathered against specific questions in the Evaluation Framework developed by the team and agreed with the Steering Committee (see annex #). These questions were developed during Phase 1, based on the TORs for the Evaluation and on consultation with key stakeholders and the Steering Committee. The majority of the information gathered concerns Theme 1: Has RIU been able to identify, develop and support innovative partnerships that deliver technology at scale and respond to the needs of the poor in a sustainable manner. In addition this paper draws on material gathered under Theme 3 concerning whether the international and national agenda changed as a result of RIU. The specific questions in the evaluation framework that this paper draws material from are indicated below in Table 1:

**Table 1: Evaluation Framework questions relevant to this paper**

<p><b>Overarching question:</b>  <b>Has the underlying theory of change “that new forms of partnership will lead to innovation (which in turn contribute to poverty reduction and economic growth)” been shown to be appropriate?</b></p>
<p><b>Theme 1:</b>  <b>Has RIU been able to identify, develop and support innovative partnerships that delivers technology at scale that responds to the needs of the poor in a sustainable manner</b></p>
<p>3. Has the design and management of the models and experiments evolved over time to take account of greater understanding of the barriers to and opportunities for adoption and innovation? (i.e. whether room was allowed for adaptation?)</p>
<p>4. Was RIU’s partnership strategy relevant in understanding and addressing the drivers of innovation and adoption (at international, national, and experimental levels)?</p>
<p>5. What partnership arrangements were the most effective in understanding and addressing the barriers to innovation both nationally and locally and why?</p>
<p>7. To what extent are the RIU models sustainable, replicable and scaleable?</p>
<p>7.2 What institutional/organizational transformations have taken place?</p>
<p>7.3 To what extent are the technologies / innovations available to private sector investors?</p>
<p><b>Theme 3:</b>  <b>Did RIU put into place the necessary information systems, quality control measures, etc to ensure the quality of evidence?</b></p>
<p>16. Have the national and international research and innovation agenda changed as a result of RIU?</p>
<p>16.1 Have groups other than those funded by RIU taken up the models?</p>
<p>16.2 What role has the private sector had in brokered research delivery?</p>
<p>16.3 How has RIU sought to influence bi- and multi-lateral agencies? What evidence of change is there as a result of these strategies? What lessons have been learned?</p>
<p>16.4 What evidence is there that RIU has influenced agricultural research and innovation policy?</p>

In sum, the objectives of the institutional analysis are to assess what changes RIU has brought about in the capacities, roles and responsibilities of and relationships between key players in the innovation process. This assessment is complemented by other parts of the evaluation that focus on changes at producer and household level.

It should be noted that this paper has sought to apply the analytical framework (Figure 2) developed towards the end of the field work as a means to organize and present findings, rather than presenting findings according to the three themes in the evaluation framework.

## **1.2 Structure**

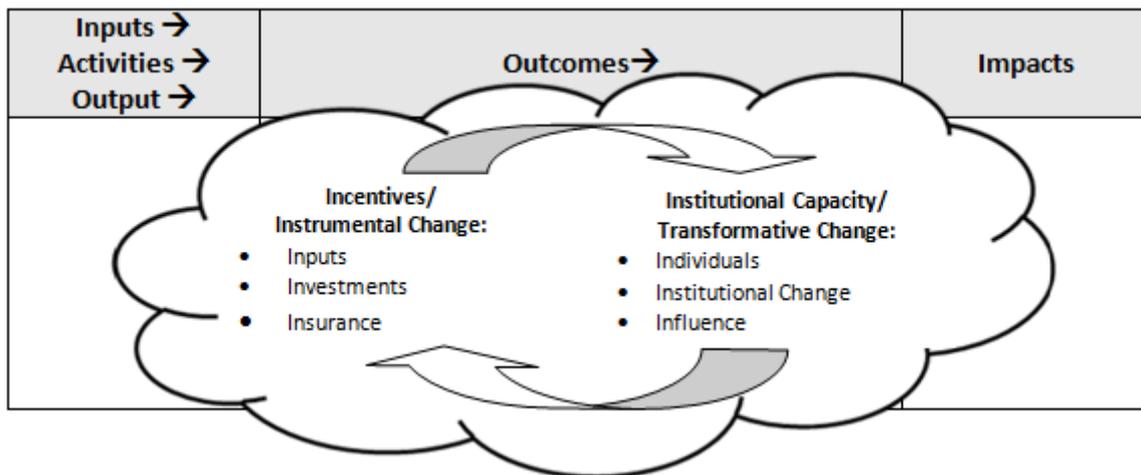
The report first provides an introduction which situates the institutional perspective within the overall evaluation; describes the terminology used to discuss changes in institutional capacity; describes the institutional contexts of the three modalities and briefly summarises the methods and scope.

There follows the main part of the report – the findings section – with two sub-sections. Findings concerning institutional changes per case study are provided first. These are followed by an overall analysis and discussion of findings. Both sections are structured around the analytical framework as followed in the RIU evaluation as a whole. Finally Section Three provides conclusions and lessons learned.

## **1.3 Terminology and analytical framework**

To situate the focus of this report within logframe terminology, findings reported here mainly relate to the outcomes, with some overlap into both outputs and impacts as indicated diagrammatically below:

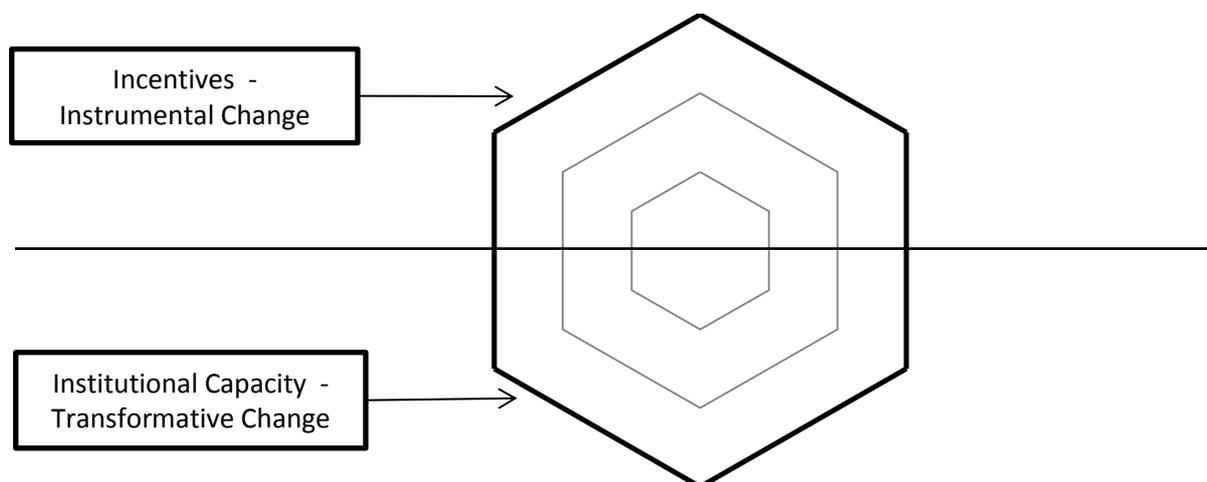
**Figure 1: Positioning of the analysis of institutional aspects of RIUs experiments**



The report should be read in conjunction with other annexes that focus mainly but not exclusively on the first column, which concerns whether the inputs, activities and outputs were fit for purpose, and the last column, which focuses on the end-users and how the programme has affected their livelihoods, social inclusion and empowerment.

The evaluation has developed an analytical framework through which to present findings. The framework is built around six “I’s” that represent six elements that can have an effect on getting research into use.: Inputs, Investments, Insurance, Individuals, Institutions and influence. This report uses the framework to analyse the institutional outcomes of the RIU programme. The framework is depicted below:

**Figure 2: The Analytical Framework**



This model complements more linear cause and effect intervention models as used e.g. in a logframe. A linear model assumes that inputs are used to fund activities, which produce clearly definable outputs, which in turn result in outcomes and ultimately impact. This chain assumes that relationships between cause and effect are visible or measurable, and that project outcomes and impact can be traced back to activities. The evaluation argues that this model is not suitable for an institutional analysis of RIU, as RIU experiments are trying to change existing complex systems. These systems are not clearly structured, but fluid with loose boundaries, and they change continuously. RIU activities are therefore like ‘prodding a system with a stick

and seeing what happens' – outcomes are not easily predictable, as a multitude of other factors determine the behaviour of the system. Figure 1 also attempts to indicate the fuzzy boundaries of institutional change.

The analytical framework distinguishes between instrumental and transformative change. Changing three of the elements (inputs, investment and insurance) in effect changes **incentives**. Most development interventions deliberately involve provision of these elements so as to incentivise new behaviour and practice. But when the interventions cease and the elements are no longer in place, practice may return to how it was before the intervention. Such types of change are therefore instrumental – they serve a purpose at the time but do not transform the system in which the development intervention is taking place.

The other three elements however can go beyond instrumental change and contribute to longer term transformation of **institutional capacity**. These include changes in individual or organisational agency, changes in institutions themselves, and ability to influence policy, behaviour and practice. Often, there is a trajectory, for example an individual or an organisation, which, through its agency, can bring about new “rules of the game” or ways of doing things, which in turn can influence policy. Or a change in policy can immediately change the rules of the game, as well as the incentives referred to above.

The difference between changes in **institutional capacity** and **incentives** were clearly described by the Rwanda RIU Country team as the former being the pipe work and the latter being putting the water through the pipe work. The team explained that during the first few years, the country programme sought to set up systems for example the National Innovation Coalition which brought together key national level stakeholders concerned with agricultural innovation, and the programme engaged with the CAADP country compact process, thus influencing the policy environment. In the latter years of the programme they explained that the pipework was in place and it was time to start focusing on field level application through supporting the innovation platforms. Whilst in the earlier phase the Country Team had less autonomy over the systems they set up, since the mid-term review their autonomy was higher in terms of the field level application.

Incentives here are taken as the water going into the pipe work. The extent to which a development initiative focuses on each depends on the nature of the initiative – advocacy, changes in government regulation concerning provision of micro-finance, and establishing new institutional systems for knowledge management are all initiatives which start by seeking to change institutional capacity. But provision of new and / or subsidised seeds and fertilisers, voucher systems or social safety nets all change the incentive structures and can be seen as instrumental, not transformative, institutional changes.

Each of the six terms, as they relate to the institutional analysis in this report, are described in the box below.

### Box 1: Understanding of each “I” in relation to this paper



The report will also use the terms **subsidising**, **brokering** and **reconfiguring** in places. These can be related back to the analytical framework. Whilst subsidising relates to effecting instrumental change through changing incentives, the other terms relate to changes in institutional capacity. Brokering concerns managing relationships and is usually referred to under the “individual” element of the analytical framework. Reconfiguring involves restructuring the institutional architecture or system and relates to the “institutions” element of the framework.

## 1.4 RIUs three modalities

The RIU experiments to which this document refers follow three different modalities: the Africa Country Programmes, the Asia Innovation Challenge Fund and the Best Bets. Each of these has its own context and history, which in turn impact on the nature and extent of likely institutional change. To be able to set the findings within context, the following paragraphs provide a summary of the history and context of each in turn.

**Africa Country Programmes (CP):** Africa Country Programmes are run by a team of paid RIU staff based in the capital of each country. In some cases there are also paid RIU programme officers based in the districts. Each CP has several , platforms, which can either be located in one geographic district or are more dispersed such as the aquaculture platform in Nigeria. The mid term and technical reviews of RIU led to greater focus in terms of platforms in each country, with some platforms being stopped or phased out. Commodity based platforms were retained whilst information management platforms were on the whole discontinued. CPs have also established national level platforms that are not commodity specific but that do bring together stakeholders from the private, public and civil society sectors. These vary in constitution and have evolved over time. Often they have enabled the political buy-in and commitment to the commodity (and information management) platform approach during the early years of the CP. The fact that the CPs have instigated national innovation coalitions, combined with their representation on national agriculture task forces or the like puts them in a position where they could have greater visibility and voice at a national level than the ICF and BB case studies.

**Asia Innovation Challenge Fund (ICF):** the ICFs are mostly continuations of former DFID projects funded through the Renewable Natural Resources Research Strategy projects, thus each one focuses on increasing the supply of a particular agricultural technology, either in one or several countries in Asia. They do not have national level offices but rather operate in selected districts of each country only. They are thus not in the same position as CPs in terms of visibility and opportunities to influence policy. However they do engage in policy advocacy if policy is a barrier to successful achievement of their objectives. Key stakeholders are researchers – both international and national – and the ICFs do not necessarily seek to bring all value chain players together.

**Best Bets (BB):** BB experiments are primarily led by private sector entrepreneurs who collaborate, to varying degrees, with scientists and other players as need be. Being entrepreneurs, they tend not to engage very closely with public sector bodies but rather pursue their objectives for the BB through dynamic and evolving informal networking with appropriate business partners. Whilst CP experiments may seek to influence donor thinking and advocacy, BBs have a different relationship with donors, seeking funding from agricultural development donors as well as from the corporate sector.

From the brief outlines above, it can be seen that each modality operates differently, each having its own “rules of the game” and each operating in a different wider institutional space. Thus the CPs often have representation in national level agricultural task forces, aim to influence policy, and identify and link up public, private and civil society sectors. They also operate at platform level and through this at farmer level. Meanwhile both the BBs and the ICFs focus on particular topics and are less concerned with policy work or with working at national decision-making level. The institutional space for BBs is different to the others as the private sector plays a more dominant role and entrepreneurs operate in a very different manner to civil servants or staff of funded programmes. This should be kept in mind when reviewing findings. For example one would expect the CPs to engage more with national level decision- and policy makers than the BBs and

the ICFs. And one would expect that the BBs would operate differently and link more with other private sector bodies than the CPs which are more neutral and seek to bring all agriculture sector value chain members to the table. However, one can also interpret the different modalities as being different stages in a process, with CPs identifying opportunities and challenges in relation to specific commodities or themes, which can then be addressed through targeted research and / or commercialization of resulting innovations. This process does not need to be linear, but could well be a dynamic movement from one modality to another, depending on requirements of the innovation process.

## 1.5 Methods

As described in the main report, the evaluation was based on review of secondary data, field work in six countries (involving mainly qualitative investigation of eight case studies<sup>235</sup>, a household survey in three countries related to three of the case studies -one each of a CP, BB and ICF experiment) and a web survey focusing purely on institutional aspects and encompassing all the RIU experiments that were not visited as case studies. This report draws on relevant findings from secondary data, the eight case studies and the web survey, but not the household survey as this concerned impact rather than institutional outcomes.

## 2. Findings

This section presents findings and analysis regarding the institutional aspects of getting research into use. Section 2.1 provides a summary of the findings regarding each case study. Section 2.2. summarises key findings from the web survey. Section 2.3 draws on the previous sections and provides a general analysis of the findings (drawing on sections 2.1. and 2.2). The analytical framework presented in Figure 2 informs the structuring of each of these Sections.

### 2.1 Introduction to the Case Studies

The eight case studies are discussed in the main report and other annexes. This section seeks to provide a specific summary of institutional dimensions of each case. For each case a short description of the policy and agriculture sector context is provided.. There follows a discussion of how the RIU experiment changed the incentives and capacity for agricultural innovation.. To this end indicative radial diagrams<sup>236</sup> are provided illustrating the situation prior to the RIU experiment, how it changed as a result of the experiment, and what, hypothetically may remain several years after the RIU support ceases. Discussion of each of these stages is built around the “I’s”, seeking to distinguish between instrumental change elements (inputs, investments, insurance) and transformative forms (individuals, institutions, influence). The nature of innovation is then discussed followed by a review of sustainability, replicability and scalability.

<sup>235</sup> Four Country Programme experiments in Rwanda (2), Sierra Leone and Nigeria; two Innovation Challenge Fund experiments in Nepal and Bangladesh and; Best Bet experiments in Kenya.

<sup>236</sup> The illustrative diagrams have several bands, which portray the extent of the element from zero (at the centre) through to low, medium and high (the outside). Where the experiment is part of a country programme, the diagrams refer to the experiment, not the wider country programme context.

The case studies are listed in the Table below:

**Table 2: The Case Study Experiments<sup>237</sup>**

No	Case study country	Case study activity	Experimental Model	Nature of activity
1	Rwanda	Potato Innovation Platform	Country Programme	Improved potato varieties and introduction of seed (mini-tuber) production technology
2	Rwanda	Cassava Innovation Platform	Country Programme	Mosaic resistant cassava varieties introduced and cassava cutting multiplication scheme
6	Sierra Leone	Poultry Innovation Platform	Country Programme	Poultry feed expansion supported through inputs for maize and start up assistance for mills and chick production.
7	Nigeria	Aquaculture Innovation Platform	Country Programme	Support for expansion of fingerling production.
4	Nepal	PCI-FORWARD	Innovation Challenge Fund	High quality seed produced locally and promoted through distribution of samples.
5	Bangladesh	Rat Management	Innovation Challenge Fund	Effective trapping systems and advice provided for controlling rats in rice fields
3	Kenya	FIPS	Best Bet	Locally based agricultural advisors supporting small farmers with appropriate technologies and scaled inputs for crops
8	Kenya	Shujaaz	Best Bet	Youth targeted printed and radio mass media used to disseminate agricultural and other advice..

## 2.2 Country Programme Cases

### 2.2.1 Potato Innovation Platform: Rwanda

#### Context

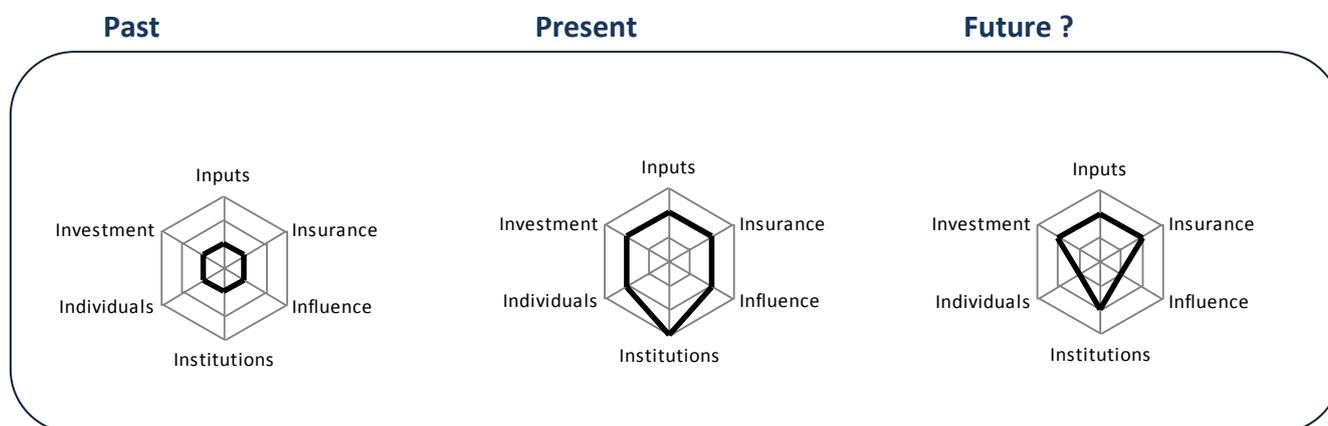
Agriculture is the major driver for pro-poor growth in Rwanda, sustaining 85% population in the rural areas. Rwanda's challenges include fragmented land, with an average plot size of 0.7 ha, and where the undulating nature of the land makes it difficult to have economies of scale through mechanization. However, land tenure is being addressed by the Government of Rwanda, with donor support. Presently much of Rwanda's agriculture is rain fed. Rwanda signed the CAADP compact in March 2007 and invests the largest proportion of GDP in agriculture out of all CAADP countries. Agricultural policy development is driven from the centre. Rwanda's Ministry of Agriculture (MINAGRI) has 21 agricultural projects, half of which are donor funded. Strong government involvement in the agriculture sector limits the scope and incentives for private sector

<sup>237</sup> Drawn from the annex concerning methodology

engagement in agriculture. Donor assistance to Rwanda is still relatively “projectised” and donor harmonisation is weak compared to that in other countries in the region.

## Institutional Changes

(Referring to the Potato Innovation Platform)



### Past

MINAGRI is one of the most well funded ministries in the country. In 2007 the Government introduced the Crop Intensification Programme (CIP), which covers around 150,000 ha of the country. Potato is one of the six priority crops under CIP (along with cassava, maize, wheat, beans and bananas). Under CIP everyone in the particular village/area is encouraged to grow a certain acreage of the designated priority crop. As an **incentive**, fertilizer is subsidized by 50%, and crop loans are made available to farmers. As CIP did not start till 2007, **inputs** and **investment** in the sector are put at a fairly low level in the diagram above, especially as there was a shortage of good quality potato seeds (inputs). There was little use of **individual** agency through platforms, though the International Fertiliser Development Centre (IFDC) did initiate some commodity platforms prior to RIU. These IFDC platforms place relatively more focus on the input side of the value chain than the later RIU potato innovation platform.

### Present

RIU is providing a variety of **inputs**. These include technological inputs from the Rwandan national agricultural research organization ISAR, contracted NGO facilitation of the platform and a system of village-based agents focusing on farmer-to-farmer extension. They have also **invested** in provision of glasshouses for seed potato production by the platform and its members. RIU decreased the risk of smallholders by bringing in improved varieties of potato that are less prone to diseases, providing a sort of **insurance**. In terms of fostering **institutional change**, RIU has been covering the costs for platform members to attend meetings. The potato platform is an innovation that focuses on **influencing** the potato value chain by bringing all players together on one table. **Institutionally**, the platform has instigated changes in the relationships between different players in the value chain: They were able to link researchers directly with farmers, with ISAR scientists training local technicians to manage potato seed production in glasshouses. Further, microfinance institutes have preferential lending patterns to potato farmers who are part of the platform. **Individual** agency was enhanced through enthusiastic staff and NGO partners who were brokering relationships to create opportunities for the potato platform.

At the national level RIU has made an effort to **influence** the agricultural setting by setting up a National Innovation Coalition (NIC). The NIC was instrumental in bringing together key players in the agriculture sector at the start of RIU's engagement in Rwanda and led to high level buy-in to the commodity platforms that were initially planned. Its formation led to institutional change, as it allowed stakeholders to have access to and relate to each other in new of different ways, opening the way for trust and partnerships to develop. Over time however, as the commodity platforms took off and less senior staff attended NIC meetings. Of late, many members of the Agricultural Sector Working Group are not aware of RIU interventions in Rwanda. The RIU Program Manager does attend the working group meetings, and initially he had informed the working group of RIUs intentions. However, after the mid term and technical reviews several of the innovation platforms that he had mentioned were dropped (mainly the knowledge management initiatives). As the commodity platforms were relatively young there was little evidence to share in the working group meetings, and the decision was made by the RIU CP to focus at the field work with the view that once there was sufficient evidence to draw upon then this could be shared by RIU in the task force meetings.

### **Future?**

The potato platform may remain viable based on membership fees. The greenhouses could be a financially sustainable method of producing clean potato seed, as they will provide quality **inputs** to farmers. Further, the greenhouses are already being supported through ISAR's extension system. **Influence** from RIU country programme would decrease as there has been no sustainable effort in ensuring RIU's positions amongst donors, though the Ministry of Agriculture has acknowledged the successes of another of RIU Rwanda's platforms – the maize platform. As RIU has been able to link glasshouse technicians with ISAR, the activities can continue without RIU's presence. Thus the glass houses will continue to make their **investments** of supplying the villages with improved seed potato. However, the financial viability of the greenhouses has not been confirmed, as there has been no financial or economic analysis of the seed potato production by the platform. The **individual** RIU and NGO staff who have been brokering many of these relationships will have left and thus the platform may lose some of its capacity after some time has passed.

### **Nature of the Innovation**

The innovation with the potato platform is about repositioning all the agents in the potato platform to sit together to work towards a common goal. An example of change is that the micro-finance institutes have preferential lending to potato producers in the platform as they are aware that platform members are getting technical advice through RIU and therefore are more likely to succeed in their potato and potato seed production. This preferential lending does not occur to potato producers outside of the platform, or the same farmer growing different commodities, but is given for potato producers as the micro-finance bodies see value in the platform's technical extension and support.

### **Impact, Sustainability, Replicability and Scalability**

The main institutional impact of the potato platform relates to improved linkages between key value chain actors. With regard to sustainability, as the potato platform required a membership charge, it might be possible for the platforms to be financially viable. Furthermore the platform is being managed by a national NGO (Caritas Rwanda). This facilitates long term engagement because if RIU leave, Caritas will still be in the area to nurture the different CBO's – if that remains a priority to the NGO. Though the platform is only

working in one district, and there are no plans to replicate the work in other districts. RIU staff are advocating for a National Confederation for potato producers to organise a change forum and as potato is a priority crop under the Crop Intensification Programme there is an enabling policy environment for its continuation.

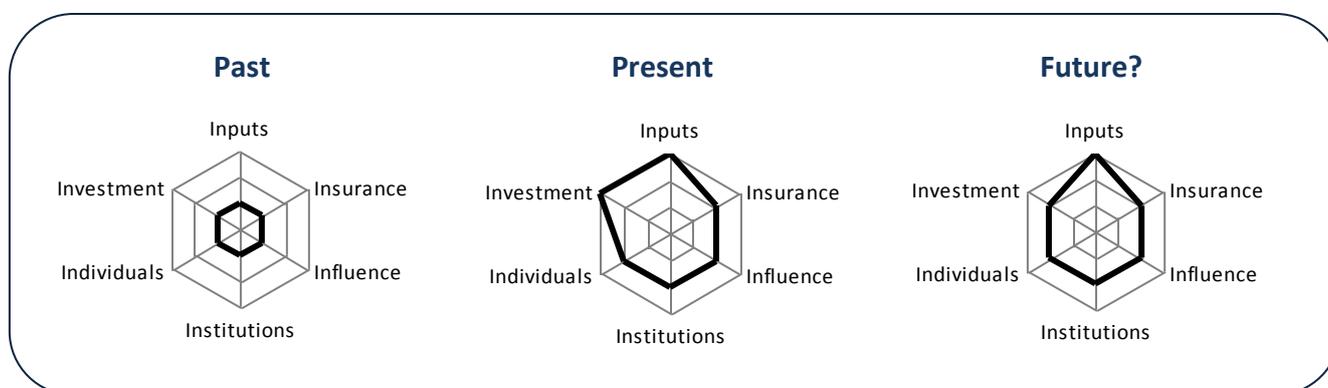
## 2.2.2 Cassava Innovation Platform: Rwanda

### Context

Rwanda signed the CAADP compact in March 2007 and invests the largest proportion of GDP in agriculture out of all CAADP countries. Agriculture is the major driver for pro-poor growth, sustaining 85% population in the rural areas. Rwanda's challenges are fragmented land, with an average plot size of 0.7 ha, and where the undulating nature of the land makes it difficult to have economies of scale through mechanization. Private sector investment in agriculture is low. MINAGRI has 21 agricultural projects, half of which are donor funded. One of these projects is the Crop Intensification Programme (CIP), which started September 2007 (during the same period as RIU) and covers 150,000 ha. CIP priority crops are cassava, Irish potato, maize, wheat, beans and bananas. Under CIP everyone in the designated village/area is encouraged to grow the same crop. As an incentive, fertilizer is subsidized by 50%, and crop loans are made available to farmers.

### Institutional Changes

*(Referring to the cassava sub-sector)*



### Past

Rwanda has been and is currently implementing Vision 2020 where Rwanda will be a middle income country by the year 2020. In order for this vision to be realised, Rwanda is heavily investing in high growth industries. Rwanda's Ministry of Agriculture is one of the best funded ministries in the country. The World Bank and USAID were the main donors concentrating in the agriculture sector. While CIP did not start until 2007, this gives an indication that there were strong **inputs** and **investments** from MINAGRI. Prior to the platform, there was a shortage of good, virus-free cassava planting material, despite a strong interest in growing cassava. An existing cooperative: SOCAGRIMA, was working hard to negotiate for the re-opening of a defunct cassava factory in the area. (The cassava factory had been funded by USAID through a Women's Network, with one of the NGO's in the country. The factory was already built, however one of the promoters

of the factory was detained and the entire operation has stalled). The RIU cassava platform was initiated at the time that SOCAGRIMA was negotiating for the re-opening of the factory.

### *Present*

Under RIU, **inputs** are provided in the form of new mosaic-resistant cassava cuttings obtained from the Rwanda Agriculture Development Authority (RADA), building on RNRRS outputs. RIU decreased the risk (and thus addressed **insurance**) of smallholders by bringing in the new improved varieties of cassava cuttings which have been proven to work effectively and which decrease the risk of diseases for cassava. The cuttings are distributed without charge. RIU developed agents and **individuals** by helping farmers to develop strategic and business plans. **Institutionally**, RIU introduced three cooperatives to work together in the cassava platform, one being SOCAGRIMA. The platform has two purposes, one is to bring key players of the cassava value chain together, and secondly it has the goal of getting the cassava factory up and running. Many of these brokering roles are owned by the members of the three cooperatives as well as the RIU Staff. RIU has instigated **institutional** change by assisting the platform members cooperatives to develop strategic and business plans. Overall the **investments** made by RIU with their business training and cassava cuttings are to make the platform sustainable by making cassava a viable enterprise and one which was gradually being seen as a business opportunity - for example through the sales of cuttings.

After the mid-term review the CP were encouraged to reduce the number of innovation platforms due to reduced funding and the need to give due attention to each platform. At this stage not only were the earlier planned knowledge management platforms dropped, it was also decided to phase out RIU support to the cassava platform to give the programme more focus and to accommodate budget changes (<http://www.researchintouse.com/programmes/riu-rwanda/riu-rw43innovplat-cassava.html>).

### *Future?*

The main reason why the cassava platform may be sustainable is the likelihood of it continuing as a private sector firm (hence the diagram indicates a higher level of **investment** than that prior to the RIU intervention). While clean cassava cuttings were originally obtained from the RIU and RADA, the production of clean cassava planting material is relatively easy, provided farmers are trained. As the cuttings are a new variety and decrease the risk of new diseases, the decrease of risk would most likely be sustainable in the medium term or until the new cassava cuttings are themselves become infected thus the same level of **insurance** is maintained. The existence of the presently defunct cassava factory provides a tangible reason for the platform to come together, and if the factory rehabilitation is successful, this may be a way to keep the platform working together and thus to maintain the **institutional** change engendered by RIU. The brokering role of the platform will remain only as long as the business is viable. All of this hinges on **investment** in rehabilitating the cassava factory, which was still pending at the time of the visit. However, as cassava is a priority crop in CIP, there remains an enabling policy environment for the development of this sector.

### **Nature of the Innovation**

The innovation within the platform is about the repositioning of farmers within the cassava value chain. The platform brings together three cooperatives all of which are concerned that the cassava factory becomes functional and together they are in a better position to bring this about. The cassava factory is at the centre of the platform's plans and if the cassava factory is successful and sustainable, it will change the cassava

industry in the area in the long term, extending the value chain and allowing for cassava production, processing and sale to be a commercial option for smallholder farmers.

### Impact, Sustainability, Replicability and Scalability

Similar to the potato platform, the main institutional impact of this platform consists in improved linkages between value chain actors and in particular between the cooperatives engaged in cassava production. As the platform is playing a large part in the mobilisation of the factory, there is a lot of energy in involving large numbers of farmers, and partners in the involvement of the platform. This makes the platform sustainable, but perhaps not scalable as the two other cooperatives that are further away from the cassava factory may have less benefits. While the factory can be replicable, more research needs to be done on the cassava market in Rwanda.

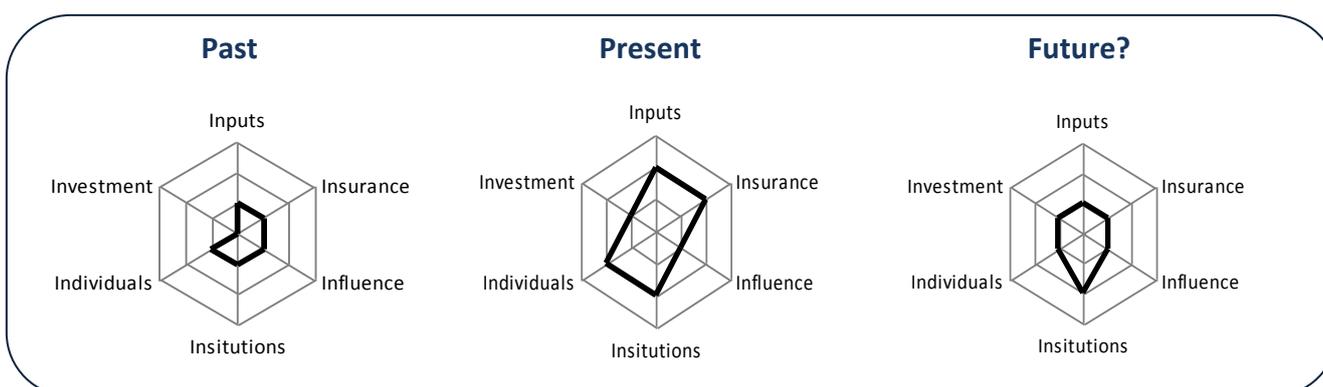
### 2.2.3 Poultry Feed Innovation Platform: Sierra Leone

#### Context

During the time that RIU has been operating in Sierra Leone – since 2007 - there have been a number of significant policy changes. In 2007 the Government of Sierra Leone, in its Agenda for Change, identified agriculture as the main engine of growth for the country. Sierra Leone signed the CAADP country compact in September 2009 and outlined its plans for agriculture in the National Sustainable Agriculture Development Programme 2010-2030. Areas of focus are commodity commercialisation, agricultural infrastructure development and private sector promotion. RIU itself presently has three platforms in Sierra Leone: a national Partnership in Agricultural Innovation for Development (PAID), a solar drying platform in the North and a poultry feed innovation platform in the East. Though this case focuses on the poultry feed innovation platform, references are made, where appropriate, to the PAID.

#### Institutional Changes

*(Referring to the poultry feed sub-sector)*



#### *Past*

Sierra Leone's livestock, including poultry stock, was decimated by the civil war. **Inputs**, including day old chicks and commercial feed, were neither being produced nor easily available in the east of the country and there was no private sector **investment** either in this region. Whilst importation of poultry products is

largely unregulated, taxes on importation of poultry inputs are high. High levels of NGO activity in relation to livelihood rehabilitation post conflict meant that small numbers of farmers were however getting **inputs** for free, thus providing some form of **insurance** against risk. The roles of **individual** players and **institutional systems** are classed as low here as the major donor-funded development initiatives were not in place, neither was the system in which policy could be **influenced**.

### *Present*

Provision of free **inputs**, thus **insuring** users against risk, and networking with private sector bodies leading to increased private sector (Nigerian) **investment** in feed production have all worked as incentives for a variety of farmer organizations and NGOs to join the poultry feed platform. **Institutional** capacity has been enhanced through RIU funding the participation of platform members in platform meetings, through platform members being required to join PAID and to register at the local council, and through better networking opportunities between platform members. **Individual agency** has increased with PAID district level executive committees voluntarily establishing themselves and meeting at their own costs in order to foster the platform activities. **Influence**, in terms of the platform being able to change government behaviour and policy regarding the poultry sector, was not in evidence.

### *Future?*

The future diagram seeks to indicate which changes to the institutional system instigated by RIU through its poultry feed platform, will last once RIU ceases its support. The level of **inputs**, and corresponding **insurance**, will decrease, especially as the government policy of commercialisation of smallholder farming discourages the giving of free inputs, though other big programmes like the smallholder commercialisation programme will still avail training, credit and other vital services to farmer groups. As the poultry sector regenerates, it is likely that private sector investment both from within the country (there is already a private sector poultry association in the west of the country) and beyond will continue. Incentives for **individual** players and agencies (such as the NGOs that have been active in voluntary PAID district committees in relation to the poultry platform) will reduce. However, it is likely that the new platform system will remain in some form and that **institutions** that had greater access to each other through the platform will remain in communication as long as is relevant for them.

## **The National Level: Partnership in Agricultural Innovation for Development**

Prior to the RIU Country Programme there was no nationwide platform for University, research, public and private sector, NGOs, CBOs and farmer organisations to interact with regard to the agriculture sector. One of the first activities of RIU in Sierra Leone was to establish a network called the Partnership in Agricultural Innovation for Development (PAID). Consisting of different stakeholders concerned with agricultural innovation, PAID early on registered as a limited company and elected a Board. PAID's membership was boosted by the platforms in that member organizations on platforms were required to register with PAID.

Analysis of PAID's formation and evolution indicates insufficient **incentive** for long term engagement, the important role of **inputs** in terms of a national Coordinator partially funded by RIU, real **changes in**

**institutional systems** due to the creation of a new space for different stakeholders to interact in, and some evidence of policy **influence** resulting from this new space. The longevity of the instrumental and transformative changes brought about by PAID is questionable. There remains a dependency attitude; an expectation that by joining PAID members will get “hardware” (material inputs) as well as “software” (linkages and knowledge) and a widely held view that PAID is “too young to be orphaned”.

### **Nature of the Innovation**

The key innovation that RIU has introduced in Sierra Leone is process related rather than technology related. The introduction of a multi-stakeholder platform related to the agriculture sector at the national level (PAID) was an innovation in the post-conflict context, as was the platform process in the east in relation to the poultry feed platform. However, the changes in direction of the RIU programme hindered the influence that the programme could have on the wider policy context. It is therefore unlikely in the long term that the RIU programme will have made significant impact due to the late start of activities giving insufficient time to nurture trust and self-direction. This is in fact an issue for the cases in general, but was particularly the case in Sierra Leone due to changes in emphasis of the programme there after the mid term and technical reviews which meant that knowledge management activities that the country programme had in mind, and had shared with other stakeholders, were dropped.

### **Impact, Sustainability, Replicability and Scalability.**

The main impact has been the improvement of input supply to producers as a result of increased communication between value chain actors. The poultry feed platform, and the national level platform PAID, are of interest to other donors and projects. The multi-million dollar Smallholder Commercialisation Programme, which is taking a slightly different approach using Agribusiness Centres (ABCs) at different levels, has requested RIU to set up two national commodity platforms, and there is informal exchange of experience between the RIU office and FARA’s Sub Saharan Africa’s Innovation Platform Challenge Fund.

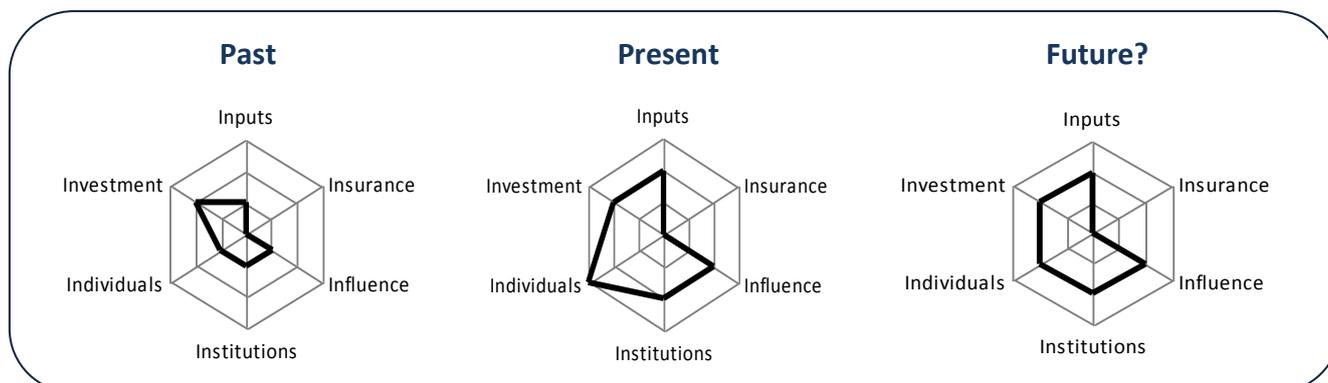
## **2.2.4 Aquaculture Innovation Platform: Nigeria**

### **Context**

With the depletion of wild fish stock, aquaculture is rapidly gaining prominence in Nigeria, despite limited donor and government interest in this to date. There is at present no government policy specifically focusing on aquaculture, neither is there a certification process for fingerlings. There is a shortage of protein concentrate for fish feed manufacture, and fingerlings available in country are of variable quality. There are a number of national fisheries associations and the private sector is actively engaged in aquaculture. Bird flu led to a mass culling of poultry and many poultry producers have, or would like to, switch to fish farming. The WB funded West Africa Agricultural Productivity Programme (WAAPP) includes funding for one of the two national fisheries institutes to become a regional centre of excellence for fisheries. RIU is housed within the Agricultural Research Council of Nigeria and the aquaculture platform is one of three that RIU is supporting in country. The aquaculture platform differs from other RIU innovation platforms in that it operates in different parts of Nigeria, not only one district (as in Rwanda).

## Institutional Changes

(Referring to the Aquaculture Sub-Sector)



### Past

Prior to the start of the aquaculture platform, **incentives** for engaging in aquaculture included some availability of **inputs** (fingerlings, fish feed) in the country – mostly from the private sector, and some private sector and government **investment** in fisheries research. Fish farming however was not an activity for the poorest (hence **insurance** is rated low in the diagram above), as adequate land and water supply is needed, in addition to sufficient capital to invest in stock making and stocking fish ponds. In terms of the **institutional capacity** prior to the establishment of the platform, some networking **institutions** such as fish farmer associations were already in place, and within these there was some **individual** agency in terms of people who saw the commercial potential for fish farming and acted as “champions” in this area. **Influence** is ranked low as there was little trust between public and private fisheries researchers and the regulatory and policy context for aquaculture was limited.

### Present

The establishment of the RIU aquaculture platform involved not only **instrumental changes** but also transformative changes to aquaculture institutional systems and capacity. On the instrumental side, RIU provided **inputs** by funding the two fisheries research institutes to conduct research into production of low value tilapia as ingredients of fish feed and in terms of fish processing. RIU also facilitated capacity development through bringing private and public sector researchers together in a workshop to discuss aquaculture technology. On the **transformative** side the platform has brought about changes in **individual/organisational** agency; institutional systems and influence. The platform functions through a network of volunteer state-based “cluster leaders”. These leaders include private sector, producer (fish farm associations), and public sector volunteers who are acting as brokers between different stakeholders in the value chain both within and beyond the state. This has fostered a change in the “rules of the game” in that new **institutional** systems are in place with new relationships being built between, for example, private sector and producer organisations; between private and public sector researchers; between research and extension and; directly between producer organisations and public sector research bodies. Finally RIU Nigeria has been supporting the Federal Department of Fisheries in developing standardisation and certification guidelines for fingerling production, thus to some extent **influencing** behaviour and policy.

### **Future?**

For the **instrumental change**, although RIU funding will cease, it is envisaged that both **inputs** and **investment** will remain at the same level at least. The reasons for this are two: Firstly the WAAPP project will undoubtedly boost Nigeria's aquaculture sector, with the plans for the National Freshwater Fisheries Research Institute to become a regional centre of excellence. And secondly, because the links that the RIU platform have fostered between the government and private sector research bodies are likely to ensure continued private sector investment in aquaculture. With regard to **influence**, it is likely that the changes in behaviour and policy with regard to aquaculture will be lasting and picked up by the WAAPP aquaculture programme in conjunction with the Federal Department of Fisheries. Meanwhile though the platform may not continue in the same form, and some **individuals** may reduce their brokering roles, it is likely that the new **institutional** relationships and roles may continue.

### **Innovation**

The key innovations that were observed in relation to the aquaculture platform relate to changing the rules of the game and the process by which this has been done. The two government research institutes are working together in a different way, trust has grown between the private and public sectors, fish farm organisations are directly contacting research stations. And with regard to process, this platform is an interesting example of one which operates effectively across many States through the brokerage roles of its members and without subsidies to attend regular platform meetings. Impact can be noted also at national level in that the ARCN has been closely observing how RIU goes about establishing platforms. It has commissioned studies on this also and has asked RIU to advise them on the platforms they plan for their member research institutes to set up in nearby villages.

### **Impact, Sustainability, Replicability and Scalability**

Institutional changes brought about by the programme relate mostly to increased linkages between value chain actors, including producers, input suppliers, researchers and regulatory authorities. Several factors contribute to the likely sustainability of the changes that the RIU aquaculture platform has indicated. There is significant private sector involvement in the sector, which is seen as a growing commercial opportunity; individuals and organisations within the platform membership have not become accustomed to having free transport provided to them to attend platform meetings, but have been carrying the "cluster lead" networking costs themselves; the policy and programme environment is favourable, and the platform approach is one endorsed at national level through the ARCN, committing to an innovation platform approach through its CAADP country compact agreements. This commitment also impacts positively on scalability and replicability, as the ARCN have a policy, for all their member research institutes, to establish village based commodity platforms in those villages neighbouring the research stations. The WAAPP may contribute to such platforms in the aquaculture sector. In addition, it remains likely that matching funding will successfully be sourced for aquaculture initiatives, as was the case where the National Oceanography and Marine Research Institute provided matching funding to RIU funding so as to scale out their research.

## 2.3 Asia Innovation Challenge Fund Cases

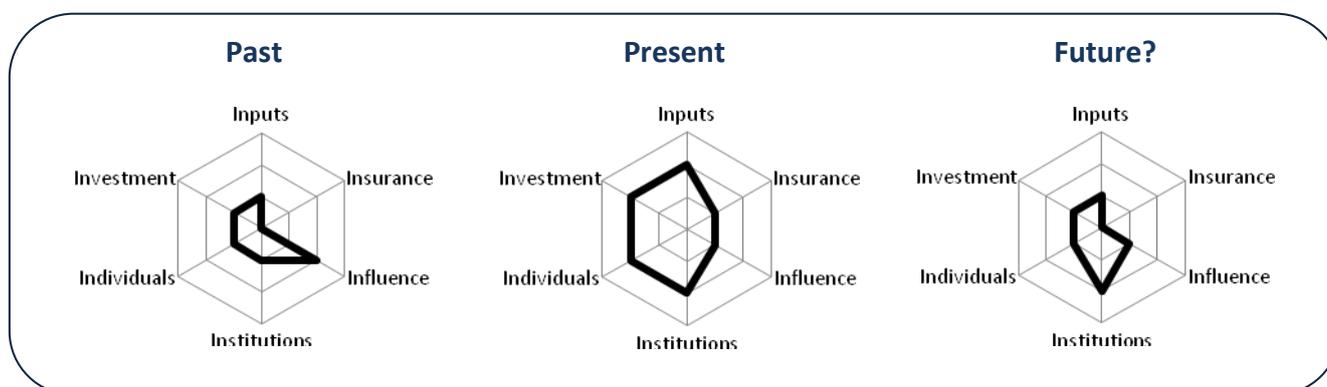
### 2.3.1 Participatory Crop Intensification: Nepal

#### Context

The central challenge for agricultural development in Nepal is to shift from a subsistence to a commercial economy in an environment characterised by widespread insecurity and instability. Agriculture is the principal source of food, income, and employment for the majority, particularly the poorest. However, agriculture is largely based on low-value cereals and subsistence production, with a mere 13 percent of output traded in markets<sup>238</sup>. Nepal's agricultural policy emphasises agricultural intensification in the Terai (Indo-Gangetic plain of Nepal) through commercialisation and investments in infrastructure. This is hampered by a widely recognised shortage of good quality seed of locally adapted, open pollinated varieties of grain legumes and cereals in the Terai, which contributes to farmers not following recommended seed replacement rates, resulting in low productivity, low production, food insecurity and loss of income from grain sales. Government interventions in the seed sector have focused largely on conventional plant breeding by NARIs, and some support to community-based seed production. Innovations in the agricultural sector often originate from the very active NGO sector, which often pioneers more innovative practices.

#### Institutional Changes

*(Referring to the seed sector as part of the national agricultural innovation system)*



#### Past

**Inputs** into the seed sector have been sporadic and scarce, with farmers using 'old' varieties that are generally not adapted to their specific agro-ecological and socio-economic conditions. With farmers having limited awareness about and access to better OP varieties, seed replacement rates were low. Limited **investments** in the sector came from the government (National Seed Board, and support to some CBSP), but the private sector was not involved in Participatory Plant Breeding (PPB) and Participatory Variety Selection (PVS) to develop, produce and distribute seed for new open pollinated (OP) varieties). Some investment came from donors (e.g. RNRRS). **Insurance** against production risks for producers, or marketing risk of input traders was almost non-existent. **Individual** agents in the system were relatively weak and poorly linked up

<sup>238</sup>

<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/EXTSAREGTOPAGRI/0,,contentMDK:20273771~menuPK:548215~pagePK:34004173~piPK:34003707~theSitePK:452766,00.html>

(with the exception of the network around the implementing NGOs and the UK partner), contributing to poorly functioning **institutions**. However, recent changes in the National Seed Act opened up new opportunities for NGO and CBO engagement in the seed sector by enabling them to have varieties originating from PPB and PVS released (using on-farm data) and to undertake truthful labelling and certification of CBSP produced seed. Previous research and development initiatives (including RNRRS and CGIAR) had exerted some policy **influence** through advocacy for PPB, PVS and the role of CBSP.

### *Present*

Under RIU, **inputs** were provided to a limited number of CBSP groups in the form of foundation seed, training and equipment – this increased access to inputs for farmers in CBSP groups working with the project, and for farmers purchasing seed originating from these groups. RIU **invested** in a private sector seed company (owned by the RIU implementing NGOs) that is meant to use PPB and PVS to develop new varieties, to provide foundation seed to CBSP groups, and to fill a perceived gap in the OP seed value chain by selling seed of improved varieties to agrovets. RIU contributed to reducing risk of participating producers by enabling implementing NGOs to provide **insurance** to CBSP groups (guaranteed market, compensation for crop failure). It nurtured the development of new **individuals** and agents, such as registered CBSP groups and the new seed company. **Institutional** changes were catalysed mainly by linking CBSP groups to agro-vets and government seed certification labs. There was no ‘new’ **influence** on policies, attitudes and behaviour, possibly because the project did not actively engage with policy makers at local and national level. However, an awareness campaign contributed to changing knowledge about and attitudes to CBSP.

### *Future?*

**Inputs** to producers are unlikely to continue at the same level beyond RIU interventions, unless there are similar programmes funded by other donors or the GoN. **Investments** are also unlikely to be sustained without RIU, as there was little engagement by RIU with the private seed sector. However, a World Bank funded agricultural project will support some of the CBSP groups initiated by the NGOs implementing the RIU project. Much will depend on whether the OP seed value chain is sufficiently profitable to attract investment. Without project support, there will be no **insurance** for seed producers, as the value chain has not yet developed sufficiently to enable relationships of mutual trust to develop between seed producers and traders. Most of the new **individuals** / agencies initiated by the projects (with the exception of some of the more mature CBSP groups) are unlikely to continue operating without project incentives and support. Most aspects of **institutional change** (such as links between mature CBSP groups, government agencies and the private sector) are likely to be sustained thanks to ongoing efforts by the implementing NGOs and some new players (e.g. WB project), but some of the newly formed linkages appear to require ongoing external support. There has been little policy **influencing** and this is unlikely to change after the end of the RIU intervention.

### **Nature of the Innovation**

The RIU intervention was the logical continuation of RNRRS and other activities, which had introduced PPB, PVS and CBSP to Nepal over the past 15 years. There have been incremental changes over a long period of time, with Nepalese research organisations being exposed (by various interventions, including RNRRS projects under the PSP) to the concepts of PPB and PVS, and government agencies embracing over time the viability of CBSP. Linking CBSP groups to markets remains a challenge, and the institutional mechanisms for this are not yet robust, with impact limited to a few mature groups that have graduated to cooperatives. The

approach under RIU is not innovative, because institutional changes have not spread beyond those project partners and producers directly involved in the project.

### **Impact, Sustainability, Replicability and Scalability**

The main impact on institutions has been the strengthening of a limited number of CBSP groups. However there are concerns about sustainability of the changes brought about by RIU, because there was little engagement at policy level, and most of the new agencies (in particular the CBSP groups) have not yet reached the level of capacity required to influence other players, or even to link with them effectively for mutual benefit and without NGO / project support. There has not been a thorough analysis of the financial incentives for the private sector to get involved in production of high quality seed of OP varieties, and the low margins obtainable (as compared e.g. from hybrid seed – imported from India and sold widely in the Terai) might be the reason why the private sector in Nepal has not invested in the OP seed sector ‘on its own’. A number of donor-funded projects with some interest in the seed sector recently started or are about to start in Nepal, but these projects had no interaction with the RIU project and are unlikely to follow a similar mode / approach. There appears to be limited interest among the implementing partners to widely share their experiences with other agencies for replication, possibly because of concerns that these new agents would not use the same approach.

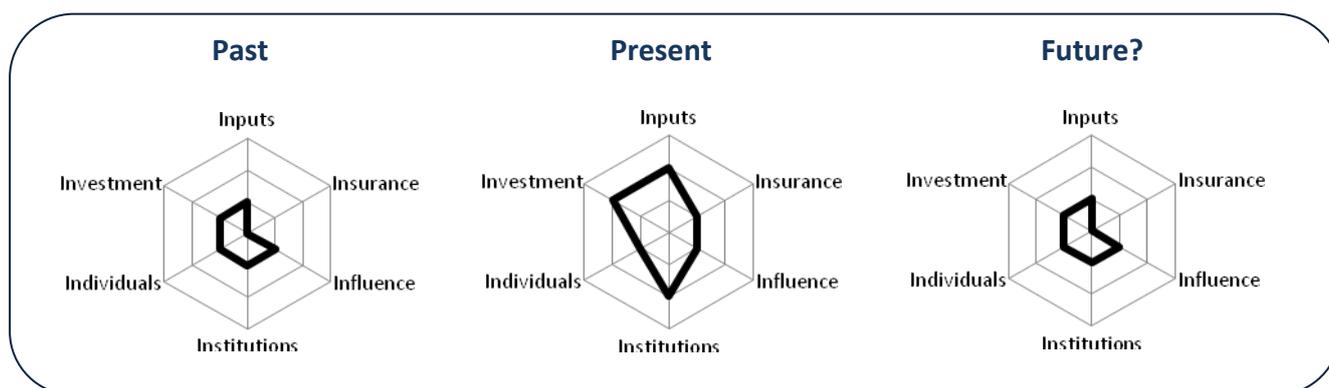
### **2.3.2 Ecological Rodent Control: Bangladesh**

#### **Context**

Bangladesh has made impressive economic and social progress in the past decade, despite frequent natural disasters and external shocks. Broad-based private sector led growth and macroeconomic stability contributed to significant decline in rural and urban poverty. However, around 56 million people still live below the poverty line, with most of them living in rural areas. One of the challenges faced by rural families is rodents, who cause significant damage both to personal property and food, while also transmitting diseases. The Department of Agricultural Extension (DAE) is the only government department with staff at the block level, which should provide an opportunity for wide ranging support to rodent control. However, the government of Bangladesh does not see rodent control in villages (rather than at field level) as a priority, and relies on NGOs to raise awareness about and mobilise communities around rodent control.

## Institutional Changes

(Referring to the rodent control sector)



### Past

**Inputs** for rodent control included commercially available rat poison and rat traps, as well as locally manufactured traps. These control measures, though widely available, are not very effective. Government (Department of Agricultural Extension) -led annual rodent control campaigns are meant to generate awareness about rodent damage and control. The private sector has **invested** in rat poison and trap manufacturing. There were no **insurance** mechanisms for users of rodent control inputs (e.g. the risk of human poisoning). **Individual** agents in the system (rodenticide manufacturers, researchers, agricultural extension) were relatively weak and poorly linked up, contributing to poorly functioning **institutions**. Previous research and development initiatives (including RNRRS and PETRRA) had exerted limited policy **influence** through advocacy for ecologically sound rodent control.

### Present

Under RIU, **inputs** were provided to a limited number of villages in the form of training and improved rat traps. The project **invested** in the manufacturing of these improved traps by ordering several batches of traps from a Bangladeshi firm, and distributing these to project beneficiaries (for free) and selling them to agro-vets. In terms of **insurance**, the use of the improved traps reduces risk at household level (it is a safer rodent control method than poison or other commercially available traps), and the trap producing firm was protected from risks by receiving advance payment for the trap orders. The project did not support the emergence of new **individuals** and agents (with the exception of loosely formed rat control groups in intervention villages), and operated instead within the existing institutional context. Some capacity development support was provided to existing agents (NGOs, agricultural extension). There were few if any **institutional** changes – only in intervention villages were links between the community and agricultural extension staff developed for during the intervention period. The collaboration between implementing NGOs and research organisations pre-dated RIU. There was no 'new' **influence** on policies, attitudes and behaviour, as the project did not actively engage with policy makers at local and national level.

### Future?

**Inputs** (in the form of improved rat traps) will most likely not be available after the end of the project, unless other donors are willing to advance-pay the manufacturers. **Investments** by private sector firms in the improved technology seem unlikely, as the project was unable to convince investors of the profitability of trap production. Without project support, there will be no **insurance** for trap producers, as there is unlikely

to be any other agent who is willing to pre-finance production of the new traps. The project did not develop new **individuals** / agencies – the rat control groups in the project villages are unlikely to continue after the project due to unavailability of improved traps. **Institutional changes** such as linkages between communities and extension are project supported and unlikely to continue after the end of the project. There has been little policy **influencing** and this is unlikely to change after the end of the RIU intervention.

### **Nature of the Innovation**

Similar to the Nepal PCI project, this RIU intervention was the logical continuation of RNRRS and PETRRA funded research. Previous projects focused on research collaboration with Bangladeshi research institutes (for the scientific component) and NGOs (for the farmer participatory component), but engaged little (if at all) with input suppliers (trap manufacturers). The innovation is both a technical product (i.e. the improved trap) and a social process (i.e. community organisation for trapping), but as the supply of the product is not ensured, and social processes have not been institutionalised, the overall impact of this project is likely to be very low.

### **Impact, Sustainability, Replicability and Scalability**

The main institutional impact has been the increased capacity of (some) NGOs and government agencies working on rodent control. The design of the RIU intervention showed that the innovation is to some extent replicable and scalable, because only one NGO (AID Comilla) was involved in the RNRRS project, while RIU is working in four regions with four different NGOs that were trained by AID Comilla. However, the intervention is not sustainable, as it relies heavily on the provision of subsidised incentives to the various actors (farmer groups – training and traps, extension staff – training, private sector – pre-paid orders of traps). Crucially, the project has not been able to create sufficient demand for the improved traps to get the private sector interested in producing them. While stimulating demand in a large country like Bangladesh is very challenging, the project did not directly engage with potential trap manufacturers / entrepreneurs to 'sell' the product. Relying on the same types of partners as during the RNRRS / PETRRA research phase (i.e., NGOs and research organisations) probably hindered an effective involvement of the private sector. Similarly, the project has not been able to create or promote appropriate social organisation or collective action models at community level, which would be a prerequisite for sustainability.

## **2.4 Best Bets**

### **2.4.1 Farm Inputs Promotions Africa Ltd: Kenya**

#### **Context**

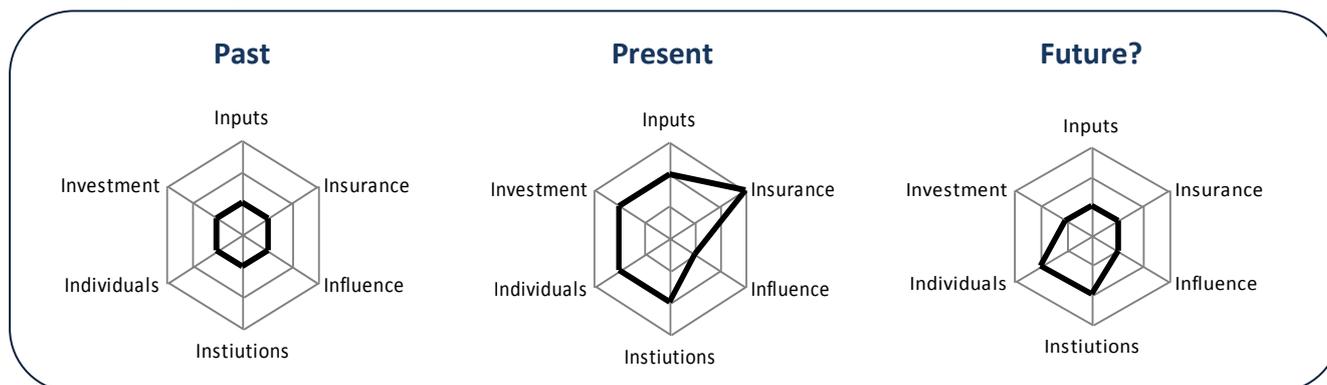
Agricultural policy in Kenya revolves around the main goals of increasing productivity and income growth, especially for smallholders; enhanced food security and equity, emphasis on irrigation to introduce stability in agricultural output, commercialisation and intensification of production especially among small scale farmers; appropriate and participatory policy formulation and environmental sustainability<sup>239</sup>. Kenya launched its Agricultural Sector Development Strategy and signed Comprehensive African Agricultural Development Program (CAADP) in 2010. In line with the CAADP Country Compact, the Strategy aims to

<sup>239</sup> Alila, P.O. and Rosemary Atieno, R. (2006) Agricultural Policy in Kenya: Issues and Processes, Future Agricultures

achieve an agricultural growth of 7% per year over a period of five years and establish agriculture as a key driver for sustained economic growth. Kenya is committed to creating a policy and regulatory environment that favours private sector engagement in the private sector.

## Institutional Changes

(Referring to the agricultural input sub-sector)



### Past

Provision of agricultural services in Kenya is pluralistic, combining traditional public sector mechanisms supported by donor funding, NGO provision and private sector sale of agricultural inputs. FIPS-Africa is a not-for-profit company operating in Kenya, Uganda and Tanzania and funded by several donors including DFID, USAID and the Rockefeller Foundation. It was already operating prior to winning RIU funding through the Best Bets scheme in 2010. FIPS-Africa's full title is "Empowering millions of small-holder farmers throughout East Africa to put research into use: a private sector-led extension service to address climatic threats to food security". As FIPS has been operating prior to accessing Best Bets's funding, it is difficult to attribute changes to RIU funding alone – the institutional changes reflected here are based on an estimate of the institutional context prior to FIPS-Africa and the future diagram is an estimate of how the cessation of RIU funding will affect the changes brought about by FIPS-Africa.

### Present

FIPS has brought about both **instrumental changes** in relation to incentives, and more systemic **institutional change**. Village based agricultural advisers (VBAAAs) have been recruited and trained by FIPS and they are making **inputs** including small packs of seed and fertiliser available to farmers at a small cost, with the incentive that they can add a small profit margin on the sale. Private sector mining and seed companies have **invested** in formulating new fertilizer mixes and have subsidized the costs of packaging. **Insurance** is ranked high as FIPS transports the seeds to the rural areas, enabling improved seeds of a variety of crops and vegetables to be accessible to farmers locally and in small quantities that are affordable to poor farmers. In terms of **institutional capacity**, **individuals** including the FIPS Director himself and the VBAAAs are at their different levels acting as intermediaries. **Institutional change** has been effected by FIPS establishing new rules of the game in terms of relations with mining and seed companies as well as new public-private linkages with government agricultural research institute (KARI). Furthermore some VBAAAs are considering forming associations so as to be able to in effect become agro-dealers in the long term. However there has

been no change in **influence** as FIPS has not been working at national policy making level but rather at the grassroots.

### **Future?**

FIPS use of VBAs is presently dependent on donor funding and once RIU ceases its funding it is not clear whether the system of VBAs will remain. There was moreover insufficient evidence that packaging of seeds and fertiliser in small packs is economically viable for companies to continue to do. Nevertheless the high degree of **individual** agency in terms of brokerage, and the new links with the mining companies may be sustainable, especially within the present climate that favours private sector engagement in the agriculture sector.

### **Nature of the Innovation**

From the institutional perspective the major innovations of the FIPS Best Bet are that it is private sector, rather than government or NGO led; it leverages improved inputs from private sector mining and seed companies directly and; it has devised a new mechanism of ensuring that these inputs are easily accessible and affordable for poor rural farmers.

### **Impact, Sustainability, Replicability, Scalability**

As mentioned above, much of the difference that FIPS has made is related to the individual agency of the Director and if there were any changes then it is unlikely that the flow of small packs of seeds and fertilisers and the reach to farmers through VBAs would continue. The system that has been set up runs parallel to already institutionalised government systems and does not work in close cooperation with NGOs operating in the area. However, other agencies such as AGRA, USAID, CIP and the Rockefeller organisation are working with FIPS. FIPs, with their support, may be in a position to maintain, and even replicate and scale out its activities.

## **2.4.2 Shujaaz Youth Communication Initiative: Kenya**

### **Context**

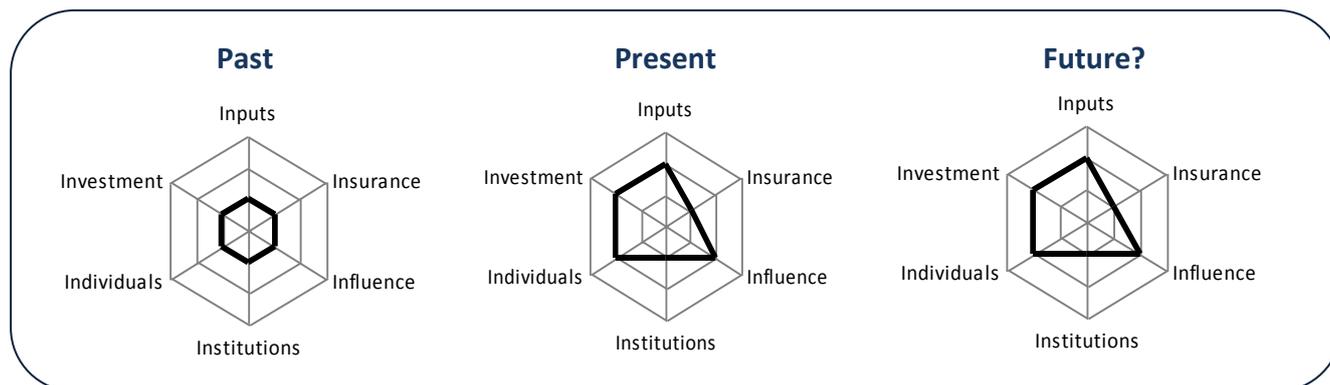
Whilst for many years most agricultural extension provision in Kenya was through the Ministry of Agriculture's Training and Visit extension approach, of recent years this has declined. Reasons include a reduction in public funding of public sector provision of extension, disillusionment with the efficacy of the T&V approach in Kenya and a move towards more learner-centred and participatory approaches. Now agricultural extension and communication take place through a variety of pathways in Kenya, with some public (Ministry of Agriculture), NGO and private sector (mostly through radio stations) provision. Farmer Field Schools are increasingly used, and there are also several initiatives seeking to avail agricultural information to farmers through information and communication technologies including mobile phones, the internet and the radio.

The Shujaaz Youth Communication Initiative is a Best Bet initiative in Kenya run by the private company 'Well Told Story' (WTS). Starting in 2010 the Best Bet involves the production of comics and radio broadcasts supplemented by interactive Facebook and SMS services. Shujaaz focuses on youth issues related to civil society and livelihood diversification. It is the only nationally produced comic that carries an agricultural

story every month. Stories are identified on the basis of focus group discussions with youth in different parts of the country. It aims to fill the gap between the multitude of local youth development initiatives and a nationwide recognition that youth issues are a concern.

## Institutional Changes

(referring to multi-media agricultural communication)



### Past

With Best Bet experiments focusing on specific outputs rather than being an activity within a wider country programme, the evaluation team did not look into the macro context in terms of the agriculture sector policy and practice in Kenya to the same extent as in, for example, Rwanda and Sierra Leone. However, in terms of **instrumental change** and **inputs**, there is some degree of extension and agricultural communication by the Government and also some **investment** by the media in agricultural news stories and phone-ins. Due to the plethora of development projects aimed at livelihood diversification in the country there is already some degree of **institutional capacity** in terms of **individual/agency knowledge brokerage** and established **institutional** systems. However the scale, reach and **influence** of these are limited and discrete.

### Present

WTS has sourced **inputs** through donor funding, and corporate **investment**, as well invested its own funds into Shujaaz. The company has a policy to only source up to a maximum of 25% funding from any one source, thus RIU has been providing 25% of the production cost – this covering the one (out of four) stories each month that has an agricultural message. In terms of more transformative change, the virtual cartoon characters are innovative examples of **virtual individual agency** in that each of the four main characters act as role models. Fans believe in them and study their actions. One of the characters – DJ Boyle – also presents all the radio broadcasts. The comic and radio broadcasts have significantly **influenced** the attitudes and behaviour of over 1.5 million young Kenyan men and women and their friends. WTS has not significantly led to a transformation in **institutional** systems or the rules of the game in that it sources stories more through individual contacts and networking, primarily outside of government bodies. However, when stories are developed that rely on either changes in policy or increased supply of inputs, these have challenged government bodies in a new way and could in the long term lead to more responsive and demand-driven agricultural research and development.

## **Future?**

The diagram above is based on a number of assumptions and is therefore hypothetical and illustrative only. Though there are issues related to sustainability (discussed below) the diagram indicates that what has been started by WTS, with some support from RIU, will continue post RIU (and is in fact a conservative estimate). WTS is a commercial body that can source **inputs** and **investment** from donors, NGOs and corporate bodies alike. Moreover, what it has to offer has value to all the public, donor and corporate sectors. With good business advice it is likely that Shujaaz will go from strength to strength and continue to reach and **influence** Kenya's youth. Though mechanisms for sourcing technical information for agricultural stories are informal, with just 12 stories to run each year, these mechanisms should still be viable.

## **Nature of the Innovation**

Shujaaz is innovative in several ways. With regard to putting research into use, Shujaaz is an effective and innovative means to communicate with large numbers of male and female youth, in a contemporary and "fun" language that they relate to. It has the power to change the way youth see agriculture and to broaden livelihood options for them accordingly. In addition, the way in which WTS has used far reaching distribution mechanisms – the Nation newspaper, and the Mpesa money transfer outlets across the country, is in itself innovative. Twaweza, which specialises in funding work through large networks and institutions – such as mass media, mobile phones, religion, and consumer goods networks – commented that of all the programmes they support, Shujaaz is the most innovative in that it is using several media (radio, facebook, comics, sms). This means of distribution allows for Shujaaz to have impact and influence at scale.

## **Impact, Sustainability, Replicability and Scalability**

Institutional impact of this experiment in the sense of influencing relationships between key actors has been limited. Donor funding from RIU, GTZ and Twaweza has all been on a relatively short-term basis to date and this has left WTS in an uncomfortable situation financially. However, the Company is seeking advice and is negotiating with Twaweza and other donors, as well as with the partners through whom they distribute the comic, and with other corporate bodies, so as to secure longer term commitment. Furthermore there is recognition that the WTS team have skills which could be used to generate income, for example through being contracted by NGOs and regional / continental bodies (such as AGRA and ASARECA) to prepare commissioned multi-media products focusing on agriculture and other development-related topics. With regard to scalability, Shujaaz already has a reach far beyond the other case studies visited and there remains great potential to scale this out further, including to other countries in the region.

## **Innovation and impact**

Shujaaz is innovative in several ways. With regard to putting research into use, Shujaaz is an effective, fun and innovative means to communicate with large numbers of male and female youth, in a language that they relate to. It has the power to change the way youth see agriculture and to broaden livelihood options for them accordingly. In addition, the way in which WTS has used far reaching distribution mechanisms – the Nation newspaper, and the Mpesa money transfer outlets across the country, is in itself innovative. Twaweza, which specialises in funding work through large networks and institutions – such as mass media, mobile phones, religion, and consumer goods networks – commented that of all the programmes they

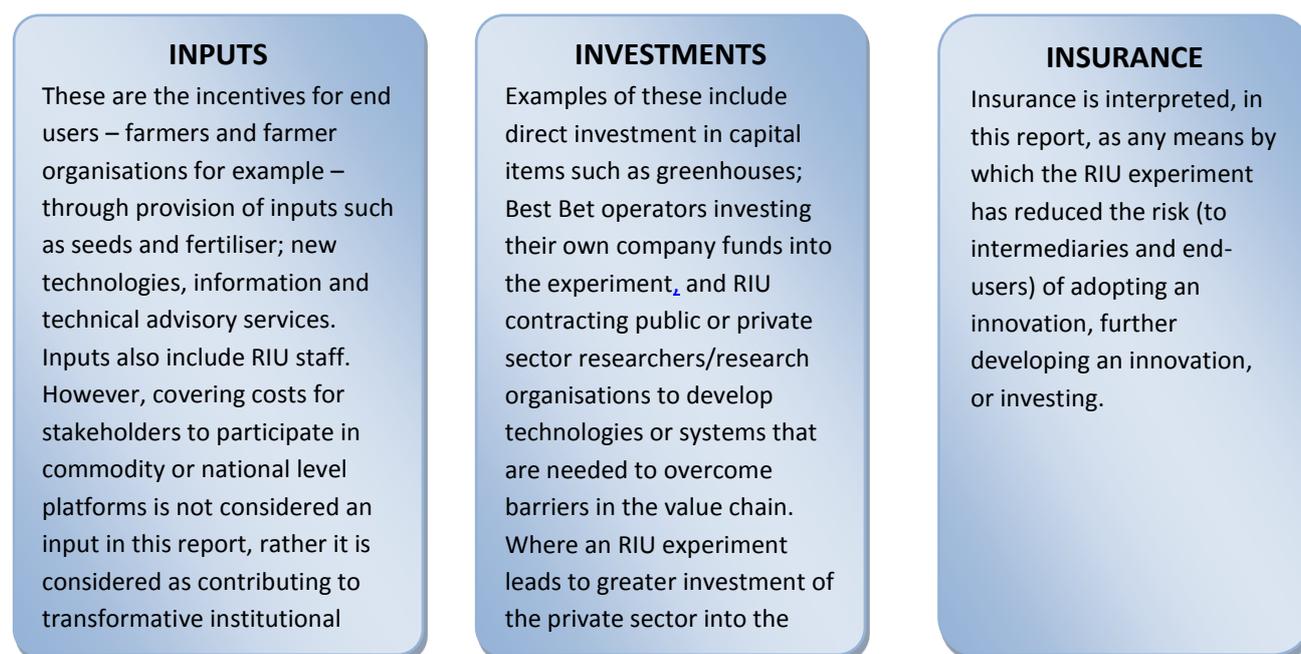
support, Shujaaz is the most innovative in that it is using several media (radio, facebook, comics, sms). This means of distribution allows for Shujaaz to have impact and influence at scale.

### 3. Overall analysis

This section provides an overall analysis of findings concerning institutional aspects of RIUs experiments. It is also structured around the analytical framework. The first sub-section examines aspects of instrumental change (inputs, investments, insurance) and the second sub-section examines aspects concerning change in institutional capacity (individuals, institutions, influence). It should be noted that these changes have taken place across a wide array political economies, and these in turn proscribe the extent to which different types of change can take place.

#### 3.1 Incentives

Discussion of incentives distinguishes between inputs, investment and insurance as per Box 1, reproduced below for convenience:



##### 3.1.1 Inputs

Three main types of inputs are relevant in the RIU context: Agricultural production inputs (provided either as full / partial subsidy to producers, or at full cost, but with improved access, quality or timeliness), technical capacity development (to the producer, including access to new knowledge), or provision of knowledge and technologies at the producer level. Introducing a new technology at producer level is a frequent intervention in development. The quality of the technology is dependent on whether the technology is user friendly (aimed at producers), readily accessible, and sustainable. Sustainability is defined as the continued accessibility and affordability of the technology at user level.

As RIU has been an innovation research project, the scale of input provision has been relatively low – either by working only with a limited number of producers in a limited geographical area such as a district, or by providing inputs in very small ‘taster’ quantities. All projects involve some sort of technical capacity development.

An input common to all three modalities of RIU (Country programmes, ICFs and Best Bets) has been provision of improved crop varieties. . In Rwanda and Nepal, the main input was introduction of new crop varieties through the distribution of seed or planting material. The new varieties were of better quality than those currently available to farmers (e.g. disease resistant, higher yielding, better adapted to local agro-ecological conditions), and a higher quality of seed than the seeds currently available to producers. In Nepal, the varieties had been developed through participatory plant breeding and participatory variety selection during previous research (funded by DFID / RNRRS, the CGIAR and others). Four out of eight case studies visited had a new crop variety component. Technical capacity development through training, extension and interaction of researchers with farmers was also a common input in the RIU experiments visited.

The programme provided direct and indirect incentives not only to agricultural producers but also to input producers, researchers, NGOs, innovation brokers/facilitators and government departments as outlined in Table 3 below. The RIU experiments used incentives both directly (by providing inputs to particular individuals, groups or organizations) and indirectly (through indirect benefits from the inputs, or by influencing the enabling environment.

**Table 3: Incentives in RIU models and experiments**

<b>Stakeholder group</b>	<b>Direct incentive</b>	<b>Indirect incentive</b>
Agricultural producers	<ul style="list-style-type: none"> <li>- Taster packs / experimental inputs (IRD packs Nepal; rat traps Bangladesh)</li> <li>- Subsidised inputs (small amounts of seed, fertilizer – e.g. Sierra Leone, Kenya FIPS)</li> <li>- Access to information (both direct and indirect incentive)</li> </ul>	<ul style="list-style-type: none"> <li>- Social capital (both among producers – through institutional development - and between producers and other value chain actors, e.g. traders, input providers)</li> <li>- Access to credit and markets</li> </ul>
Input producers	<ul style="list-style-type: none"> <li>- Access to information about new technologies</li> <li>- Training (e.g. Nigeria)</li> </ul>	<ul style="list-style-type: none"> <li>- Access to larger markets, if more producers adopt innovations (e.g. Rwanda, Kenya FIPs) – Rapid Demand creation</li> </ul>
Researchers	<ul style="list-style-type: none"> <li>- Payment for services (advice, training) provided to experiments</li> </ul>	<ul style="list-style-type: none"> <li>- Some technologies developed by them will be put into use (resulting in increased reputation, job satisfaction and motivation)</li> <li>- Development of professional network</li> <li>- Intrinsic motivation – if things are working</li> </ul>
NGOs	<ul style="list-style-type: none"> <li>- Training / capacity development</li> <li>- Payment for services provided (e.g. as project implementers in ICF)</li> </ul>	<ul style="list-style-type: none"> <li>- Increased credibility</li> <li>- Expanded network (e.g. for future work)</li> <li>- Intrinsic motivation – if things are working</li> </ul>

Innovation brokers / facilitators	- Are paid for services by the project (e.g. country PM) or via project partners (e.g. VGAs / FIPS, village workers / Bangladesh, field staff / Nepal)	- Enhanced skills, experience, knowledge, resulting in increased job opportunities after RIU
Government departments	- Payment for services rendered (e.g. RIU pays allowances and costs for Department of Fisheries staff in Nigeria to undertake training)	- Functioning platforms contribute to government objectives and targets; career advancement / pay might depend on this - Intrinsic motivation – if things are working

The emphasis on provision of improved varieties and training in their management by RIU is likely to stem from RIU being a programme designed to put RNRSS outputs into use. In term of “innovativeness” this can be found more in the institutional processes followed to put research into use (discussed later in section 3.2) than in the technical inputs of the programme.

### 3.1.2 Investment

Investments are defined by this evaluation as capital costs (instead of recurring costs) and as investments made by these actors themselves as a result of the RIU interventions. Some of the capital costs are given directly from RIU for example, in the case of Rwanda’s Potato Innovation Platform, RIU invested in a greenhouse to enable the production of clean seed potatoes at community level.

Most types of investments are best done through the private sector. As the private sector is only likely to invest in an enterprise that is profitable, an investment from the private sector may indicate sustainability. Some interventions require the private sector to subsidise the activities initially, as they see a benefit for their future economic growth. For example, FIPS has asked for the private sector to subsidise the making of smaller packages of fertiliser and seeds to distribute to smallholders. The move from producing regular seed packages of 1kg or 5kg bags to making available smaller inputs of 6 seeds is a dramatic change in how seed companies do business, however they have invested in the change as they see a potential for future economic growth. Providing free or low cost ‘taster packs’ is already a widely used marketing strategies by the private sector worldwide, but using it for agricultural inputs in developing countries to trigger demand is a relatively new strategy.

Shujaaz on the other hand is sourcing investment through working in innovative partnerships with corporate and media bodies such as Safaricom and its Mpesa (money transaction) outlets, and the Nation newsgroup. Shujaaz provides selective advertising for example in return for free distribution of its products. It is also networking with bodies as diverse as Barclays and the Alliance for a Green Revolution in Africa (AGRA).

To overcome bottlenecks in the value chain, RIU has also directly invested in a private sector firm; Global Agrotech Nepal Private Ltd (GATE).. The ICF PCI (Participatory Crop Improvement project) in Nepal makes technologies available to farmer groups through supporting NGOs to form a seed company. The company will undertake participatory plant breeding and variety selection, provide community-based seed production

groups with foundation seed, and purchase seed from the groups to market through a dealer network. The aim was to fill a gap between small scale farmer-based seed production, research and profit-oriented seed suppliers. GATE was designed to have a long term perspectives for the Community Based Seed Producers (CBSPs). GATE will market and sell seeds that previously were only provided by the public sector. By making it a privately owned company, RIU has invested in part of the business for the long term sustainability of the seed sector.

To summarise, investments through RIU have largely focused on three methods: subsidising equipment for long term use, inclusion of the private sector within the value chain to subsidise a part of the business, and the creation of a private company to fill a gap.

### 3.1.3 Insurance

The goal of RIU is to contribute to poverty reduction. In RIU's logframe, one of the output 1 indicators specifically states that RIU needs to 'Strengthen the responsiveness of innovation processes to the needs of poor people and other socially desirable outcomes'. From a socio-economic and institutional perspective, responding to the needs of poor people would require some degree of risk reduction, at the very least to ensure that the most vulnerable groups are not worse off as a result of the interventions, and to ensure that they benefit at least as much (if not more) than higher income groups. Decreasing risk is important in allowing smallholders to feel comfortable with exploring new types of relationships, trying new products, or experimenting with new techniques, and indeed in reducing risk to all stakeholders.

The case studies reviewed during this evaluation provided very few examples where explicit insurance mechanisms were built into the experiment. For example, the Shujaz Youth Communications Initiative was not designed to decrease risk for producers; rather, it aimed to disseminate information (though it may have reduced producers' risk by informing listeners about integrated pest management (IPM) strategies, which reduce the risk of crop losses through pests and diseases. However, in projects where risk was taken into account, there were some moderate benefits. In Nepal, both the RNRRS and RIU projects covered any losses that farmers incurred when participating in the experiments (however, it is not clear how often farmers claimed and received compensation).

Platforms generally appear to reduce risk by creating more transparency and trust between value chain actors. Platforms in some cases were able to bridge the gap between different players in order to enhance the trust in smallholder farmers. In the Potato Innovation Platform, the micro-finance institute started preferential lending to potato growers who were part of the platform. This preferential lending did not extend to other potato farmers, who were not part of the platform, nor did it extend to platform farmers who were going to use the funds for other crops. This indicates that the micro-finance institute has a greater trust in farmers who grow potatoes within the platform system, as they are receiving regular technical assistance from RIU, which increases the likelihood that the loans will be repaid. Platforms also create a venue for all players in the value chain to join forces for policy advocacy. In the case of the Cassava Innovation Platform, platform members were able to advocate for the re-opening of a Cassava factory to increase business opportunities for all actors in the value chain.

With Farm Inputs Promotions Africa (FIPS-Africa), the project re-packages seed of improved varieties and transports these seeds to rural areas. Though the transport is subsidised, the seeds are still sold at a cost in small quantities, which are affordable to farmers. This lowers risk for farmers as it a) gives them an affordable opportunity to try new crop varieties, and b) the seeds are being transported from an area where

there is easily access to seeds to an area where there is very low access. The transport cost is being subsidised through FIPS.

To summarise, insurance is a way to reduce the risk to producers and allow for new innovative behaviours. It needs to be directly designed into the programme to maximise its benefits. Ways that RIU has worked to reduce risk include rearranging relationships to develop trust between different groups, which allowed for producers to have preferential borrowing at micro finance institutes, and repackaging and presenting seeds of new crop varieties.

### 3.2 Institutional Capacity

Discussion of institutional capacity distinguishes between individuals, institutional change and influence as per Box 1, reproduced below for convenience:



#### 3.2.1 Individuals and agents

##### Introduction

Individuals and agents are the actors who determine, contribute to, influence, or act on the institutional capacities of the innovation system). Their capacities, roles and linkages with each other are influenced by project interventions. The term agency refers here loosely to an organisation or individual that represents others – for example, a union or political party representing the interests of its members.

The CRT has written on several occasions about the role of individuals – specifically, of entrepreneurs<sup>240</sup>, brokers<sup>241</sup> and champions (Box 2). In the different RIU modalities and experiments, individuals from different organisational affiliations fulfilled these roles:

<sup>240</sup> [www.researchintouse.com/resources/ext/link10bulletin-dorai-hall.pdf](http://www.researchintouse.com/resources/ext/link10bulletin-dorai-hall.pdf)

<sup>241</sup> <http://www.researchintouse.com/resources/riu10discuss02bottmupdevent.pdf>

In the **Country Programmes**, the RIU national coordinators play an important broker role at national level, to explain the innovation systems concept to stakeholders and convince different actors that it is worthwhile to participate in commodity platforms. The coordinator would also coordinate the use of inputs and investment – e.g. by sub-contracting partners for the delivery of specific inputs (such as NGOs providing training to farmers in Rwanda), or by direct investments such as the greenhouse provision in Rwanda. By providing inputs to partners (such as the greenhouse).

At the platform level, a similar function is fulfilled by the platform chairperson (whose role includes implicitly ensuring that key actors have sufficient incentives to remain with the platform, if their role is required). The Aquaculture Platform in Nigeria has voluntary platform leaders at state/cluster levels, with these leaders coming from and representing the private sector (fingerling breeders, fish feed suppliers), the public sector (federal department of fisheries), and representatives of fish farming organisations. These leaders both represent their sector and interact with the other value chain members in and beyond their cluster/state.

At community level, community facilitators (e.g. Rwanda) are operating, but their role is more one of mobilisation than of brokerage between different actors. However, their role goes much beyond the narrow role of agricultural extension as shown in CRT's analysis<sup>242</sup> of innovation system thinking, whereby agricultural innovation systems go beyond extension, to include new domains not generally addressed by advisory services – with an emphasis on markets, access to inputs, etc.

In the **Best Bets**, the entrepreneur(s) behind the innovation were of particular importance, as these were the main drivers behind the initiative. Often these are highly motivated individuals, who have a strong stake in the initiative, are passionate about it and have gone to the extent of investing their own company's capital in it (in the case of Shujaaz). In addition, and no less important, are the field-level brokers (Village Based Agricultural Advisers or VBAs in the case of the FIPS Best Bet), who act as intermediaries between different actors. Though the intention is that these young farmers operate on a no-pay basis, they are managed by 16 paid District Coordinators on salaried positions funded by RIU. That the latter are paid does raise the question of sustainability – will they continue to manage the VBAs once RIU funds cease? However, FIPS has already initiated ways in which the VBA positions can remain viable – VBAs have received significant training and they can make a profit margin on sale of inputs to farmers..

In the **Innovation Challenge Fund**, important individuals include the project leaders of the two ICF cases visited in Nepal and Bangladesh, who generally have a high stake in the project – because of genuine motivation, but also to maintain and reinforce their role in the scientific and NGO community or hierarchy, and to retain credibility for attracting future funding. Their role is less explicitly an intermediary one – even though, as project leaders, they need to coordinate and balance the role, interventions and interests of different project partners. But as a result of the 'project mode' of operation of the ICF projects, they are accountable largely to RIU management, and not to the networks and actors in-country.

It is probably fair to say that in all three RIU modalities, some charismatic individuals played an important role in advancing the projects, but the main difference between the modalities is the extent to which an intermediary or brokerage role was explicitly in-built and supported, rather than emerging *ad hoc* and by coincidence.

The ways in which RIU has both introduced new agents and built the capacity of existing agents is discussed next. A discussion of the role of the private sector follows and the section finishes with a short conclusion.

<sup>242</sup> <http://www.researchintouse.com/resources/riu1008invest-relationship-hall-dijkman-sulaiman.pdf>

RIU interventions can either ‘create’ new agents, or change the characteristics of existing agents. Most of the RIU case study experiments explicitly aimed to do the latter, with an underlying assumption that more capacitated agents with clearly defined roles and responsibilities will be better able to fulfill their role in the institutional system, and to effectively link with each other. The main mechanisms for changing agents were incentives, such as subsidised training, facilitation and other capacity development support.

## New agents

New agents were initiated by the RIU experiments at different levels:

**Producer level.** Here RIU experiments initiated<sup>243</sup> the formation of interest- or producer groups (e.g. rodent control groups in Bangladesh, community-based seed production (CBSP) groups in Nepal and, in effect, the poultry feed innovation platform in Sierra Leone. In both of the ICF cases, the new agents act as entry points for ‘supply driven’ innovation upscaling activities of NGOs funded by RIU. In Nepal, the agricultural extension services are meant to ‘take over’ support to the CBSP groups after completion of the RIU project, as seed production is a government priority and there are ongoing government programmes for this. However, considering the low capacity of agricultural department staff (both in terms of quantity and quality of personnel), this is unlikely to be effective, and the implementing NGOs are actively seeking financial support from other donors to continue supporting these groups. In Bangladesh, it is even less likely that the rodent control groups – operating through women at village level - will continue, as rodent control in residential areas is not a priority for the Department of Agricultural extension. Therefore the initiation of new agents at producer level, without a strategy to link them to an existing support mechanism in-country, does not appear to have been successful. In terms of achieving impact, a strategy that aims at influencing in-country institutions and support mechanisms for producer and interest groups (e.g. in Nepal, the policies of the National Seed Company and of the Department of Agricultural Extension, and in Bangladesh the national rodent control campaigns) might have had a wider and longer lasting impact.

**Intermediate / commodity level.** RIU initiated ‘higher level’ interest groups around commodities (potato and cassava platforms in Rwanda, aquaculture platform in Nigeria). The role of these new agents is to enable better collaboration and coordination between individual actors, and to create a critical mass of agency around commodities that have potential to contribute to poverty reduction (by increasing incomes for producers, processors and traders, and reducing market price for consumers). Platforms were usually formed as part of country programmes (CPs), and operate in only one part (e.g. district) of a country (with the exception of the aquaculture platform in Nigeria, which operates in several states). Stakeholders involved in the value chain can include consumer and producer representatives, processors, traders, input dealers, government agricultural departments or other relevant government bodies, NGOs, and research organisations. The extent to which different stakeholders participate in the platform depends on the wider context. For example, in some States in Nigeria there is less processing of fish and there is less involvement of fish processors in the platforms in those locations, and in Sierra Leone the poultry feed innovation platform is predominately composed of producers and some traders. The platforms have essentially a transitional role to overcome bottlenecks in those value chains that CPs identified as viable. RIU strengthened the capacity of platform members (e.g. through NARI – National Agricultural Research Institute - inputs) and contributed to increased credibility of some of the members (e.g. NGO partners). CPs generally

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<sup>243</sup> In fact some of the CBSP groups in Nepal under the RIU project were existing farmer groups that had originally formed for other reasons (possibly also donor funded projects), and some had been formed pre-RIU – either by RNRRS-funded projects or by the RIU-implementing NGOs as part of other projects.

have several platforms (for example, in Sierra Leone there is a solar drying platform in the North and a poultry feed innovation platform in the East)..

**National level.** In order to achieve high level commitment, RIU initiated in some countries (generally under country programmes) national level fora (e.g. the National Innovation Committee in Rwanda and the Partnership in Agricultural Innovation for Development – PAID - in Sierra Leone), which are meant to catalyse high level commitment to agricultural development through value chain development, and pave the way for sectoral innovation platforms. For example, in Rwanda, the NIC was instrumental in bringing together key players in the agriculture sector at the start of RIUs engagement in Rwanda and led to high level buy-in to the commodity platforms that were initially planned. The formation of NIC led to institutional change, as member organisations were able to get to know each other, build trust and establish new networks and opportunities. Over time, as the commodity platforms took off and less senior staff attended NIC meetings, this coalition became less useful, but its existence at the start paved the way for the commodity platforms. In Sierra Leone, the national level platform PAID registered as a limited company and its operations are expected to be sustained on members annual fees. However, at the time of the evaluation members were not paying their annual fees, as they do not see what tangible benefits they are getting out of PAID.

**Intermediaries: Brokers, facilitators and champions.** In some instances, RIU experiments initiated new agents with a specific role to facilitate, broker or promote specific processes or messages. Their role can also include linking different actors, processing and sharing information, negotiating on behalf of others or fulfill other intermediary roles. This role is explained further in Andy Hall’s note on brokers at <http://www.researchintouse.com/resources/riu10brokeringnetworks-hall.pdf>. The role can also include monitoring or assuring that the various agencies have sufficient incentives (see Section 3.1) to act in a specific way. The broker therefore needs to understand the motivations of each actor and try to balance the benefits and costs to ensure that incentives are sufficiently strong.

Some of these roles are linked to commodity platforms (e.g. coordinators at local or national level), and here sustainability is again an issue. In the case of Rwanda, Sierra Leone and Nigeria, platform coordinators were paid by RIU, but are meant to be paid eventually by contributions from platform members. Much of the coordination of activities in the aquaculture platform of Nigeria is done by members on a voluntary basis, whereby a network of volunteer state-based “cluster leaders” (including private sector, producer / fish farm associations, and public sector volunteers) are acting as brokers between different stakeholders in the value chain, both within and beyond the state. This has fostered a change in the “rules of the game” and new relationships being built between, for example, private sector and producer organisations; between private and public sector researchers; between research and extension and; directly between producer organisations and public sector research bodies (see section 3.2.2 on institutional change). These have resulted in greater collaboration and trust between public and private sector researchers, improved communication between research and extension, and cases representatives of fish farm organizations have directly contacted national fisheries research institutes with specific requests.

In FIPs / Kenya, village based agricultural advisers (VBAAAs) have been recruited and trained with RIU funding, who are making agricultural inputs (including small packs of seed and fertilizer) available to farmers, with the incentive that they can add a small profit margin on the sale. Some VBAAAs are considering forming associations so as to be able to in effect become agro-dealers in the long term. FIPS use of VBAAAs is presently dependent on donor funding, and once RIU ceases its funding it is not clear whether the system of VBAAAs will remain in place.

“Champions” also fulfill a brokering function by promoting an innovation through advocacy and networking at the ‘higher’ level. The Best Bet interventions were led by entrepreneurs who acted as champions – for example, the FIPS Director, who was already involved in RNRRS research, is using an entrepreneurial approach involving informal networking rather than formal MOUs and institutional partnerships. This model is flexible and ever evolving, and – similar to Shujaaz - activities hinge on the dynamic personality of the Director himself. In the case of Shujaaz, it is the passion and commitment of the Director of Well Told Story (that partially funds Shujaaz), who won the Best Bet funding, that makes the whole initiative happen successfully. Here the role of the individual in catalysing and inspiring action is critical.

The PCI project in Nepal had a strong champion in the person of the project leader – a University of Bangor staff who originates from and is still strongly involved with the implementing NGOs, and who had a strong involvement with the preceding RNRRS projects. While undoubtedly having an excellent understanding of the underlying science of PPB and PVS, the project leader does not have the same understanding of and linkages with private sector actors. This makes him a strong champion for influencing research approaches to plant breeding, but less suitable to promote the required incentive systems and institutional arrangements required for upscaling. This is in line with a lesson from the CRT that it *‘appears that, to be successful, champion need limited ownership of the research’*:

#### Box 2: The role of innovation champions

Under the RNRRS, whilst much of the research undertaken succeeded in developing innovative approaches, usually these did not become institutionalised and failed to displace existing approaches. To put research into use requires a champion who is able to navigate complex political and institutional landscapes, building networks of practitioners and policy actors willing to advocate and promote the approach – and this is unlikely to be the originator of the research. It appears that, to be successful, champion need limited ownership of the research; a stronger ownership of outcomes; strong networks with policy and entrepreneurial actors – and they may work in a private company. Although these findings are preliminary, a clear implication is that for research to be put into use, creative ways need to be found to transit from scientific champions to innovation champions. Understanding the motivations of champions under different circumstances will help develop better ways to deploy championing as a research into use strategy.

Source: Emerging lesson 5, <http://www.researchintouse.com/learning/learning31emerginglessons.html>

#### Existing agents

In addition to initiating new agents, RIU experiments identified and worked with existing agents, often seeking to develop their capacities. This includes increased knowledge, skills and experience of RIU partners, either as a result of specific training and capacity development interventions initiated by the project, or as a result of ‘learning by doing’ - i.e. developing capacity by facing and mastering new challenges, and learning from these. Less tangible are changes in beliefs and attitudes of individuals, and with them changes in organisational systems and processes (discussed in section 2.2.5 under ‘institutional change’). For example, where researchers have engaged with private sector entrepreneurs in platforms or fora initiated by RIU, they were exposed to new ideas, which may well have made some of them re-think their views about the ability of technology alone to bring about developmental benefits. Often these changes are the continuation of

processes initiated earlier and by different actors. Experiments worked with existing agents at different levels:

**Producer level.** Several experiments provided training and facilitation to existing producer groups, or individual producers, to enable them to operate more effectively, and to access inputs (including knowledge) and markets. FIPs in Kenya works with both farmer groups and individual farmers, providing training and advice. Also, membership of the commodity based innovation platforms formed under the CPs included already existing cooperatives that, through their membership of the platform, accessed inputs and markets. However, the role of RIU in developing the capacity at producer level has generally been relatively small, particularly in the area of process skills such as how to operate more effectively as a platform, as the emphasis has been on working with representatives and intermediaries.

**Intermediaries.** As described above, these agents have different roles, all related to supporting other players in the institutional system. Existing intermediaries include agricultural advisory services / extension staff, both from government departments and the private sector (e.g. input suppliers). Where incentives for intermediaries are linked to performance (and ideally with direct accountability to beneficiaries – whether at grassroots or higher level), there is perhaps a higher likelihood that these intermediaries will continue operating. Arguably, even the characters in Shujaaz comics (who deliver the agricultural ‘message’) are intermediaries – albeit virtual ones.

**National level.** RIU has also developed the capacity of existing national level agencies and organisations, such as agricultural advisory services and research. For example, in Nigeria ARCN has gained experience in working with platforms through RIU, and is now in a better position to implement regional guidelines (FARA / CORAF) on agricultural innovation; there are plans for each institute to adopt village for specific value chains. ARCN has studied RIUs approach very carefully, to learn from RIU how it is setting up and running innovation platforms in practice. It has commissioned studies into this. FIPs in Kenya contributed to increased capacity of agricultural extension staff (who interact with VGAAAs and learn from them about new crop varieties and technologies).

### Role of the private sector

The private sector can play an intermediary role by brokering the relationship between producers and e.g. researchers. Input dealers have an interest in farmers using improved seed, fertilizer and other agro-chemicals or equipment, and in several case studies (e.g. the potato platform Rwanda, FIPS Kenya, the aquaculture platform Nigeria) the private sector benefited from Rapid Demand Creation (RDC) resulting from producers’ exposure to and subsequent demand for improved inputs. In Nepal, RIU supported the establishment of Global Agritech Nepal Pvt Ltd, a private sector seed company working with CBSPs and promoting / implementing PVS and PPB. The aim of this enterprise is to fill a perceived gap in the innovation system between agricultural researchers, the private sector and farmers. However, private sector entrepreneurs are obviously not ‘neutral’ brokers and might not always have the trust of and credibility with smallholder producers.

The evaluation assessed whether private sector access to technologies/innovation and, more generally, private sector involvement in the agriculture sector increased as a result of RIU interventions. This depends on the **political economy**, including the macro- institutional context, the policy and regulatory environment, and whether the country is stable or in a post-conflict state. There is less scope for the private sector to engage in agriculture in for example Rwanda and Sierra Leone, compared to Nigeria; in Rwanda because of the policy context and in Sierra Leone because the private sector is generally weak. Both countries are in a

post-conflict state and it takes time for the private sector to recover and grow in these contexts. Meanwhile the policy context in Kenya favours private sector involvement in agricultural research for development, with increasing scope for private sector delivery of extension messages, and the two best bets case studies benefit from this.

## Conclusions

RIU supported both the emergence of new agents and the enhancement of capacity of existing ones. The new agents and mechanisms introduced generally had brokering and facilitation functions. Specifically the commodity platform approach, though not new, appears to have been an appropriate way to develop value chains and commercialise smallholder farming, so long as skilled facilitation is provided.

Brokers were initially paid by and accountable to RIU, but in some cases it is likely that incentives for these agents will eventually come from those whom they serve, i.e. via direct payment for their services by users. RIU also strengthened the capacity of existing agents, including producer groups, service providers and the private sector, through training and by exposing them to new opportunities and ways of thinking. These interventions were relatively limited in scale and scope, with limited institutionalisation.

While there are many promising and successful cases of agency development, the main concern is around sustainability, scalability and replicability. The RIU interventions were possibly too short for all involved to see tangible benefits from new or strengthened agency, and to let a real demand for intermediaries develop. In only a few cases were experiments able to institutionalise RIU approaches – e.g. by influencing government or other donor policies. There is therefore a high risk that the lessons from these ‘pilots’ will not be used for longer-term transformation change, in particular as it appears that the performance of RIU introduced or supported agents and individuals, and the contributions they made to wider institutional systems (of which the value chains are a part) were not systematically monitored and documented by the project. There was no systematic assessment of the costs and benefits of intermediaries, which makes it difficult to recommend this approach to other donors, national governments or indeed value chain actors.

### 3.2.2 Institutional change

#### Introduction

Institutions can be defined in the RIU context as the ‘rules of the game’ that determine the interactions between different players in the innovation process. The rationale behind the need for institutional change to enable innovation processes is the assumption that existing institutions are not adequate to promote pro-poor innovation, as they do not sufficiently support:

- an innovation-enabling regulatory and policy environment, and suitable ‘rules of the game’ for innovation;
- communication, coordination and building of trust between key actors (in particular between researchers, producers and the private sector);
- strengthening of capacity of less powerful stakeholder groups (in particular smallholder farmers).

This rationale was not explicitly included in the RIU design, but the CRT produced a document in July 2010<sup>244</sup>, which, among others, discussed ways of ‘reorganising the relationship between agricultural research and innovation’. So while this paper does not explicitly discuss institutional change, it proposes changes to relationships between key actors.

Different RIU modalities have put different degrees of emphasis on institutional change, with country programmes more explicitly aiming to change relationships between value chain actors, whereas the Best Bets and ICF did not specifically target institutional transformation. Based on the case study findings, it appears as though the main institutional changes brought about by the experiments fall into the following categories:

- Changes in roles and capacities of different actors in the institutional system – these have been covered in the previous section under “individuals and agency”;
- Changes in relationships and social capital between actors, including issues around partnership;
- Changes in systems, processes and ‘rules of the game’ (both formal and informal)

Unfortunately, none of these changes have been systematically monitored, documented and analysed at experimental level, or for RIU overall. Indeed it appears as though RIU did not attempt to monitor and understand what is happening in the ‘institutional cloud’ (as shown in Section 1 Figure 1), with the exception of the higher level, conceptual papers produced by the CRT.

### Changes in relationships

In particular the country programmes, and to a lesser extent the ‘Best Bets’, brought about changes in the way key stakeholders relate to each other – whom they know, how they communicate and interact, what types of transactions they undertake with each other etc. The main changes have occurred in the relationship between the private sector (including both commodity and input traders), producers and organisations, government agencies and research organisations. Activities contributing to this are the facilitation of interactions between these players, e.g. by organising meetings (at various level – local, district / region, and national), field days / study tours and visits, and resulting formal or informal transactions – mostly in relation to trade of inputs and commodities, and demand and provision of associated services and advice. For example, community-based seed production (CBSP) groups in Nepal have been introduced by the project to regional (government) seed laboratories, who quality control their seed, enabling them to sell it as ‘truthfully labeled’ or even ‘certified’. The CBSP groups have become more professional and market oriented, with better linkages to seed labs and to the market. The number of contracts between agrovets and seed producer groups is increasing). CBSPs also have links to banks now and take loans. They have better links to the agricultural development office.

Experience from Sierra Leone showed that the development of linkages through country platforms is an important mechanism that changes relationships between key actors, but this process takes time in order to build trust between actors. The view in Sierra Leone was that it is counterproductive to rush into partnerships; *“partnerships need to be explored and foundations built before they are formed – premature formalisation could be chaotic and not lead to mutual benefit”*.

<sup>244</sup> <http://www.researchintouse.com/resources/riu1008invest-relationship-hall-dijkman-sulaiman.pdf>

The case studies provided several cases where linkages with other aid donors (besides DFID) and RIU implementing staff / partners existed – but generally the aim of these relationships were to obtain further funding for upscaling or outscaling (or indeed continuing – after the end of the RIU programme) of activities, and not to influence these donors to take on board lessons learnt from the respective experiment. For example, in Nepal, the project-implementing NGOs, together with UK-based scientists, applied for EC funding for activities complementary to those of the RIU experiment. It would probably be overambitious to aim to influence the EC framework programme for research (FP7).

### Changes in systems, processes and rules

Often as a result of increased capacities and changes in relationships, changes in ‘the way things are done’ have occurred at different levels. This includes the formalisation of some processes (e.g. seed certification and labeling, trade transactions), the introduction of new systems for quality control, communication, and access to finance. It also includes the development of new institutions (and in some cases, new organisations), and processes of de-centralisation as in the story of PAID (Box 3)

#### Box 3: The evolution of Sierra Leone’s Partnership in Agricultural Innovation for Development (PAID).

When PAID the general assembly of all members nominated a steering committee which later became a Board of Directors. PAID is registered as a limited (membership company). Over time the Board voted for PAID having a full time National Coordinator, funded increasingly from membership dues. District Coordination teams made up of volunteers started up at first in the districts where the platform are active and spread to ten of the thirteen districts in the country. Some of these platformse have evolved into commodity platform executive committees and these are in the process of developing business plans. Membership is varied and includes NGO and CBO representation with some committee meeting weekly.

A significant change has been the formalisation of the status of key agents such as PAID in Sierra Leone (which is now registered as a limited company); the PAID district platform committees (also in Sierra Leone) and the registration of CBSP groups in Nepal. (Some) CBSPs have evolved and are technically, financially and socially transformed – to the extent that they got registered as cooperatives. In many cases a formal legal status of an agency is a prerequisite for having formal transactions, e.g. trade transactions. In other cases, membership to a recognised forum (e.g. the potato platform in Rwanda) gives credibility to members, which acts as an incentive to e.g. credit agencies lending to them.

Last, but not least, RIU has induced changes in attitudes of private sector agro-input producers and dealers. For example, in Kenya input dealers now recognise the benefits from distributing inputs in small quantities, while ARM (fertiliser firm) now produce different types of more balanced fertiliser.

### Changes in private sector engagement

A key parameter influencing the ‘rules of the game’ is the extent of private sector involvement or interest in engaging in innovation processes. This tends to be greater where the commodity has commercial value: e.g. aquaculture in Nigeria. In Rwanda RIUs support of the cassava platform has led to cassava (and cassava

cutting) production being seen as having commercial, in addition to subsistence, value – opening doors for private sector processors and traders.

Private sector access to and involvement in production of technologies/innovations appears to be greater for sectors which have traditionally not been the focus of government policy e.g. the aquaculture platform in Nigeria – the government has general policies related to fisheries, but wild capture has become less important and fish farming has really grown in recent years, particularly post bird flu when many poultry producers switched to fish farming. This commercial opportunity has not been missed by private sector investors who are engaging not only in input (fish feed, fingerling) provision but also in aquaculture research concerning production and processing.

Nigeria's aquaculture platform successfully brought together government and private sector stakeholders, building trust. Both are already engaged in research, but they are more willing to share what they are doing and collaborate. New brokers have emerged as a result of RIU facilitating links between research organisations and the private sector, as shown in the case study in Box 4 below, who promote new technologies, while benefiting from expanding markets for advisory services.

#### **Box 4: Ali Leonard Ibrahim – an entrepreneur and broker in fish farming**

Ali Leonard Ibrahim was previously a member of the Nigerian military. He voluntarily retired from the army, and went through the army orientation camp for civilian life. This orientation aroused his interest in fish farming. He went to study aquaculture and acquired a certificate or diploma in Aquaculture in 2003/2004. By 2006 he had registered Ojodu farms and started a fish farming business. He has a hatchery and provides fingerlings for sale to fish farmers and information and consulting on Aquaculture. He also produces and sells table sized catfish.

Ali received an invitation from RIU in 2009 to participate in the inauguration of the aquaculture platform. At the meeting, he was exposed to new technologies in fish farming. For the first time he met fish scientists from the research stations and learned about new ways of drying and processing fish. In 2009, he participated in a second RIU organised workshop in Zaria. He met different value chain actors and established new contacts. Through the meeting he became aware of new technologies, which he was able to transfer to the field. He now has two fish farms and provides inputs, information and consulting services across 5-6 states.

Ali's company advertises its products and sells to the open market, middle men, and bulk processors. He has been providing around 600 fish farmers with information about quality farming. He has helped farmers to form a marketing association in order not to be exploited by middlemen, and he links farmers with retail buyers.

Private sector involvement varies by RIU modality, with the Best Bets specifically focused on this (and the cases examined are led by the private sector). In FIPS the private sector is both the source and the user of innovation, with FIPS sourcing inputs from mining companies and private (as well as government) seed producers, and village based advisers generating an income from sale of these products. The private company Well Told Story produces and delivers the Shujaaz comics and radio shows, sourcing support and

funding from government, donors and the private sector. Again, as mentioned above, these initiatives are taking place in a favourable policy environment.

### Supply and demand

The emphasis of most RIU experiments was on ‘facilitation’, with the interventions aiming to mobilize partners to provide inputs and services to those who need them (e.g. credit to farmers) without project investments. The platform strategy was crucial in providing a mechanism to articulate demand for and supply of required goods and services. By bring different stakeholder together around the table, the platform enabled the identification of gaps and inefficiencies in markets, and provided incentives for collaboration and coordination.

However, RIUs investment in stimulating demand has not always led to a corresponding increase in supply. For example, in the AID-Comilla rodent control ICF experiment in Bangladesh the demand for improved rodent traps far exceeds supply and no commercial entity has picked up on this opportunity. In the case of Shujaaz Best Bet, some of the agricultural stories have stimulated demand for e.g. pheromone traps and for particular varieties of sweet potato, but these have not been locally available. FIPs introduced farmers to hybrid seed and fertiliser, to which the same applies. If these initiatives had been in a country programme context, the whole value chain would have been analysed and comprehensive efforts made to identify and address all the barriers, or weaknesses in the value chain. But Best Bets are focused on specific interventions and cannot be expected to address all elements of an innovation system.

### Conclusions

RIU experiments brought about wide-ranging, and in some cases potentially long-lasting, institutional changes. These manifested themselves through changes in relationships of key actors and agents, in particular between producers, the private sector, government agencies and research institutes. Through brokering and facilitation, RIU supported intermediaries were able to also influence the regularisation of agents and their organisations, which contributes to their legitimacy and good governance. The engagement of the private sector as a key player in value chains has generally increased, with RIU brokerage creating new ways of communication and coordination between the private sector and other value chain actors. Some experiments have increased the demand for specific technologies or for innovation as an ongoing process, but it is too early to see whether these demands will be met in the long term by the new configuration of players.

Again these changes have not been systematically monitored, documented and shared by RIU, nor has there been any exchange between experiments on institutional change aspects. This is a missed opportunity, which might contribute to reduced sustainability of these changes.

## 3.2.3 Influence

### Introduction and policy context

Influencing national level agricultural policies was not an explicit objective of RIU, perhaps recognising that this would require a longer term engagement, and possibly more resources for systematic compilation of

evidence. Not surprisingly, there is overall little evidence that RIU experiments directly influenced national research and innovation priorities and policies. However, there are some examples where RIU has had an influence at sub-sector or sub-national (e.g. district) level.

Policy change is difficult to attribute to external / project interventions, even where changing policies was an articulated component or objective of an experiment. Where RIU followed directly from RNRRS, as in the case of the ICF, it is impossible to separate the awareness raising (among national and local decision makers) and advocacy work (e.g. for participatory plant breeding and participatory variety selection in Nepal, or ecologically sound rodent control in Bangladesh) undertaken during RNRRS and related projects, from the interventions under RIU. In Nepal, the 2008 amendment to the seed act (enabling public private partnerships in the seed sector) was influenced by donors, using evidence from research and development initiatives (including RNRRS and CGIAR), which had exerted some policy influence through advocacy for PPB, PVS and the role of CBSP. The RIU project benefited from this opportunity, rather than creating it.

Similarly, in Bangladesh previous DFID supported research and development initiatives (including RNRRS and PETRRA) had exerted some influence on the Department of Agricultural Extension's rodent control programmes through advocacy for ecologically sound rodent control.

### Policy context and RIU fit with existing policies and programmes

Overall RIU experimented attempted to fit with (or at least not contradict) national agricultural policies, while exerting an influence on institutional systems (as discussed in the previous section on institutional change). As agricultural policies are not always supportive of extensive private sector engagement in agriculture, and of farmers making demands on government agencies for efficient and effective service delivery, this meant that de facto RIU was often in a position where it kept a low profile nationally, but used its influence at the sub-national level (e.g. district) or sub-sector level (e.g. input supply).

In Africa, national CAADP compacts are meant to provide a framework for ARD interventions, but as these frameworks are still under preparation or have only recently been agreed, RIU was not able to build on them during the programme design phase. There were, however, examples of effective linkages with CAADP players at national level. In Nigeria, the platform approach was perceived to be very much in line with the CORAF/WECARD (and FARA) approach, under CAADP. In Sierra Leone, RIU is not operating in line with Government policy in that it is giving fee inputs (albeit in such small quantities as to be insignificant). However RIUs work in Sierra Leone engaging agricultural sector stakeholders in a different way through the PAID and prior to the CAADP country compact process was believed to have paved the way for the country compact process itself.

Other examples of policy engagement include Rwanda, where RIU produced a paper on its alignment with national agricultural and rural development strategies, in an attempt to work with and support national policies. RIU in Sierra Leone worked with SLARI on a proposal to seek funding for the development of an agricultural extension policy for SL.

Besides the policy context, all case study countries have a range of development interventions, funded by national governments, donors, NGOs or the private sector. These also contribute to institutional change – sometimes into the same 'direction' as those by RIU. Some of these are operating with significantly larger budgets and time frames than RIU (e.g. CIP in Rwanda, SCP in Sierra Leone), justifying significantly higher expectations from stakeholders in terms of actual impact on rural poverty. In Sierra Leone, there are no formal links between the poultry platform and the smallholder commercialisation programme (SCP), as the

programme does not prioritise poultry. SCP management were sceptical about RIU, as they perceived its role to be that of a development project with a small budget. Being measured against these players has sometimes been a challenge, in particular where national partners and stakeholders were not or insufficiently aware of the lesson learning / research role of RIU.

In Kenya, the system set up by FIPS runs parallel to already institutionalised government systems and does not work in close cooperation with NGOs operating in the area. However, other agencies such as AGRA, USAID, CIP and the Rockefeller organisation are working with FIPS. FIPs, with their support, may be in a position to maintain, and even replicate and scale out its activities. The evaluation only looked at FIPs in Kenya - in Tanzania FIPS has better linkages with the Ministry of Agriculture than in Kenya. Ways of operating in each country are adapted to fit with the national agriculture sector context.

In Rwanda, there have been other organisations that work in the potato sector such as IFDC, who are in contact with RIU regarding value chain development. There is an exchange of experiences and learning. IFDC, as RIU, has to 'fit' with the Rwandan Crop Intensification Programme (CIP), which started in September 2007 (during the same period as RIU). CIP priority crops are cassava, Irish potato, maize, wheat, beans and bananas, so including the two platform commodities.

RIU partners have not generally been able to influence the design of new development projects. For example, whilst the Participatory Crop Intensification Project lead in Nepal (PI) is much respected by both government departments and donors in Nepal for his expertise on CBSP, he had not been consulted on new seed multiplication programmes / project components designed by other donors (e.g. WB).

### Changes in policies – present and future

In particular in the ICF projects, which did not have an explicit 'mandate' to bring about policy change, there were probably a number of missed opportunities. Because of the project 'mode' of the ICF, experiments focused on delivering whatever outputs their logframe demanded, rather than make use of opportunities to influence 'the rules of the game'. For example, in Bangladesh the rodent control project undertook some awareness raising and training of government staff under the RNRRS, and extension staff in the RIU intervention villages attended rodent control training sessions. However, no institutional changes (e.g. changes to the national rodent control campaign) were planned or implemented in DAE as a result of the project.

Examples from Africa include Sierra Leone, where RIU undertook a policy study regarding importation of poultry feeds and chicks and was able to draw attention to disability as an issue to be considered. In Nigeria, RIU has taken up policy issues with the Government on occasions where the platforms have been affected - for example, when a liberalisation of the law regarding importation of vegetable oils had a negative impact on the outputs of the soybean platform, or when there was a discontinuation of the regulation that 15% of all baked products should be made up of cassava, not wheat flour, and this affected the cassava platform. However, RIU was not able in both cases to exert its influence – which is not surprising, considering that RIU is a minor player in Nigeria with its many lobby groups.

RIU has been able to change some systems and regulations through advocacy and by working with regulatory bodies. For example, in Nigeria RIU has been working with the Federal Department of Fisheries in supporting the development of standardisation and certification guidelines for the production of fingerlings and management of fish farms. In Kenya, as a result of FIPs advocacy, KEPHIS (the Kenyan certification authority) has started certifying small quantities of seed (e.g. 5kg potatoes – CIP).

In the case of the ICF, inputs and investments were focused on a very limited, project-defined range of direct and indirect beneficiaries. While this was in line with the project aims and objectives, it resulted in limited scope for sustainable impact, as the *status quo* in terms of relationships between value chain actors was not challenged. It is not possible to say whether ICF projects, by making a concerted effort to influence (e.g. government and private sector) policies and practice in order to outscale their innovation model (e.g. seed production through Community Based Seed Producers – CBSPs), could have succeeded, as the two experiments visited did not strategically engage with policy makers.

The web survey showed that RIU contributed to policy changes in non-case study countries. For example, in Malawi there have been policy changes related to Certification of fingerling production and fish production using monosex (Fisheries) and changing regulation to allow farmers to participate in production of certified seed of open pollinated varieties of legumes (Legume platform). This was done after the platforms identified these as policy bottlenecks to improvement of the respective sectors and these issues were taken up with government with one platform voice hence the adoption.

In Zambia, RIU interventions of conservation agriculture innovation platforms are key strategies that the ministry wants to use to coordinate conservation agriculture, in order to complement its policy on CA. RIUZ is currently engaging the Ministry focal point person on CA, who is interested in ensuring that the IP system is replicated to other parts of the country.

Examples from Best Bets include recognition of new technologies by government agencies. In Kenya and Tanzania, governments have included community based armyworm forecasting (CBAF) activities in the budget projections for the upcoming financial year. In Ghana, EPA is reviewing their registration process relating to bio-pesticide registration. In Uganda, the experiment contributed to strengthening the policy to treat zoonotic sleeping sickness from a different angle.

Some ICF projects also contributed to policy change. In Nepal, the Participatory Market Chain Approach was successfully piloted and tested in Nepal and has been endorsed as part of the Government of Nepal planning mechanisms working through the Department of Agriculture marketing Directorate. In Vietnam, the provincial government in Hai Duong has incorporated local varieties of rice in their new agricultural development strategy as a result of ICUC advocacy.

## Conclusions

RIU was not designed with a major policy influencing function, and this is confirmed by the evaluation findings. While in some cases opportunities to influence policy were recognised and made use of, the focus was overall on achieving ‘fit’ with national policies by identifying and filling a ‘niche’. There is an inherent contradiction between expectations for RIU to influence policy and expectations of harmonising approaches and interventions with existing policies – in particular if these are high level endorsed frameworks such as CAADP.

The main lesson appears to be that effective policy influencing would have required a different approach, with longer term in-country engagement and more focus on the generation of evidence that responds to policy needs. In particular where experiments were largely supply driven (by the drive to promote specific technologies), there was little space for ‘smart operators’ to scan the policy horizon and identify demand and opportunities for interventions that RIU could deliver.

## 4. General Conclusions and Lessons Learned

How research is effectively put into use is a key concern not only to RIU and DFID but to all those concerned with furthering the agriculture sector. This report has reviewed the ways in which the RIU programme has tried out different ways of putting research into use in different agro-ecological and socio-political contexts across Africa and Asia. It has explored these from an institutional perspective drawing on an analytical framework which identifies six institutional elements that have relevance to getting research into use.

From the findings recorded here it can be concluded that a combination of instrumental and transformative change elements are required, with transformative elements such as changes in the capacity of individuals and agency, and changes in institutions being critical to sustainability.

The main changes that the RIU programme effected in the instrumental arena were availing inputs, technologies and services to farmers in ways that reduced risk to the farmers in trying out these new technologies. In these ways RIU chose safe, tried and tested entry points. Changes in the transformative area included enabling and building the capacity of individual men and women and their agencies to take on a brokerage role, and changing the ways in which value chain stakeholders relate to, have access to, and partner with each other.

RIU had relatively little impact on policy change and indeed took a conservative approach to this with little evidence of it seeking to position itself to be able to promote radical policy change. Further it did not make significant efforts to connect its activities with those being supported by other large donor funded projects and programmes neither was there much evidence that commodity platforms were informed by cost-benefit, market, or livelihood baselines or analysis nor any wider political economy analysis.

Five key lessons emerge from this study

### 1. Positioning

Putting research into use effectively requires a good understanding of national policy opportunities, priorities and constraints at the national level as well as an understanding of the opportunities and barriers at the value chain level. It is vital that any such initiatives are aware of, and keep up, with other government, donor funded and private sector programmes in the sector.

### 2. Choice of entry point

In a research project that concerns learning about how to put research into use it is critical that strategic choices are made concerning entry point, so as to ensure greatest leverage. The majority of the experiments reviewed chose provision of incentives combined with brokerage as the key entry point, combined with some degree of change in agency and institutions. However, in some cases a more appropriate entry point, especially considering the limited funds per country, may have been to seek to influence and bring about change through working at the policy and regulatory level.

### 3. Role of brokerage

Brokerage was a key entry point for most of the RIU experiments combined with changing the incentive structure. The case studies provided evidence that introducing or strengthening the

intermediary/brokerage role of individuals and agencies leads to a change in the institutional system, catalysing new relationships between stakeholders and stakeholder groups. From the study it is clear that brokerage at different levels – national and platform/commodity – has synergistic effects, with the former bringing about buy-in at the political level and the latter significantly changing relations between value chain holders. Furthermore, RIU experiments have shown that this synergy also exists vertically – with enhanced access of district level stakeholders to national level scientists, private sector bodies and decision makers, and membership of commodity platforms enhancing the purpose and activities of national level brokered relationships for example in Sierra Leone. The study also showed the relevance and effectiveness of different types of brokerage ranging from the more formal approaches seen in the country programmes to the more entrepreneurial, informal and dynamic approaches seen in the Best Bet experiments.

#### 4. Policy alignment and influencing

RIUs influence on policy was, as mentioned above, fairly minimal in the countries visited. The evaluation found several reasons for this that provide lessons for any similar project in future. To have a voice and to have influence it is important to build strategic networks and alliances with large agriculture sector programmes – with the Government departments responsible for these and with the major donors. In this case most country programmes had little or no contact even with DFID in-country representation and links with the World Bank, USAID, and other large donors were minimal.

#### 5. Sustainability considerations

Sustainability is always an issue in time-constrained donor funded initiatives. This is particularly the case where a major focus is on building multiple-stakeholder platforms that thrive only once trust is built within and between stakeholder groups. Many RIU experiments have only been running for a 1-3 years, and there was strong evidence that the transformations brought about through having platforms and coalitions – the new institutional architecture – are not strong enough yet to survive once RIU funding ceases, especially where RIU has been covering the costs for platform members to attend meetings. Where a commodity has clear commercial value then it is more likely that the activities initiated or catalysed by RIU will continue, but it is not clear to what extent the commercial viability of each commodity has actually been assessed – value chain initiatives will only continue if, indeed, there is enough value in the chain.

# Annex 10

## Household Survey: Method and Results

v. 02-May 2011

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## 1 REASONS FOR THE HOUSEHOLD SURVEY

### Data availability:

It was clear early in the evaluation that, whilst the availability of data differed considerably amongst the RIU activities, it was generally limited.

As noted elsewhere in the evaluation report, although the RIU began with strong ambitions for collecting and analysing data through the MIL, the CRT took over in Phase II and had a different approach<sup>245</sup>. Even under Phase I the premature ending of the MIL meant that the level of data collection and analysis activities never achieved their planned potential.

The process information necessary for reporting has been gathered by all the activities, but the collection of substantive baseline and monitoring data that could be used for lesson learning and the measurement of impact has been much more uneven. Most of the Country Programmes have been weak in this area, with one or two exceptions. The Best Bets were also left to themselves and only one has made a systematic effort to establish baselines and monitor progress.

The presence of data in the ACF activities, supported as they were by academic institutions, has been generally stronger. Outside of Asia, however, apart from the case of the Best Bet exception noted<sup>246</sup>, information at the level of target beneficiaries is particularly weak.

An effective economic analysis of impact is therefore precluded by the lack of baseline data,. Even if it had been collected, of course, useful analysis would have been hampered by the relatively short period during which the Project has been active in the field.

Whilst the data issue could not be resolved by the Evaluation, it was considered important to obtain some evidence of the experience that direct beneficiaries have had with the Project.

This could be obtained to some extent through focus group discussions, but it was also decided to carry out a limited survey of individual households that would include representatives of different types of beneficiaries, including those often not invited to focus group discussions.

### Aim:

The main aims of the household survey were to gain an understanding of:

- some of the reasons why households take up innovations.
- what sort of effect the innovations have on their families when they do take them up.

The approach and limitations of the survey as described below limit the extent to which any conclusions can be generalised. The objective was therefore more to aid understanding and point out directions for future than to come to firm conclusions and make recommendations.

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<sup>245</sup> These issues are discussed in the Quality of Science annex of this report as well as in John Wyeth Research Into Use. "Impact Evaluation: Method Options & Approach Issues"

<sup>246</sup> The exception is FIPS-Africa, which has established a solid system for collecting baseline data from the farmers it works with as well as follow up surveys that allow it to learn lessons and establish impact.

## 2 METHOD

### **General approach:**

The variation amongst the activities of the RIU made it necessary to design a questionnaire that would be general enough to provide information that could be compared across them but specific enough to be significant. It was decided to avoid quantitative data that would be difficult to analyse across activities. Instead a questionnaire was developed that is based almost entirely on open questions providing qualitative information.

As a result it was never the intention to look for statistical rigour that would allow generalisations, but to gain an impression of why households were interested in taking part in the activities and the sorts of changes that taking up the innovations were having at household level.

### **Coverage:**

Again because of the wide variation amongst the RIU activities, it was considered desirable to carry out the survey over as many activities as time and funding would allow.

In the event the survey could be applied only to three RIU experiments, one chosen from each of the main regions where RIU works: East and West Africa and Asia, with limited application in a fourth country. The ones initially selected were the Potato Innovation Platform in Rwanda, the PCI programme headed by FORWARD in Nepal and the Poultry Innovation Platform in Sierra Leone.

Later, the lack of a Best Bet and other practical issues led to the substitution of FIPS-Africa in Kenya for Rwanda, although some data already existed from Rwanda where the questionnaire had been trialed, and these data have been included in the analysis where possible.

### **Data type:**

A quantitative approach based on baselines would have covered both economic (crop yield, income, physical and economic assets etc.) and social (consumption patterns, social assets etc.) issues. The qualitative survey actually carried out approached the same topics but in different ways: looking for the opinions of the households involved and concentrating on the two specific topics mentioned: reasons the households had for taking part (adoption motivation), and the effects that adoption has had on the families involved.

In both cases it was accepted that responses would be subjective and rely on memory and interpretation. Questions had to be answerable by respondents involved in any of the activities, so they were open questions and non-specific.

### **Questionnaire design and application:**

Since the survey was to cover several different types of activity a questionnaire was designed that would not be too dependent on the nature of the activity. In this way it was hoped that it would be possible to compare answers across the activities.

**General approach:**

In order to minimise travel, supervision and other costs the surveys were carried out concurrently with the general field visits of the evaluation teams.

In each of the activities chosen, three enumerators were used, usually recent agricultural or rural development graduates from local universities. One was always female. They were given training for one full day and then taken to the field to carry out interviews for three days. This made it possible to collect responses from between 36 and 46 respondents for each activity. A total of 125 questionnaires were completed.

**Choice of respondents:**

As noted, the restricted sampling design and nature of the questions precluded statistical rigour. The objective was simply to solicit field opinions across as wide a variety of the target population as possible. Sampling was therefore purposive, and as follows.

For each activity a location was chosen using criteria that included practicality and subjective decisions about representativeness. An attempt was made to avoid locations that had responded either very well or very poorly to activity intervention. Within the chosen locations respondents were selected to represent:

- **Poverty levels:** No quantitative wealth or income data were collected. Proxy variables included variables such as house construction material, land area used, caste and so on. In addition the enumerators were asked to make a judgement of the relative poverty of the respondents compared with their neighbours and (later on) the respondents were also asked how they viewed themselves when compared with their neighbours.

Each of the proxy variables had different levels of importance in different cultures. For example: in some places the area of land to which the respondent had access was closely related to poverty whilst in others (Sierra Leone) many respondents, poor and better-off, had access to more land than they could use. In this case proxies included labour, resources to buy inputs and access to markets. Similarly: caste and ethnicity were more clearly related to status and poverty in Nepal than in the other case studies.

- **Performance as farmers with RIU activities.** An attempt was made to include farmers who had done poorly as well as those that had done well (which the activity staff was more likely to steer us towards).
- **Attitudes to RIU activities.** This was a purely subjective criterion. The initial choice was made on the advice of the local staff member and the enumerators were then asked to make their own assessment of attitude on the basis of the answers they had received in the interviews. And, as in all other criteria, questions were then included in the survey to find out the view of the household on this matter.
- **Disadvantaged groups, particularly female headed households (defined as households without an active male), low caste members and poor people.**

In most cases only one of these were important, although in some places it was possible to find both low caste and female headed households

In each case the criteria were shared with the staff of the RIU activity and for the first day or so their choice of respondents were accepted. A record was kept of the categories fulfilled by the respondents chosen and in later days a more active role was taken by the supervisor to ensure that neglected categories were included.

In all cases the interview was conducted only by the enumerator with the respondent, including members of the respondent's family if desired. From the outset, care was always taken to exclude staff from the RIU activity or anyone else who might complicate the respondent's perception about who they were talking to. This rule was strictly applied because it had been noted that it was not always easy to comply with it during the focus group discussions in the rest of the evaluation investigations.

### The Questionnaire

It has already been explained that the survey did not aim to correct for the lack of baseline data and no attempt was made to collect systematic quantitative data. Instead the option chosen was to elicit opinion at the level of target beneficiaries.

Furthermore, because of the geographical, social, ethnic, cultural and economic variety of the target groups across all of the RIU activities, multiple choice questions were avoided and the questionnaire relied almost entirely on open questions that allowed the respondents to express themselves in their own way. This approach made analysis more difficult but it did provide the flexibility needed for the diversity faced by the evaluation.

The full questionnaire is provided at the end of this annex and Table 1 provides a schematic summary of the information it was designed to collect.

**Table 1: Design of Questionnaire**

Data category	Questions	Information collected
Household identification	<b>Section A: Respondent Characteristics</b> 7	HH identification
	<b>Section B: Household Characteristics</b> 8	HH classifying characteristics: poverty, ethnicity, gender.
Adoption	<b>Section C: Reasons for Adoption</b> 11	Why households adopt
	<b>Section D: Reasons for Non-adoption</b> 5	
Effects on households	<b>Section E: Impact of Adoption</b> 24	
	Income	Effect on income flow
	Physical	Effect on Livelihood Assets (including extra social livelihoods assets)
	Human	
	Natural Assets	
	Financial Assets	
	Social Assets	
	<b>Section F: Uses of the Benefits</b> 6	Details on how benefits used to impact consumption or livelihoods
	Cash	
	Nutrition	
<b>Section G: Informational</b> 5		
Design and implementation of the		

Data category	Questions	Information collected
	programme	Effect on DFID empowerment assets
	Information from the Innovation	
	Section H: Aspirations 6	

72 121

The first two sections of the questionnaire (A and B) collected identifying and classification data about the household. The following two (C & D) investigated the adoption (or non-adoption) motivations of the respondents whilst the final ones (E to H) asked them about the effect participation had on their lives, including the impact on the various types of livelihoods assets in addition to income and how it is spent.

No prompts were given in most questions in order to avoid leading to answers. Instead it was hoped to gather what issues came to mind when the open question was asked, even though it was recognised that many of the other options might also have been agreed with.

### 3 APPROACH TO DATA ANALYSIS

#### Analytical Methods

The questionnaires were analysed with the assistance of the qualitative software package NVivo. This permitted combining information from the questionnaires with information from other sources, in particular the semi-structured interview activities of the evaluation, and it made it possible to study the relationships discussed in Section 4 below.

#### Construction of variables and derived variables

As explained above: open questions were used so that the questionnaire could collect information across a wide variety of activities and cultures. However, a useful analysis that makes comparisons across the activities and cultures requires some degree of standardisation of responses.

After they had been gathered, therefore, the key responses were coded into scaled analytical variables. Multiple responses generally had to be used for this coding. For some variables this was because, as pointed out in the last section, issues related to the productive environment as well as cultural meant that different variables had different implications for different activities.

In addition, some proxies referring to variables, such as those relating to attitude or performance level, were subjective and it was necessary for responses to be supported by the answers to other questions. Various proxies therefore had to be combined to provide standardised derived variables that could be used for comparisons. Questions were designed specifically with this approach in mind, although the open nature of the questionnaire meant that clues about appropriate coding also appeared in the answers to other questions.

Table 2 indicates the variables chosen for the analysis, how they were constructed from the survey responses and what the scaled coding levels were for each variable:

The coding for questions that solicited opinions was not preset but was developed only *after* a review of those opinions. This applied particularly to questions about:

- attitude,

- ▶ motivation for adoption
- ▶ aspirations and
- ▶ impact

Hence, the types of attitude encountered themselves suggested the ways in which the answers were categorised. Similarly, patterns were found in the answers to questions about what convinced the farmers to adopt the innovations and these were used to establish the code categories for motivations. Answers to questions about Aspirations and Impact also proved to follow patterns that will be described below, and these formed the basis for the coding of those questions.

### Issues relating to specific variables:

A number of points need to be made that affect the interpretation of some of the variables.

- **Expectations:** No variable is included to record the direct answer to the question in the survey about whether expectations have been met because many respondents felt it was too early to say. Instead, the wider variable about attitude toward the RIU was substituted.

**Table 2: Construction of Analytical Variables from Household Survey Questions**

Target variable	Data Sources	Coding levels/Response scales
Poverty	General comments B04 land access B6 crop types B07 animals (numbers/size/use) /B3/B1 labour to HH size ratio /A07a ethnicity / Caste /X1 wall material /X2 roof material /X3 poverty self assessed /EA well being	better-off average poor
Attitude in general (self satisfaction)	General comments EA28 attitude H1 future vision	optimistic neutral pessimistic
Attitude to RIU	General comments C4 expectations met C6 disadvantages G4 complaint mechanism & use H2 changed vision H4 if RIU helped move up ladder	positive negative acquisitive neutral tried & rejected unaware
Performance	EA24/26 performance C3 benefits received H4 RIU change to aspirations	high achiever average loser
Adoption motivation / pressures	C1 source of initial information C2 what is new C5 what convinced	material inputs training better productivity available labour surplus social benefits
Aspirations	H1 aspirations / vision	educate children improve nutrition (qual/quant) financial improvements acquire assets

Target variable	Data Sources	Coding levels/Response scales
		improve skills better / bigger at agriculture leave agriculture get more help apple pie - general improvements
Female HH	A6/A7 female / head EA27 female HH	female male
Impact	E1 income received & form E2 physical assets received E5 / E7 training E22 new activities G5 information gained	production increase cash income consumption increase knowledge acquired assets improved wider social network tried & rejected none sustainability intent

- **Attitudes toward RIU:** It has been explained that RIU staff and supervisory personnel were always kept away from the interviews. Nevertheless, it was understood, and sometimes clear from the way answers were given, that respondents often saw the enumerator as a representative of the Project and thought that being positive toward RIU might pay dividends. In fact, even where respondents were negative it sometimes appeared that they were wanting to make a point *to* the Project rather than just *about* it.

It should be noted also that assigning a positive grade to RIU does not imply that the respondent had no problem with RIU. Late arrival of seeds was a relatively frequent complaint amongst respondents who still wanted to show a positive attitude. Also, some respondents were positive without having done well because they recognised that some problems they had were outside of RIU control, such as poor weather or soils.

- **Sustainability and incentives.** Although the survey included questions designed to find out whether the respondents intended to continue the activity of the innovation after the initial incentives were over, this turned out to be quite a difficult question to deal with. Even though the questions were intended to refer to sustainability in the absence of incentives, some respondents wanted to lobby for continuation and were keen to show that they would like to continue to participate in the programme with incentives intact.
- **Adoption.** "Adoption motivation" refers to what led the respondent to try out the technology in the first place. Whether the respondent continued to be an adopter by retaining the technology after the event is more complicated, however, because a farmer might take on a new crop variety, for example, only for a season or as long as an incentive lasts, then revert to previous practice. The question then arises whether he should be regarded as an "adopter" or a "non adopter". In other words a "non adopter" can be someone who has never tried, or someone who has tried but has lapsed or rejected the new technology. The RIU has not existed for long enough for an empirical investigation of this issue and no attempt has been made to deal with it a priori.
- **Incentives:** Different RIU activities have offered a variety of incentives. Although a potentially important issue, the study was not able to classify them or distinguish the

respective strengths, implications and problems of the alternatives. Neither did it investigate what effect the nature of the incentive might have on adoption or sustainability.

## 4 RESULTS

Results from the data collected are reported in what follows. The analysis focuses on the two main questions about adoption motivation and effect on the family. However there is a brief initial overview of the characteristics of the respondents that have a bearing on later analysis appears in the next sub section, and general conclusions are drawn in the final one.

### 4.1 Respondent Characteristics

#### Headlines on respondent characteristics:

- There was a slight tendency for female headed households to be poorer than male headed households, but it was not strong, and there were some female headed households that were better-off.
- Poor households were much more likely to perform less well with the innovation and have a more pessimistic outlook than better-off ones.

The information collected that describes characteristics of the respondent households was mainly directed at livelihood status: how much land they had, what animals they had, what they regarded as their main occupation, and so on.

The main descriptive characteristic analysed from the data was poverty. The respondents were divided into three wealth groups but, as pointed out above, because of the different conditions in the different countries and cultures, this was done through proxy variables rather than with quantitative variables. The poverty referred to is therefore relative poverty within each work area.

In total 26% of the sample households were in the better-off group, 39% in the average group and 45% were relatively poor. It should be emphasised, however, that this was a purposive sample and the figures say nothing about the population. The intention was to get a sufficient number in each group to see if there were patterns in the opinions of each group. In addition, of course, nothing is said about whether poverty was generally greater in one or another of the countries.

A particular effort was made to target female headed households<sup>247</sup> in order to find out whether this had an effect on poverty. These were interviewed by a female enumerator and they made up about 25% of the sample<sup>248</sup>.

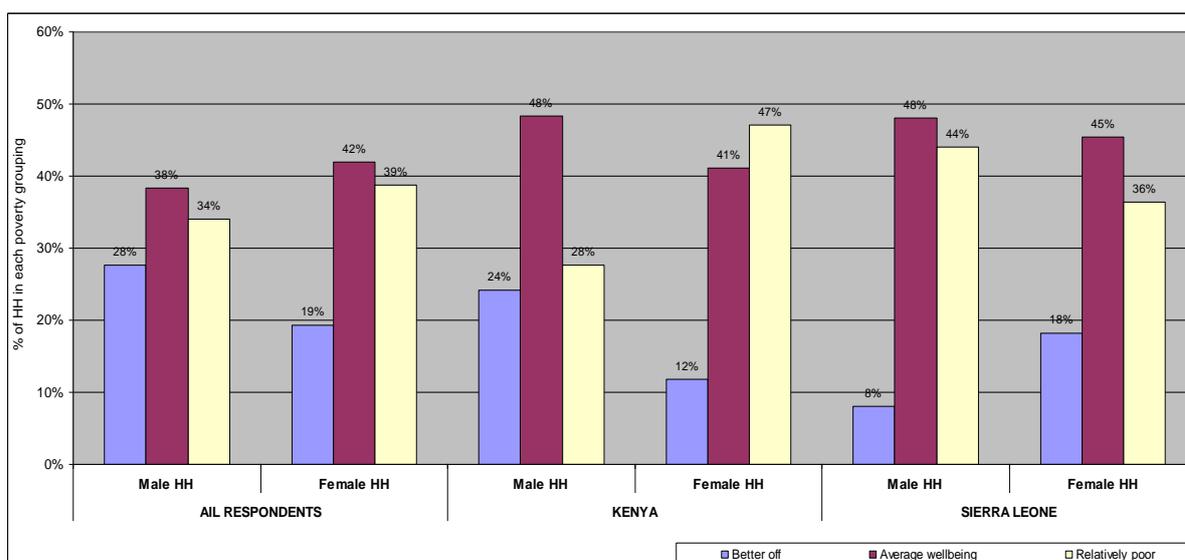
<sup>247</sup> defined as a household where there was effectively no man. Often this was because the woman was a widow - either a mother or a grandmother of the children - but it could also be because the husband was incapacitated, or absent for a long period.

<sup>248</sup> Again, of course, since they were targeted this says nothing about the proportion of female headed households in the population.

Nepal was slightly different from the other cases because caste appeared to be the outstanding general indicator of poverty and the survey made more of an effort to target low caste respondents than female headed households.

The derived poverty variable was compared with several other variables to see whether there were any obvious relationships. No statistical tests were carried out, of course, and the comparison was a visual one. So the relationship had to be strong enough to see if it was to be regarded as interesting. The following relationships were noted as being significant later in the analysis.

**Fig 1: Comparison of poverty levels between male and female headed households**



- **Poverty and gender of household head**

Across the full sample about the same proportion of male and female headed households (38% and 42% respectively - see Figure 1<sup>249</sup>) were classified as having average wellbeing. However, of those that were not average, only about a third of the female headed households were better-off, and two thirds were relatively poor, whereas 45% of the rest of the male headed households were richer and 55% poorer.

<sup>249</sup> Note that most graphs in this annex show both overall data and data disaggregated by country (and hence activity). Figure 1 does not because, as explained in the text, caste seemed to be more important than gender in Nepal and too few female headed households were interviewed to allow an impression to be gained of their situation..

There was therefore a slight tendency overall for female headed households to be poorer. This tendency was not strong, however, and it did not seem to be the case at all in Sierra Leone, although no explanation is offered for this observation.

There *were* cases of hardship amongst the female headed households, of course, but so there were amongst the male headed families also. And conversely, there were cases where women on their own seemed to be doing very well (see Vignette 1) - as well as some nominally male headed households where the man seemed to be a brake on progress rather than the reverse.

- **Poverty and Attitude to RIU**

Attitudes to RIU amongst participants were overwhelmingly positive (Figure 2). Whilst welcome news, this may not be surprising if the respondents saw enumerators as representatives of the Project and wanted to encourage a continuation of existing incentives, or even new ones.

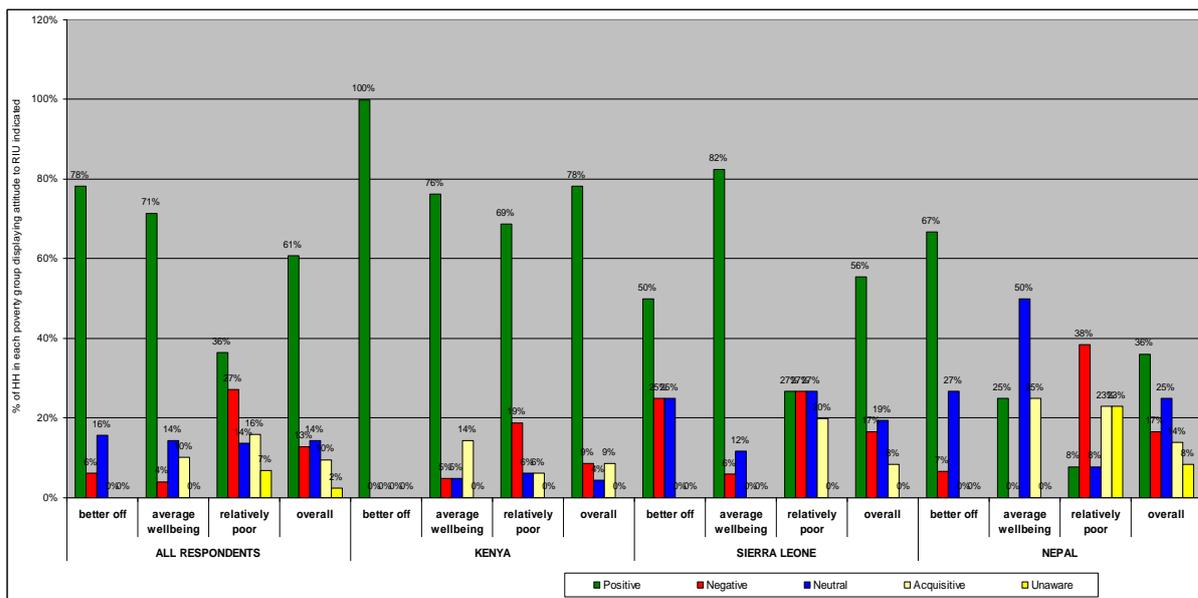
However, poor people were more likely to be negative about their contact with RIU. Although not shown in the graphs, their reasons were investigated and the main ones were:

- RIU not giving them as much as they had hoped. Sometimes expectations, whether justifiably or not, were for more than they received. This applied to the desire to get more of what they were already being given, usually because the incentive was only to last a year or season, and they wanted it for longer, but also because once they had received something they had asked for other things which had not been granted.

### Vignette 1 - Who needs a man?

Florence does have a husband, but he has gone away to work and she hardly sees him and regards herself as a female headed household. She relies entirely on her farm to feed her large household of 9 children. Her house is perfectly arranged and she is well organised compared with her neighbours. She works hard and her farm has become an example to her neighbours of what should be done and how. She does mixed cropping (mainly maize beans & sweet potatoes) mainly for subsistence and doesn't sell much because of the size of family she has to feed (there are 12 people in her household). She relies on the children for labour. Their work on the farm is alternated with school attendance.

It was RIU that gave her the enthusiasm. Since joining she has become so interested in both the new varieties she is using and the new skills she

**Fig 2: Attitudes to RIU disaggregated by Poverty Levels and Country**

- The performance of the innovation not fulfilling expectations. This issue is connected with a finding below, that poorer people often didn't do as well with the innovation as richer ones. However, it was also because poorer people were more likely to blame the innovation for disappointing performance when the better-off groups were more likely to accept that, when things did not work out, there could be other variables involved (soil type, weather etc.).
- Lack of continuing contact with the sponsors of whatever activity they were involved in. Resentment at not being contacted more was not infrequent. The importance of contact in encouraging innovation is returned to below.

Despite these issues, the general tendency in nearly all groups was more positive than negative. Nepal appeared to be the only place where the responses from any group were more negative than positive. Again, the group concerned was the poorest one.

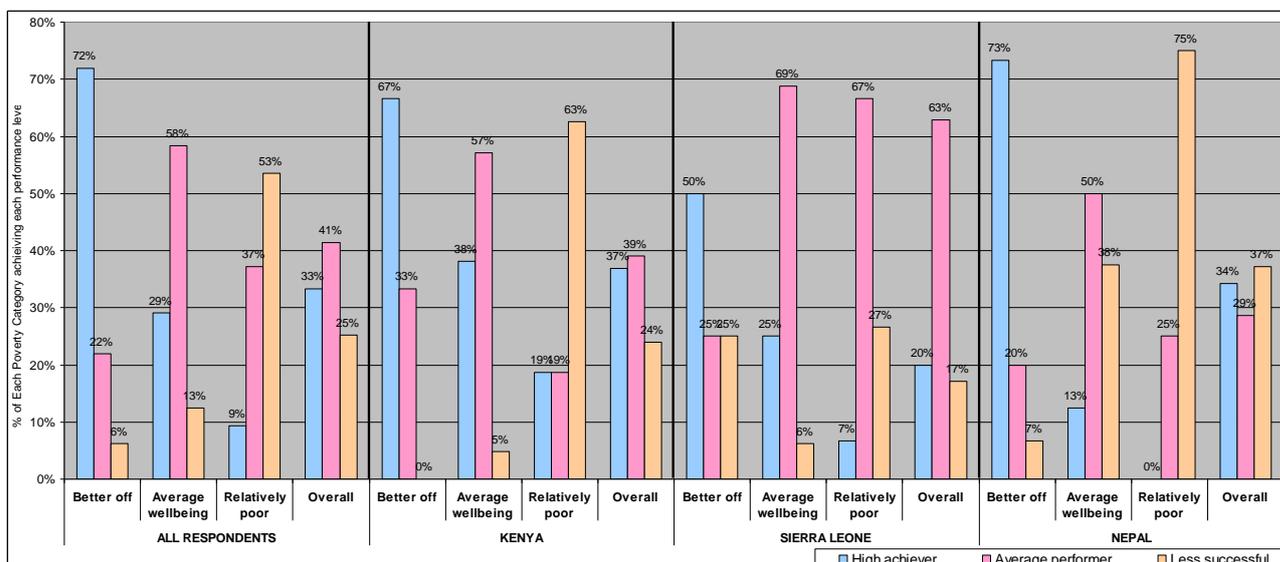
It is noted that the PCI in Nepal promotes local production of improved seed (through the CBSPs). It also promotes the use of that seed by giving away try-out "Kits" of the seed. Encouraging the CBSPs involves more contact with the Project than distributing the Kits. The CBSPs also tend to include the better and better-off farmers. Hence the poorer farmers are often no more than recipients of Kits. Some responses suggest that not all have the expertise to take full advantage of them and this appeared to affect their attitude toward RIU. Certainly the most negative comments in the responses came from the poorest caste beneficiaries.

- **Poverty and Performance**

Figure 3 looks at how well performing the different wealth groups are. Again there is a clear tendency for the poorer people to be poorer performers. Indeed, in Nepal, not a single one of the poorest group was classed as a good performer in the use of the new innovation (which in that case included improved crop varieties).

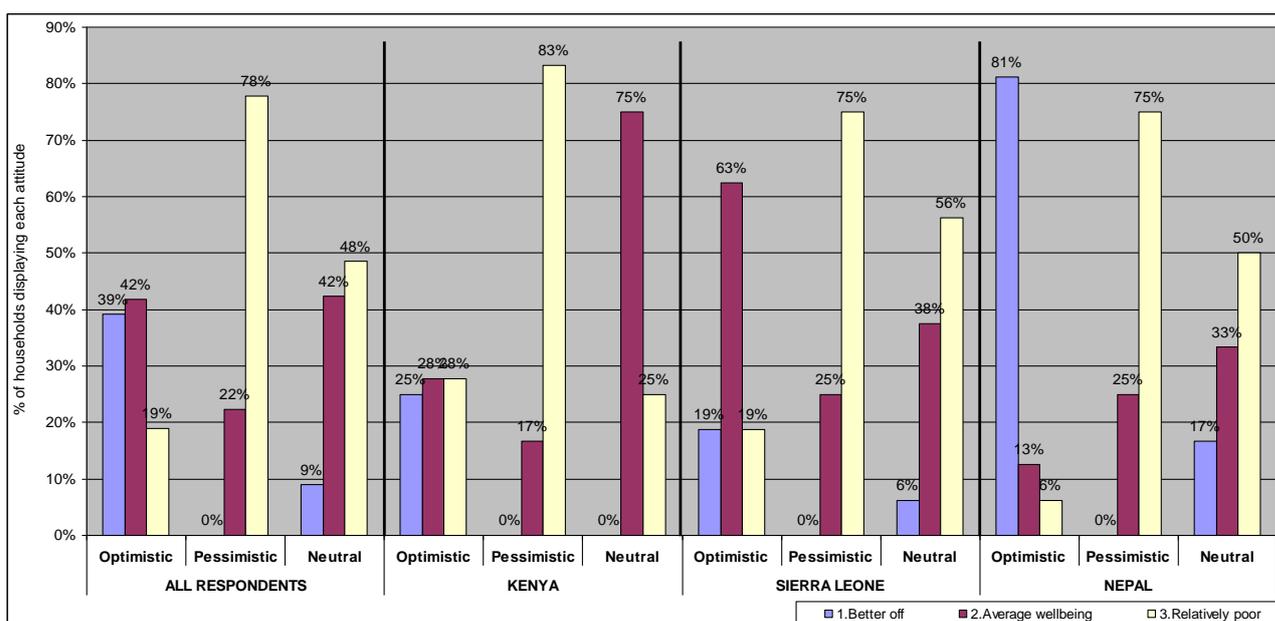
The disaggregation in Figure 3 also shows that there is an exception in Sierra Leone where there is less performance variation and the tendency of the poorer to do less well is lower. An interesting point to make in this respect is that the innovation activity in Sierra Leone is a communal one. Whilst individual respondent households may be poor, therefore, they are working with others who are less so, and their work is also closely supervised by the Project. This may be why the performance seemed to be better for the poorer group.

**Fig 3: Performance Levels disaggregated by Poverty category**



- Poverty and general outlook**

In addition to attitude toward RIU the survey also attempted to grade the households for their general attitude and outlook. This grading depended on the response to only one question however, though it was supplemented by the general impression felt by the enumerator about each respondent (see Table 2). An assessment could not always be made, and where this occurred the respondent was graded as neutral.

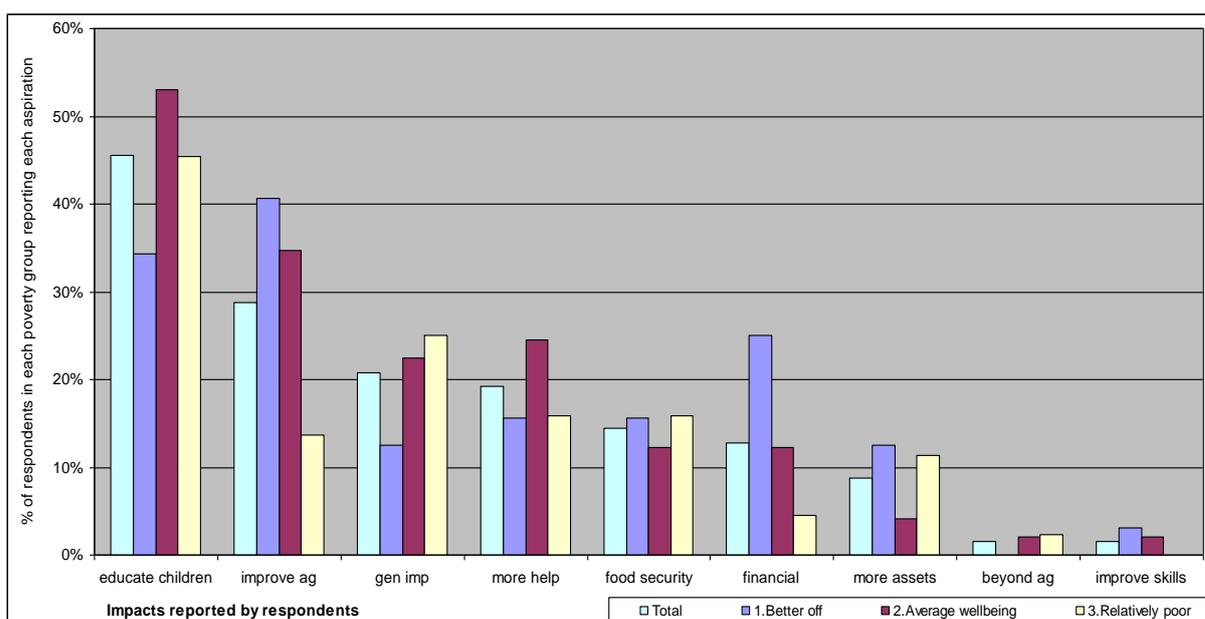
**Fig 4: Poverty level and general attitude**

Despite the relatively weak grounding of this variable it did lead to an interesting result. It turned out that the majority of relatively poor families had been graded as pessimistic and there was a clear tendency for better-off families to be optimistic (Figure 4). In fact, when the coding had been done, it was discovered that not a single household in the better-off group had been graded as pessimistic. An argument could be made for the causal effect to go in either direction.

- **Poverty and Aspirations**

The final characteristic investigated was the aspirations of the respondents and how they varied amongst the different poverty groups.

Again, all of the responses were in answer to open questions with no prompting and it was found that the responses could be categorised into the 9 aspirations indicated in Table 2 and Figure 5.

**Fig 5: Aspirations reported by respondent households at different poverty levels**

The most frequently mentioned aspiration, cited by just under half of all respondents, was to have better educated children, followed by those who aspired to be better farmers. It is also noted that the differences amongst the wealth groups was not very great. Finally, it is interesting to observe that it was the already better-off farmers who were more likely to say that they aspired to be more wealthy.

## 4.2 Adoption Motivation

### Introduction:

One of the objectives of the household survey was to investigate what motivated target beneficiaries to participate and adopt the innovation promoted by the different types of RIU activity studied. Before looking at the data it is important to make some a priori qualifications about conclusions that can be drawn on this topic.

In particular, it needs to be noted that the participants of the programme are not a self selecting group in a neutral environment where they have an open choice either to participate or not based on the merits of the innovation. Rather, they have been selected to participate by the promoters of the innovation and are offered incentives to do so.

### Headlines on adoption motivation:

- i. By far the commonest reason given for adopting the innovation was the presence of incentives - whatever the type. This was no less true for richer group than it was for the poorer one.
- ii. The relatively short life span of the Project means that it has not been possible to verify retention of the innovation once adopted, but most (though not all) respondents indicated that they did intend to continue.
- iii. In some cases excessive expectations did seem to have been aroused, even if unintentionally. Many respondents expected things from the Project - principally

The incentives greatly increase the chance of adoption (if properly designed), at least initially, making it difficult to draw conclusions about how to get innovations adopted on a mass scale when there are no incentives.

This issue also highlights the importance of the criteria used by the promoters of the innovation when choosing the participants. It also makes it desirable to find and survey farmers who have the option to participate but who choose not to, as well as those who do self select, by adopting the innovation of their own accord, even if they were not invited to participate in the Project.

This survey was not able to exercise these options. Given the relatively short life span of the Project it could not even investigate with precision the extent to which participants continue with the innovation after the incentives expire. It did gather *some* information on this issue, however, by asking the respondents what their intentions were.

As discussed in the description of the I-model in Annex 5, incentives are necessary as a way of helping participants deal with risk, but they do complicate the process of generalising from conclusions. The Central Research Team of the RIU has discussed this problem in a more general way in the form of innovation experiments operating within "protected innovation niches"<sup>250</sup>

### Reasons given for adopting innovations:

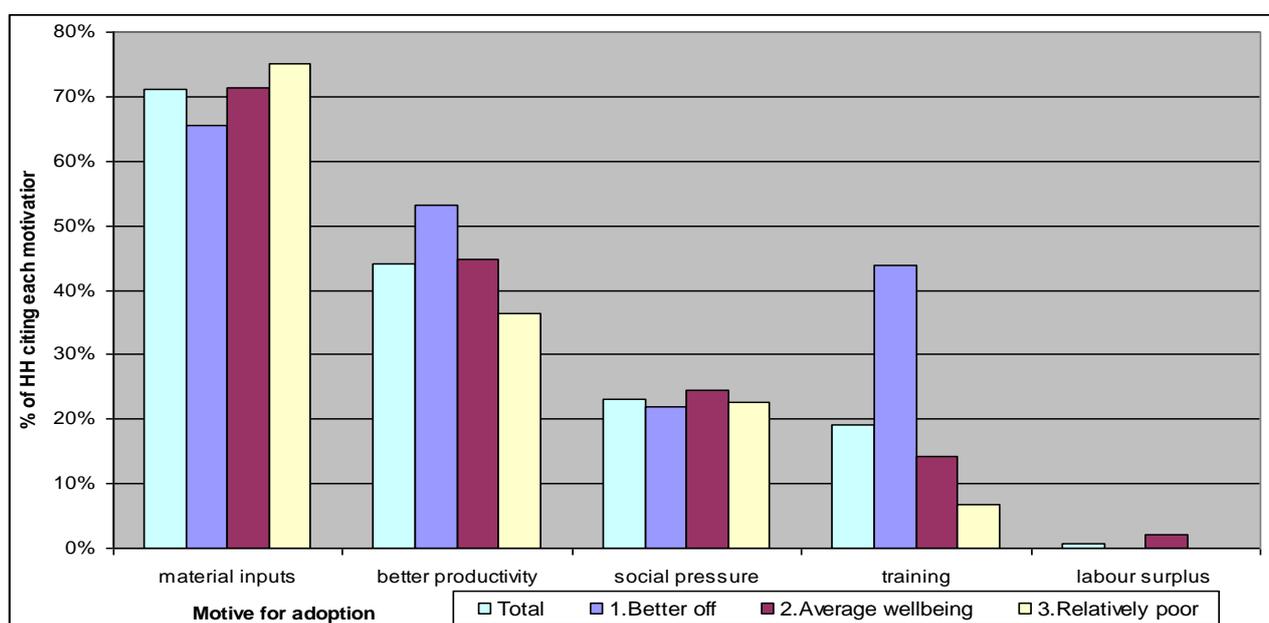
It is worth reiterating that all the household survey questions were open ones. Respondents were asked what led them to adopt. They were not given a list of possible reasons and asked to comment on them. When motives were brought up therefore, they came from the respondent unprompted to an open ended enquiry.

When analysed it transpired that five main reasons, or groups of reasons, were given for why the respondent households had taken up the innovation. They were:

<sup>250</sup> Andy Hall, Jeroen Dijkman and Rasheed Sulaiman V. "Research Into Use: Investigating the Relationship between Agricultural Research and Innovation" CRT, RIU < Mk IVFinal July 2010 (Repaired).doc > P. 13 et seq.

- i. To get the material inputs: free, subsidised or facilitated in some way. It wasn't always the case that the inputs were cheap. On occasion it was because the farmers were having difficult identifying a particular seed.
- ii. A general hope that the respondent would improve productivity and earn more. The source of the improved productivity could be from new activities, improved varieties or from improved skills.
- iii. As a response to social pressure from friends, neighbours, colleagues or from someone they respect.
- iv. The hope to gain skills and to learn improved farming systems.
- v. As a way of using labour surpluses held in the family.

**Fig 6: Number of households citing different reasons for adoption**



By far the most popular of these reasons was the availability of material inputs. Over 70% of the respondents cited this motive (Figure 6). Since input incentives reduce costs this is by no means surprising. The monetary value of the inputs was often not great but the expectation would be that they would be relatively more important to poor people than better-off ones, and in fact the poorer people did cite this motive more than richer one. However the better-off were clearly also attracted by the prospect of help in acquiring inputs.

Fewer people cited the prospect of improving their skills as an attraction but

#### **Vignette 2 - They were giving them free of cost . .**

I was a member of the farmers group and a friend there told me he had heard about new (crop) varieties. We asked the chairman (of the group). At first we were informed only that we would be able to get some improved seeds of different crops and that they were giving them free of cost so we said we would try. Later on it turned out that they would provide technical knowledge too. It's really very good for farmers like us. We do want to do well but often lack technical knowledge and that may hamper our farming. (RH05)

the other interesting item from the graph is that better-off were more likely to do so. This was consistent with the suggestion that they have a better understanding of the importance of education in making progress.

### 4.3 Changes in Lives

#### Headlines:

- i. There was nearly always some benefit reported by the respondents. Usually this was greater output that for poorer households reduced food deficits and for better-off ones increase income
- ii. Knowledge was a second valuable impact and, although not recognised as a potential

#### Introduction

The second area where the household survey was designed to throw light was on what differences, if any, participation in the activities promoted by RIU has had on the lives of families that took part.

Although no quantitative impact data was collected questions about different types of impact included some that would derive from economic impact. Evidence was gathered about the extent to which the activities had contributed to all the principal asset forms: economic and social (physical, human, natural, financial, social, knowledge, aspirations). The impacts cited fell into the following (grouped as captioned in Figure 7):

- i. Improved productivity
- ii. Increased cash income
- iii. Improved food consumption (quantitative and / or quality)
- iv. Increased assets
- v. Greater knowledge / greater skills
- vi. Widened social network
- vii. Innovation was tried and rejected - lapsed
- viii. No benefit received at all

Many households mentioned multiple impacts and they were all recorded. The respondents did include some households that had only recently joined the Project and had not yet experienced any impact. In all cases members of this group were upbeat about their experience and were looking forward to positive impact<sup>251</sup>.

<sup>251</sup> Efforts were made throughout the survey to avoid including farmers who had not been a part of the activities for long enough to have a view on output but, in spite of the pre interview screening, several cases slipped through where it only transpired later in the interview that impact had not yet appeared. Only in one case was the interview entered in full knowledge that this was the case, and that was because the respondent was the head man of the village and he insisted on being interviewed willy nilly.

The results noted can conveniently be grouped into three categories: two positive and one negative. This was done and they are summarised diagrammatically in Figure 7.

**Positive impact**

The two types of positive impact recorded referred to material impact and impact on human assets.

**Material impact: increased output**

Most of the participants (77%) said that they had experienced an increase in agricultural production as a result of their participation in the activity. This was translated into increased consumption and income.

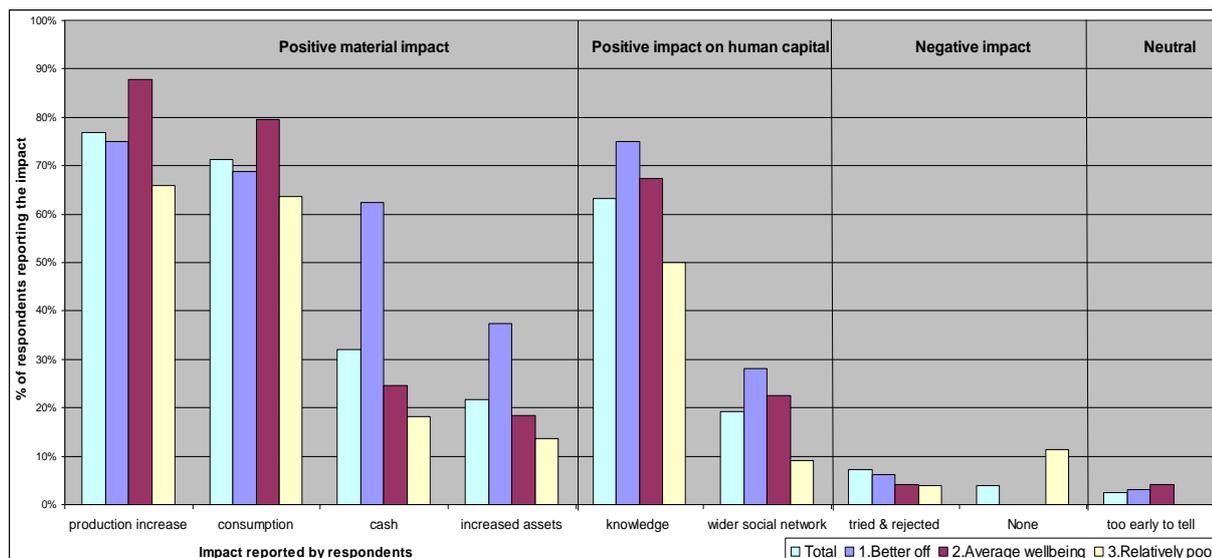


Fig 7: Impacts reported by respondent

**households**

For most (71%) of those who increased their production it was consumption that was affected. This did not apply to all respondents, however, because some (nearly all of them in the better-off category - and none in the relatively-poor group) said that they were already eating enough before they started participating, so the extra production had no effect on consumption patterns or quantity. In the case of the poorer households

however, increased production reduced a food household deficit rather than creating a surplus.

For some the increase in production led to higher income. This was a much smaller group however (32%) because most said that they did not have enough to sell. Many in this group did say that they had only had one season of production and that they hoped to do better and to be able to sell surplus in the future. Also, in the case of Sierra Leone, where the activity was a communal one, some sales were made but the money stayed in a common fund

and was not distributed to the members. Even in these cases, however, the members did receive some of the production for their families to consume.

There were a few that reported both increased consumption and increased income, but not many.

### **Vignette 3-Knowledge has meant everything for me**

The main thing I have from the activity is knowledge and understanding. Before: I couldn't invest money in potato - now I am able to produce so much potato seed and many people come to me because they are sure of my quality. I have knowledge about how to plant – distancing. I know how to differentiate fertilisers that are suitable. I know which pesticides to use and when and I know lots about potato diseases and how to fight against them. Most important, I know how to identify potato to harvest for seed and potato to harvest for consumption. I have also learned about post harvest handling and how to store seed. There are traditional ways of passing on seed, but no formal way of doing it and I wouldn't' have known how to do it if it weren't for the project. Knowledge has meant everything for me.

### ***Improved human assets***

Not so many respondents reported change in human assets, but it was still a substantial proportion and, when they mentioned training or increased knowledge, it was noticeable that they were enthusiastic about what they had learned. Even though less than 20% of the respondents had included hope for improved farming skills as a motive for becoming involved in the activity at the start, once they had participated, 63% not only said they'd had training, but they expressed appreciation for it. It was also noted that those who cited the importance of training also recorded the most number of different types of impact.

Many fewer people mentioned increased contact with others (wider social network) as an impact, but the proportion was still about a fifth of them, and again this was not usually something that they had looked for when joining.

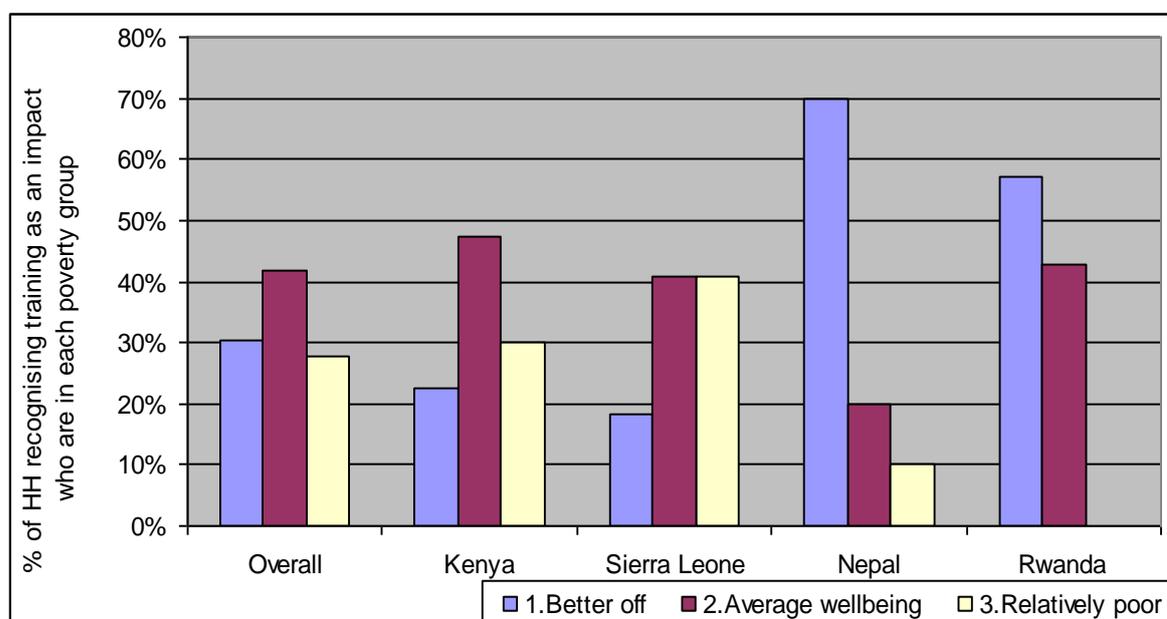
Some of the activities, notably the Sierra Leone and Rwanda innovation platforms, involved becoming part of a group, so an expanded social network could be expected..

Even for the participants of FIPS-Africa however, which avoids working through groups as a part of a policy to include any household that wants to join irrespective of their social position or network, simply participating in an activity that involves other people makes them part of a group. This was mentioned by many of the respondents in a positive way.

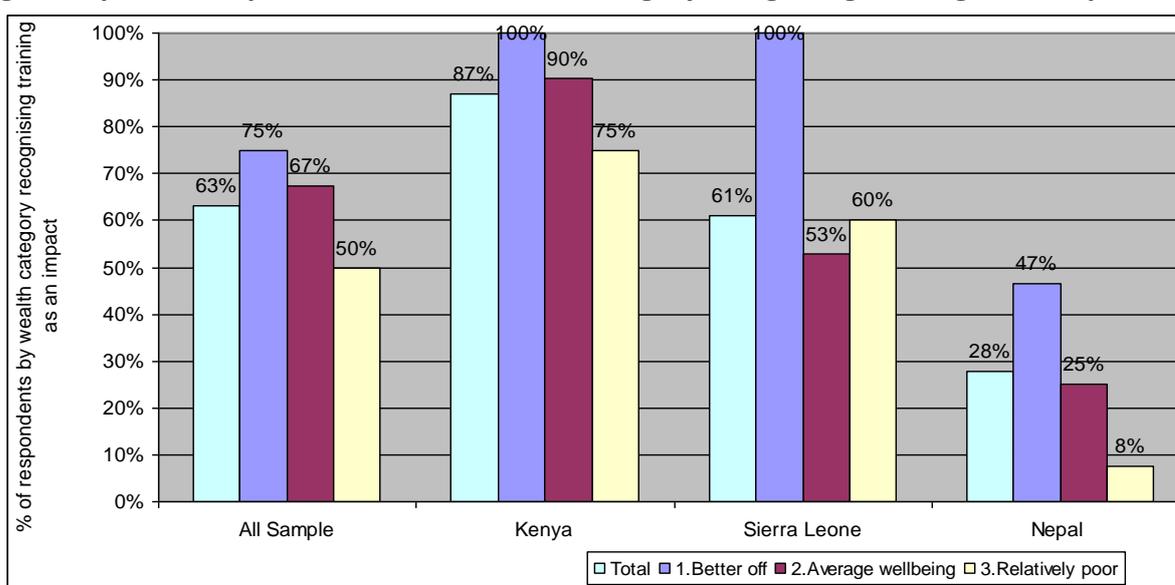
It is also instructive to compare the attitude of the different poverty groups toward training and knowledge before participation with that of impact of this variable after participation.

Figure 8 shows the proportion of all the respondents who recognised that training is important who are in each wealth group. Figure 9 indicates the proportion of all respondents in each wealth group who recognised training as an impact.

**Fig 8: Recognition of training as an impact by different poverty groups**



**Fig 9: Proportion respondents in each wealth category recognising training as an impact**



It was pointed out above that the main interest in knowledge before participation was from the better-off group. After participation however, the attitude of the different groups had evened out considerably.

Most of the increased interest in the knowledge gained was from the lower income groups. The changes in relative interest in training is was therefore not because the interest of the better-off group had gone down, but because the interest of the worse off groups had gone up.

When this response was broken down by country there proved to be an exception, and it was Nepal. This was significant because most of the continuing training contact in Nepal needed to be directed at the CBSPs, the membership of which relied on the more successful farmers who were therefore the better-off ones. The relatively poor were usually the recipients of kits, where there was much less reporting of training received. Brief written instructions were included with the kits, but many of the Dalits reported that they could not read and made little effort to get someone to read it for them.

### **Negative impact**

Open discontent about the Project was rare, but it was encountered occasionally. Only about 4% said that they had no beneficial impact at all, but more, around 7%, went further and gave reasons why they would not continue with the activity. Often this was because of poor timing of input delivery, or because the new variety did not deliver as expected.

The worrying aspect of this is that most respondents in this group were from the poorer category. Some better-off people reported the same problems, but they were less ready to blame the RIU for it and more willing to cite poor weather, or poor soils, for the difficulty,. In these cases they were more likely to say that they would continue with the systems learned but change the varieties.

### **Sustainability**

As pointed out at the beginning of this Annex, the issue of sustainability is a difficult one. To deal with The Project has not been going on for long enough to be able to gauge how long the changes it has encouraged will be retained. The survey can therefore only comment on intentions. In fact nearly all of those who reported improved production said they would carry on with the activity even after their incentives ended and they would have to start paying.

Whether the will to sustain is maintained when the participants are faced with the reality of continuing without incentives remains to be seen.

## 5 FINAL ANALYSIS AND CONCLUSIONS

### Headlines for General Conclusions

- The technology needs to be appropriate. If it is to stick the innovation needs to offer something that is needed.
- Most people go for the incentive. - so the incentive has to be attractive.
- The most important way of getting the change to stick is contact and training. The most important factor in transferring technology (assuming the technology is appropriate in the first place) is contact and support.
- Targeting the poor may require a special effort to understand their problems and deal with them separately from the better-off.

The survey has been a small one with limited scope but it has found that respondents have generally favourable attitudes towards the activities of the RIU. It has also been able to identify a number of issues that may contribute to an understanding of the requirements for success in the transfer of new technologies to small farmers.

#### ***i. Appropriateness of the innovation:***

An obvious one is that the technology being offered needs to be appropriate. The study has reminded us of the importance of this point by the number of respondents who have complained about the supply of crop varieties that do not suit them for one reason or another.

Specific issues mentioned have included inappropriate maturing periods, the need for complementary inputs that were not provided by RIU and unsuitability for local climatic conditions.

These issues have not turned out to be serious ones in the RIU activities. The number of complaints have been relatively small, and at least some of them may have reflected more general dissatisfaction with conditions that it was not the concern of RIU to address. In fact most respondents have appreciated the crop varieties that have been promoted for their generally short growing periods and their superior growing and taste qualities.

Nevertheless, the fact that they were made does emphasise that it is the perception of the potential innovators about the appropriateness of the innovation that matters.

#### ***ii. Incentives:***

The importance of incentives to attract participants and deal with risk has also been confirmed by this study. Since most respondents, irrespective of their wealth grouping, admitted that they were initially attracted by the prospect of inputs that were facilitated in one way or another, the appeal of reducing costs seems to be universal and this is clearly a good way of attracting the attention of potential innovators.

The question is what happens next and what must be done to sustain the innovation. By the time the incentives expire the innovator needs to be clear that the innovation responds to a real need and the costs of sustaining it are outweighed by the benefits. It depends also on whether other conditions, dealt with elsewhere in this report, are in place to sustain the innovation.

From the conversations with the respondents it is clear that some of their lives have been affected profoundly by what they have been encouraged to do by the RIU and that there will be no going back for them. For some of the others, however, it did look as though the activity was just another outside intervention that has come and will go in their lives. It has been pointed out that by far the majority of the respondents claimed that they would continue with the innovation, but there was no way of checking this through the present survey.

#### ***iii. The role and importance of long term support:***

One of the strongest impressions left from conversations with the respondents is the extent to which the nature and frequency of contact with the RIU programme staff and promoters has affected the attitudes of respondents to what they have received, what they are doing with it and how they intend to continue in the future.

The most positive answers to questions about impact came from people with positive answers about training as well as the frequency and continuity of contact with the promoters of the activity. Target beneficiaries who had multiple contacts with the activity, or who were in a position where they could initiate contact easily, were more likely to have done well and to be

willing to carry on in the future. They were also the most realistic about the longevity of the incentives and what would come after those incentives were gone.

On the other hand, those who had been provided with inputs but had not been supported by training were the least likely to have been successful with the innovation or want to continue with it.

One conclusion that this points to is that, if you want to encourage innovation, it is desirable to design a system that allows a long term relationship that includes continuing contact between the promoter of the innovation and the target.

Such an approach deals with a number of potential problems. It assures the innovator that if things go wrong there is someone responsive they can turn to. It also allows skills to be developed over time. When old systems are well entrenched, the amount of information that can be internalised about new ways of doing things is limited, so constant low level contact and repeated messaging allows absorption to occur at a realistic pace. The strongest results came from the activity that had designed a system where the representatives of the Project live locally and so could not escape hearing about the consequences of their advice.

Similarly, trust in the messenger was often mentioned. Respondents frequently cited the respect they had for their contact as influential on whether they took up the innovation. Hence the benefits of working through local people who are already well known and respected in the community

It is worth mentioning also that the messenger can be trusted and effective without being real. Although not part of the survey Shujaaz was one of the evaluation case studies, and it had clearly built up considerable trust amongst its readership for the characters it used<sup>252</sup>, none of whom are real. It is still important that there is *something* real, substantive and reliable behind the messenger however, and the necessary elements of good information and support must be delivered. So the virtual characters do have to be backed by verifiably reliable advisors if they are to gain trust.

***iv. The potential importance of differential targeting:***

A little more speculative, but still coming out of the responses to the questionnaires, is a need to consider treating different types of target beneficiaries in different ways.

It has been pointed out that the training received had a strong influence on how positively the respondents reported on impact.

All of the activities studied included strong elements of training, but there were inevitably variations in the extent to which respondents benefited from it. This would have been due partly to the individuals and how much they were willing and able to get involved. But it was also possible to identify groups that tended to benefit more or less.

---

<sup>252</sup> This was one of the conclusions of the report "Shujaaz Impact Study - Quantitative Research Report " by Joel Lehmann. Synovate November 2010

The main grouping studied here has depended on wealth status and, whilst we have seen that all levels agreed on the importance of training, it is noticeable that every respondent from the better-off group in two of the countries reported training as a significant impact<sup>253</sup>.

It has already been noted that the richer groups are more optimistic, more receptive, more positive toward RIU, get more out of what they have done with the activity and more likely to internalise the messages and be willing to continue to work with the innovation in the absence of the support provided by the Project. All this makes the better-off easier to work with and more likely to deliver results.

Although the poorer are more needy, getting through to them is more demanding. There is a vicious circle for the poor here: being more receptive and easier to work with, the better-off might get more contact, and benefit more. Being less easy to deal with, the poor get less contact and their progress is more fragile.

The relative inability of the poor to take advantage, not just of innovations but of efforts to encourage them to innovate, is a clear from much of what we have said and it suggests the need for alternative working mechanisms that takes these problems into account explicitly.

### **A final word**

The limitations of this survey are clear. It uses a relatively small group of respondents from only four of the more than 40 activities of the RIU, so it cannot do justice to the tens of thousands of people who have been touched directly by the Project. Also, there are limitations on the analysis that can be done on the type of information that has been collected.

Whilst the temptation to make recommendations on the basis of the observations has been avoided, however, it is hoped that some food for thought and pointers for future investigation can be found within them.

---

<sup>253</sup> Figure 8 shows the proportion of each wealth group in each country/activity that reported benefiting from training..

## Household Survey Questionnaire used for Annex 10

### RIU Impact Evaluation

#### Household Impact Questionnaire for Households

(use separate sheet for answers where necessary but ensure that question numbering is retained)

**General comments:**

*( Place any general comments you want to make about the interview here. You may also put explanatory notes and comments anywhere in the form if you wish)*

**Date:** \_\_

**Start time:** \_\_

#### SECTION A: RESPONDENT CHARACTERISTICS

**A1**

Household Identification Number.  
(Interviewer initial + sequential number)

Household location

**A2** District  
**A3** Division  
**A4** Location  
**A4a** Village


**A5**

Name of respondent: \_\_\_\_\_

**A6**

Gender of respondent (male/female) : \_\_\_\_

**A7**

Position in household ( head / spouse of head / other (specify) ): \_\_\_\_

(N.B. If Head is absent and spouse or alternate is unable to respond. Then go to next HH)

#### SECTION B: HOUSEHOLD CHARACTERISTICS

House construction materials:

**X1**

Walls: \_

**X2**

Roof: \_

**B1**

How many people live in the household? \_\_\_\_

**B2**

Starting with the respondent, write the following information for all members of this household. (*When filing in the electronic copy add as many lines to this table as needed*)

	Name	Age (years)	Sex (M/F)	Relation to respondent	Occupation	Level of Education
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

(Provide any explanatory notes about family here:)

**B3**

How many people in the family are active in farming activity at some time?: \_\_\_

**Access to land (ownership or usufruct)****B4**

How much land did you have access to in the last crop season (total & units)? \_\_\_

**B5**

What type of access did you have (owned, rented, shared)? (*Add lines as needed*)

Amount	Unit (ha/acre etc)	Access (owned, rented, shared, other (specify))

**B6**

What did you use the land for (include fallow, indicate separately if shared)? (*Add lines as needed*) (NB when filing in electronic copy provide a heading for each season if the season varies between seasons):

Amount	Unit (ha/acre etc)	Crops or animals (or fallow)

**B7**

How many animals do you have?

Animals	Number
(note here if no animals)	
Cattle	
Goats	
Sheep	
Chickens	

Ducks	
Rabbits	
Pigs	
Fish	
other (sp)	

**B8**

Did you take part in this project? (write "yes" or "no") \_\_\_\_

**B8a**

What year did you start? \_\_\_\_

[If yes, please go to Section C. If not, or if adoption has lapsed, please go to Section D]

### *SECTION C: REASONS FOR ADOPTION*

**Adoption / View of the Innovation:** (Farmer understanding of the nature of the innovation.)  
(If non adopter - go to section below)

**C1**

How did you learn about the activity you are participating in? (How did you hear about the innovation?)

---

**C2**

Does it give you anything that you regard as new or different from what you knew or did before? (write "yes" or "no")

If so, what is new / different about it? (list as bullet points and if more than one innovation ensure that all are included)

---

**C3**

Do you think it has brought you any benefits yet? (write "yes" or "no")  
If so, what are the they? (bullet points)

---

**C4**

Did these results meet your expectations? Explain.

---

**C5**

What were the most important things about the innovation that convinced you to take part?  
Include information in any of the following areas:

- **Economic** (e.g. asset endowments, labour surpluses, seasonal complementarities; storage and price incentives)
- **Social or political** reasons or pressures (including keeping up with neighbours or family pressures)
- Any **other reasons** - to be specified.

---

**C6**

Have you come across any disadvantages in taking part?  
If so, what? (e.g. labour, community relationships / rivalries)

C7

---

Will / did you carry on with this activity after any project incentives finish?  
Why? / why not? (NB that if more than one innovation has been adopted or tried then include information about continuity of all of them)

---

C8

---

If you have used a new crop variety, have you retained any of your output to use as seed in the next season?

---

C9

---

Are you aware of other people who have been convinced to adopt the innovation by seeing what you are doing? If so, please describe:

---

C10

---

Have you ever made an effort to pass on what you have learned to anybody else?  
If so, how?

---

C11

---

If so, was this on your own initiative or has some system been established for you to do this?

---

#### *SECTION D: REASONS FOR NON-ADOPTION*

D1

---

Did you know about this innovation? (write "yes" or "no")

---

D2

---

If so, how did you learn about it?

---

D3

---

Why aren't you adopting it - or why did you stop adopting it? Include consideration of the following areas:

- **Economic** (e.g. lack of resources, including labour surpluses, seasonal issues, problems over storage or marketing, etc)
- **Social or political** reasons or pressures (including problems with neighbours or family)
- Any **other reasons** - to be specified.

---

D4

---

Were any offers or incentives made to convince you to take it up? (write "yes" or "no") If so, please describe:

---

**D5**

What would need to change to take it up?

---

### **SECTION E: IMPACT OF ADOPTION**

#### **Income**

**E1**

Did participation in this activity bring any benefits in this last year? How did the benefits from the activity this year compare with what they were before you adopted the innovation? Include information in the following areas:

#### **Cash income**

How much more income (or other benefit) did you make in the last cropping season -when you adopted - compared with before you adopted? (refer to proportional changes and take explicit account of all the innovations made).

Who received the income? (head of household, spouse, other (specify))

#### **Family Consumption - did you eat more / or something new?**

How much?

Who in the family benefited most from this extra consumption (head, spouse, grandparent, child etc)

---

#### **Physical Assets**

**E2**

What physical assets (tools, implements, land) have you acquired to use with the activity?

---

**E3**

How did you get them? (e.g. grant, purchased, purchased with credit, purchased with subsidy, provided on any other conditions. You can specify more than one way)

---

**E4**

Are there uses for these assets other than the primary activity they were acquired for?

---

#### **Human Assets**

**E5**

Did anyone in your household get training for the activity? (write "yes" or "no")

---

**E6**

Who received it?

---

**E7**

How did the recipient get the training?

---

**E8**

Did the person who got the training make use of the training? (or did it (for example) have to be passed on to someone else?)

---

**E9**

Have there been other forms of skill sharing? (write "yes" or "no"). If so, what?

---

**E10**

Has this training been useful in other activities? (write "yes" or "no"). If so, in which other activities has training been useful?

---

**E11**

Has your family had to provide extra labour as a result of the activity/innovation? (write "yes" or "no" and explain).

---

**E12**

How did you provide it? (e.g. worked longer hours, new family members worked, hired more labour - or specify other).

---

**E13**

How easy was it to provide this extra labour? Explain:

---

***Natural Assets*****E14**Has your access to land increased? (write "yes" or "no")  
If so, how? (rented, bought, other (specify))

---

***Financial impacts and other receipts or payments***

**E15**

Have you received any credit for this activity? (write "yes" or "no") If so:

i) Where is it from? \_\_\_\_

ii) What did you use it for? \_\_\_\_

**E16**

Has anything been given to you so that you can introduce the innovation?

If so, what for? (was it used for the purpose intended?)

---

**E16a**

Have you paid anything for it yet? If so what?

---

**E16b**

Are you going to have to pay for it or give anything back. If so what are you going to have to pay, and when?

---

**E17**

Do you know more about banks or other credit providers as a result of this activity? (write "yes" or "no")

---

**E18**

If so, are you using any of them? (specify which ones & how e.g. credit, new account etc)

---

### **Social Assets**

**E19**

Is it obligatory to be a member of a group to access these innovations (write "yes" or "no")

---

**E20**

Have you had to join one? (write "yes" or "no") If so then specify:

---

**E21**

What groups are you now a member of (even if you did not have to join one - *specify the purpose of the group*)?

---

**E22**

Have you been involved in new activities that result from having taken part?

If so, what types of new activity? (e.g. visiting new people, going to new places)

---

**E23**

Have you been involved in decisions about buying and selling products? ("yes" or "no")  
If so, what types of decision? (e.g. how much to sell for/when to sell?)

---

**E24**

Has your role in your family changed as a result of taking part in this innovation? (write "yes" or "no"). If so, how has your role changed? (e.g. decision making power on household budgets, child related decisions, joining organisations)

---

### **SECTION F: USES OF THE BENEFITS**

#### **Cash**

**F1**

If you have more cash than before as a result of this innovation, how much did you receive?

---

**F2**

What did you use it for? (e.g. consumption, livelihoods assets, savings etc)

---

#### **Nutrition**

Since you started you activities with the RIU:

**F3**

Have you noticed an improved taste in your food? (write "yes" or "no")

---

**F4**

Have there been greater quantities of food in your household? (write "yes" or "no")

---

**F5**

Have you noticed improved quality in your food? (write "yes" or "no")

---

**F6**

Have you got an improved knowledge of nutrition? (write "yes" or "no")

---

### **SECTION G: INFORMATIONAL**

#### **Design and implementation of the Programme**

**G1**

To what extent did you participate in the design of the programme? (use categories such as Informed - Consulted - Partnership - In control - and then make a comment)

---

**G2**

How much were you involved in the development of the activities? (use categories such as Informed - Consulted - Partnership - In control - and then make a comment)

---

**G3**

Did you get the opportunity to ask questions about the innovation? (write "yes" or "no")  
 If yes, did you use the opportunity?(write "yes" or "no")  
 If so, who did you ask? - add any comments

---

**G4**

Were you given a mechanism for complaining or airing grievances about the programme?  
 (write "yes" or "no")  
 Did you use it? (write "yes" or "no")  
 Did it have any effect? (write "yes" or "no")  
 Comments?

---

### *Information from the Innovation*

**G5**

What new information has become available as a result of participation in the activity?

<b>What information did you learn</b>	<b>Who gave it to you and how?</b>	<b>How often have you received this type of information?</b>
Government structures, rights, practices		
Commercial practices, markets and marketing.		
Community organisation and individuals		
Other (news etc)		

### **SECTION H: ASPIRATIONS**

Please look at the ladder below. Imagine that the top of the ladder represents where you are trying to climb to – your hopes and dreams.

**H1**

How do you see your future? (what is your vision for your family?)

---

**H2**

Has this vision changed since starting this activity? (write "yes" or "no")  
If so, how?

---

**Your hopes and dreams for yourself and your family NOW.**

Top: Your Vision as expressed in Question H 1



H3 How far up this ladder are you? (Please mark on the ladder)

**H4**

Has this programme helped you move up the ladder? (write "yes" or "no")  
If so, how?

---

**H5**

What do you need to do to move further up the ladder?

---

**H6**

What is preventing you from climbing higher up the ladder?

---

**X3**

How well off do you consider yourself compared with your neighbours?

---

**X4**

Do you think that your activity with RIU has changed your position (explain)

---

**END**

End

**End time** of interview: \_\_\_\_\_

Annex 11

**RIU AS A RESEARCH PROGRAMME:  
QUALITY OF SCIENCE**

G. J. Gill

April 2011

Version 0.1

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<b>Abbreviations</b>	
ABB	African Best Bets
ACP	African Country Programme
AICF	Asian Innovation Challenge Fund
AWBB	Army Worm Best Bet
BB	Best Bets
CA	Country Assessment
CGIAR	Consultative Group on International Agricultural Research
CRT	Central Research Team
CS	Country Strategy
DP	Discussion Paper
DSP	Decentralised Seed Production
FIPS	Farm Input Promotions - Africa
ICF	Innovation Challenge Fund
ICV	Intervention Curriculum Vita
IPM	Integrated Pest Management
IS	Innovation Systems
LFMRP	Linking Farmers with Markets for Rural Prosperity
M&E	Monitoring and Evaluation
MIL	Monitoring, Impact Assessment and Learning
MTR	Mid-Term Review (of RIU)
NARS	National Agricultural Research System
QR	Quarterly Report

R&D	Research and Development
RF	Research Fellow
RMRCP	Rat Management for Rural Communities
SOS	Stamp Out Sleeping Sickness

## RIU AS A RESEARCH PROGRAMME: QUALITY OF SCIENCE

G. J. Gill

This part of the evaluation is concerned with the social science behind putting research into use, rather than the agricultural sciences that underpin the techniques and technologies intended to be put into use. Its purpose is to help establish the quality and reliability of the evidence that is being generated by the RIU programme.

No single research design will fit all cases. For example there may or may not be hypotheses, experiments or models, but features of good science that are common across all disciplines are:

- A design that is characterised by logical rigour
- Knowledge of the state of the art
- Peer interaction throughout the process
- Accurate observation and an appreciation of the significance of these observations
- Reliability of observations and a knowledge of the degree of accuracy that is required
- Knowledge of potential errors
- Appreciation of the significance of any particular data point
- Open-mindedness regarding the possibility the approach taken is mistaken or inadequate

RIU underwent radical change in the aftermath of a highly critical Mid-Term Review (MTR) conducted in 2008/09<sup>254</sup>, and it has become common to refer to the pre- and post-MTR periods as Phase 1 and Phase 2. The approach to evidence-gathering also changed quite radically comparing the two phases, so the distinction is important and will be referenced as necessary. Throughout this paper RIU in general is referred to as ‘the programme’, discrete individual initiatives at country level are referred to as ‘experiments’ (e.g. Rwanda cassava platform, FIPS Africa,) and groups of such activities as ‘experimental modalities’ (Best Bets, Africa Country Programmes, Asian Innovation Challenge Funds).

### 1. Research Design

RIU is a research project which aims to test a number of alternative pathways to put research into use. Its predecessor, the RNRRS, as well as producing research products, also generated some key lessons about the process of putting research into use. Fundamental to this was a growing (but far from across-the-board) acceptance that the traditional ‘linear’ model of innovation was inadequate for this purpose. The basic assumption of the linear model is that “The initiator of innovation is science, and an increase of scientific inputs into the pipeline will directly increase the number of new innovations and technologies flowing

---

<sup>254</sup> ITAD 2009: *Research into Use Programme Mid-Term Review Final Report* (revised version); January.

out of the downstream end.”<sup>255</sup> It is surprising that RNRRS took so long to learn this lesson, given that widespread realisation of the inadequacies of the linear model long predated the Strategy. The key messages to emerge from RNRRS in this respect were outlined in one of its last publications, and are summarised in Box 1 below.

**Box 1. Key messages from RNRRS regarding the IS approach**

- Many elements of the Innovation Systems (IS) approach were implicit in some of the research programmes funded by RNRRS as they evolved, but this was largely unsystematic across the programmes, and varied in timing, degree and effectiveness
- The IS approach refocuses attention from research to the process of innovation; research remains important, but becomes just one element of a wider system of activities and organisations. The interaction between suppliers and users of knowledge is at the heart of IS, and this ensures the relevance of the research taking place
- Some programmes found the IS framework useful in providing guidance for research managers wishing to achieve innovation; although not a panacea, it provides valuable insights as to why innovation may or may not occur
- The IS framework indicates which actions taken by managers of research programmes are most likely to be effective in bringing new ideas and technologies into use; an initial system diagnosis is vital
- The IS approach requires a very flexible and evolutionary approach to programme management and finance
- An essential feature of the approach is to invest in monitoring the research management process and systematised learning

(Based on Susan Turrall 2006: *From Research to Innovation Systems: Learning from the Renewable Natural Resources Research Strategy Series*)

This learning experience is reflected in RIU design, which places the Innovation Systems (IS) approach at the core of its strategy:

*The innovation systems approach offers a way forward in that, by understanding and mapping the system, we are able to identify the critical points of intervention that may enhance the effectiveness of the system as a whole, and the types of intervention that might be most productive in varying contexts and for different groups. Our hypothesis is that: “an innovation systems approach will prove more effective than previous linear approaches at getting research outputs into use for the benefit of the poor”.*<sup>256</sup>

Innovation is defined in the RIU website as “the application of new knowledge, or of existing knowledge used in new ways and contexts, to do something better”.

Placing the IS approach at the centre of RIU’s activities from the start of the programme was

<sup>255</sup> OECD 1997: *National Innovation Systems*; Paris

<sup>256</sup> RIU *Final Inception Report*, July 2006-June 2007

a realistic reflection of both RNRRS experience and the fact that DFID's Sustainable Agriculture Strategy, which was then being rolled out, had already adopted an IS approach. Hence research that produced insightful lessons about how to implement an IS approach could be expected to make a very useful contribution to knowledge in this field.

The RIU research framework has two broad categories, or components. The first is an implementation component comprising a set of around 45 experiments spread over 14 African and Asian countries, experiments that are designed to try out different ways of putting research into use. The second component is lesson learning: 'It combines lessons from the experiments with knowledge about putting research into use that is generated outside the Project to produce policy guidance on supporting and encouraging innovation in agriculture.'<sup>257</sup> RIU's experiments are therefore key to realisation, not only of the first component, but also of the second: "the projects or organisational activities financed by the programme ... are experiments in the sense that they are purposeful environments the RIU has set up with an explicit agenda of learning".<sup>258</sup> This is an important point, because in the course of project implementation this view seems to have lost ground in terms of learning activities being firmly rooted in the experiments, as will be discussed later.

### **Box 2. RIU's Experimental Modalities**

In order of their introduction by RIU, these are:

#### **1. Asian Challenge Fund Projects**

These "tended to be of a rather modest scale, focussed around RNRRS-era project teams and themes, with the logic that a final 'into use' phase could extract the elusive impact" that was desired

#### **2. Africa Country Programmes**

The emphasis here "was to establish offices to incubate clusters of research development and enterprise organisations around development opportunities and, in doing so, put RNRRS and other research into use. The assumption was about the need to was about the need to build systems that could respond to opportunities and challenges by mobilising ideas and expertise, including research A key approach was the idea of an innovation platform. This tended to be suite of processes to get people talking to each other, rather than necessarily involving the setting up (of) a formalised body."

#### **3. Best Bets**

"This used a venture capital investment-style selection process to identify business models and public-private sector partnerships that centred on the delivery of research-derived products and services to the poor. RIU support is helping incubate these business models and partnerships, often by helping create awareness among the poor for products and services that companies can then sell to them. Some aspects of this experiment involve encouraging civil society organisations to behave more like private companies."

**Source:** Andy Hall, Jeroen Dijkman and Rasheed Sulaiman V.: *Research Into Use: An Experiment in Innovation*; LINK Look, United Nations University-MERIT, March 2010

<sup>257</sup> John Wyeth: *Research Into Use Impact Evaluation: Method Options and Approach Issues*; September 2010

<sup>258</sup> Jeroen Dijkman (RIU Central Research Team): comments on the Evaluation Approach Paper

The experiments under the first component fall under three broad categories (here called the ‘experimental modalities’) which are described in Box 2. A fourth modality, ‘Investment for Development’ was planned, but was never established in practice.<sup>259</sup> It is not clear what the effect will be of introducing different modalities in Asia and Sub-Saharan Africa, given the very different histories of agricultural innovation in these two areas. This introduces an additional variable to complicate the lesson learning process.<sup>260</sup>

Of the three modalities outlined in Box 2, the first is the least innovative, and, the MTR expressed serious reservations regarding its ability to “move the RIU model far enough forwards”, given the relatively small scale of projects as well as the lack of concern for replicability in Asian Innovation Challenge Fund AICF design (p.11). Nevertheless, all three modalities are in theory capable of, at least to some extent, helping the investigator to understand and map the system in such a way that (in the words of the RIU Inception Report) “we are able to identify the critical points of intervention that may enhance the effectiveness of the system as a whole”. In order to achieve this, however, monitoring has a key role to play, and there are reasons for serious concern on this front, as will be shown later.

### 1.1 Logframe Outputs

The logframe has gone through a number of iterations during the course of implementation. The original version had three outputs:

1. Significant use of RNRRS and other natural resources research outputs for the benefit (direct/indirect) of poor people in diverse contexts
2. Research into use evidence and lessons learned generated with the evaluation partners
3. Policy processes enabled by research into use principles, lessons and discourse

This formulation has evolved into the current version, which has two outputs:

1. To introduce and implement experimental modalities which seek to expand the demand for and use of pro-poor agricultural research/technologies, and
2. To research the experimental investment models, disseminate findings and, thereby, increase understanding of how to promote and expand use of agricultural research and technology.

In neither version of Output 1 is the concept of sustainability addressed. In the first, the implication is that research should be put into use, but there is no mention of *keeping* it in use. Output 1 in the latest version contains an implicit but crucial assumption that the use of pro-poor agricultural research and technologies is constrained by lack of demand. This no doubt reflects the starting proposition that the linear approach was a supply-push model

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<sup>259</sup> Two other experiments are engagement in policy dialogue and the use of a third party private technology broker to search for research products beyond RNRRS. The first of these is covered elsewhere in this report, while the second is in its early stages and has not been included in the present evaluation.

<sup>260</sup> Consideration was given within RIU to both introducing an Innovation Challenge Fund approach in Africa and the Country Programme approach in Asia, but neither of these came to fruition.

based on the flawed assumption that supply would create its own demand. However, as the present evaluation has established, while demand may be a necessary condition for putting research into use, it is far from being a sufficient condition. What is also needed for sustainability is a supply chain that is capable of delivering research products to the farmer.

This is nowhere more graphically illustrated than in the *Rat Management for Rural Communities Project* (RMRCP) in Bangladesh. Here the lead NGO, AID-COMILLA, did excellent work in creating demand for rat control technology. Villagers had been well aware of the damage inflicted by rats both in the field and, more particularly, in the household, where these rodents not only eat stored food, but also destroy household goods such as bedding, and personal effects such as clothing. They even damage housing, as their borrowing undermines walls, sometimes causing them to collapse. However the people knew of no safe and effective technology to counter this. Their main management technique was to use rodenticides, but these were not only environmentally harmful and a threat to health, but were also of decreasing effectiveness, as the surviving rats learned to avoid them. RMRCP's awareness building efforts taught villagers that rats also carry serious health hazards, in the shape of contamination of the food they did not eat (via urine, faeces and saliva). The Project thus helped create demand, and then built on this by creating a supply of environmentally-friendly rat control technologies. Only one of these, a spring-loaded baited trap, was in high demand among beneficiaries. However, failure to create a supply chain for this technology meant that when the traps failed (which they tended to do after a year to 18 months) – by which time the Project had moved on to a new set of villages – there was no alternative source of supply.<sup>261</sup>

Further investigation revealed that the Project had imported the rat traps (a technology that had previously been validated by the RNRRS Crop Protection Programme) and contracted a Dhaka firm to produce 20,000 units. These were then sold in the intervention villages, with training provided in their safe use. There was, however, no attempt to interest wholesalers and retailers in stocking them, and no analysis of prospects for creating a commercially-viable supply chain. Such analysis was essential, because, while villagers who had been trained to use the traps reported being willing to pay up to three times the amount they had been charged by RMRCP – suggesting reasonable prospects for profitability – the manufacturer had required, and would continue to require, payment up-front, and this would tend to deter prospective wholesalers.<sup>262</sup> Essentially the project is relying on the government's Department of Agricultural Extension to adopt this technology and scale it up across the country, despite the lack of evidence that the Department has either the capacity or the funding to do this, or that government procurement rules would permit prepayment.

This RMRCP is by no means unique in this respect, although in some other cases managers

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<sup>261</sup> Information based on evaluation team's interviews with RMRCP current and former participants in the villages of Haripur, Baraipur and Mirjanagar, Comilla District, Bangladesh.

<sup>262</sup> Information based on interviews with AID-COMILLA staff and with the Production Manager, Mirpur Agricultural Workshop and Training School, Dhaka, Bangladesh.

of the experiment in question took active steps to identify and address the supply chain problem. Hence in the *Promoting sustainable coastal aquaculture in Bangladesh* experiment, it was reported that high demand for the technology had created great scarcity in the supply of natural crab seeds. Noting that at least two crab seed hatcheries would have to be constructed to meet demand for crab seed, the implementing NGO identified sites for the two hatcheries and gained the support of Bangladesh Bank to finance construction.<sup>263</sup> Similarly, in the Army Worm Best Bet (AWBB) in Kenya, there were regulatory obstacles to using the pheromone that was to bait the moth traps, as it fell under regulations meant to deal with pesticides, nor biological pest control agents. Dealing with this required carefully nuanced negotiations involving the AWBB, the Best Bets technical support team and the Ministry of Agriculture, but in the end it was possible to establish a supply chain, so that farmers now have access to the pheromone in question.<sup>264</sup> Similar registration problems have been encountered and are being addressed by staff of the *Real IPM* Best Bet in the shape of the need to put biological control agents into use.<sup>265</sup>

## 1.2 Country Assessments

An essential part of creating knowledge of the state of the art is to explore and map at the outset the institutional environment in which experiments are to be carried out. Hence, before each RIU African Country Programme was established, a Country Assessment was carried out, and a Country Assessment Report produced. A country strategy then followed from this exercise. The various Country Assessments worked to the same TORs, but the teams were different, so that there is a lack of standardisation across the reports. Surprisingly, only one of these reports (Sierra Leone) contained a methodology section, so it is difficult to assess what methods were used in the other cases. A basic issue that a country assessment might have addressed is the circumstances under which farmers have historically adopted, or fail to adopt, innovations. Since there are many possible explanations (lack of knowledge, lack of finance, risk aversion, lack of market orientation, etc) this would seem to be a fairly basic starting point, but it is not clear from the Country Assessments that this was done, even in the case of Sierra Leone.

There was no Country Assessment for the AICF or Best Bets, as these are not national-level programmes.<sup>266</sup> In one case, however, the *Participatory Crop Improvement Programme in Asia*, participatory approaches were used under its RNRRS predecessor from the outset (in the shape of Participatory Varietal Selection and Participatory Crop Breeding), so that the farmer's perspective on new varieties were incorporated from the start. There is little doubt that this was a major factor behind the rapid spread of the innovations that were introduced by this experiment.

<sup>263</sup> Source: *Promoting sustainable coastal aquaculture in Bangladesh*; quarterly report, Oct-Dec 2010

<sup>264</sup> Interview with Dr Andrew Ward, Best Bets Technical Support, November 2010

<sup>265</sup> *Real IPM Best Bet: Lesson Learning Report*; January-March 2010

<sup>266</sup> An exception was Bangladesh, where a Country Assessment was initiated, but this was not followed up by a Country Strategy and no use ever seems to have been made of the CA.

### 1.3 Research Design in Phase 2

The MTR found that, despite having developed a central hypothesis, the programme lacked a unified vision, and was thus too diffuse:

*Overall, we conclude that the MIL work has been slow to take-off, particularly the Component 2.2 'knowledge' work which lacks a strong methodological, and thence analytical, framework. The 'monitoring and impact' work and Output 1 activities (ICFs and Country Programmes) have not been well integrated until more recently. On one hand, Country Programme MIL work tended to work independently of the Country Programmes, and on the other, the ICFs have bought-in separate quantitative M&E support (which adds to the actual spend on MIL). The communications work in RIU has been criticised for lacking substance, this substance is meant to be generated in large part from the MIL work. It is a significant weakness that Outputs 2 and 3 have not worked together to achieve this. As part of this, the MIL team need to start generating visible 'product', other than working papers on Grapevine (p.28)*

### Box 3. The Research Design of RIU Phase 2

The research design consists of the following key elements.

1. The aim of the research is to contribute to an understanding of how agricultural research can best be put into use for developmental purposes. The research is premised on the notion that this field of investigation is not about how to put research products, technologies and ideas into use, *per se*, but rather about how the process of research can best be used within the wider process of innovation.
2. The specific research question being addressed is: *What configurations of relationships and processes around agricultural research are required in different contexts, for different types of innovation (technical, institutional and policy) at different points in the innovation trajectory and what policy and institutional settings support and steer these innovation trajectories towards different social, economic and sustainability goals?*
3. A better understanding of the relationship between research and innovation, combined with insights about which approaches work under which circumstances, will help planners and entrepreneurs make choices about investments that will enable innovation and have developmental impact.
4. The centrepiece of the research design is six overlapping innovation narratives. These narratives will provide competing and complementary explanations of the circumstances that lead to agricultural innovation. Each implies different roles for research and each has a set of hypotheses about how innovation takes place. The main purpose of these narratives is as a framework to help sort evidence about how research gets put into use under different circumstances.
5. The research will use the four RIU experiments (Africa County Programmes, Asia Project Clusters, Best Bets and the Innovation Finance Facility) to generate evidence that explains the circumstances under which these innovation narratives hold true and to understand the sequencing and clustering of these modes of innovation and the location and role of research within these processes, as well as the opportunities for private investment and public policy.
6. To ensure that RIU's research can contribute an understanding to all six narratives, gap-filling case studies will be selected from outside the programme's activities.
7. The approach to putting research into use adopted by RIU is an evolving one that will develop incrementally by learning throughout the programme's life. Direct comparison of the added value of the programme's approach will, however, be conceptually problematic. The programme nevertheless wishes to explore comparator cases where more traditional approaches to agricultural research and innovation have dominated. This will be achieved by investigating a limited number of cases through histories of selected research and innovation trajectories.

*Source: RIU Central Research Team Work Plan; May 2009; p.2*

These concerns were taken so seriously that in Phase 2 the previous MIL (Monitoring, Impact Assessment and Learning) team was discontinued and a new Central Research Team (CRT) with new personnel established to take over this facet of RIU's work. The CRT's staff complement is a team leader, two senior professionals responsible for leading research in Africa and Asia respectively (each employed roughly 75% of full time), and six Research Fellows, each responsible for specific aspects of the work.

### 1.3.1 The Central Research Team

The CRT developed a research design whose key elements are listed in Box 3. This contains two crucial features that require further examination. One is obviously the ‘centrepiece’ statement in #4 (see below). The second emerges from juxtaposing #1 and #5. There is a commitment under #5 to use the RIU experiments to generate evidence to implement the research design (albeit bolstered by ‘gap-filling’ information from non-RIU sources). However the statement under #1 that the research is not designed to establish “how to put research products, technologies and ideas into use, *per se*” represents a major departure from what had been done at the experiment level in Phase 1, because this is exactly what they were meant to do under Output 1 of the original logframe. This is not a problem in itself, but the change to investigating ‘how the process of research can best be used within the wider process of innovation’ implied that a new dimension needed be added to what the experiments were already doing. Facilitating this change is clearly the responsibility of the CRT. The Team’s response to this challenge is addressed later (see §2.2.2).

#### Box 4. RIU’s Innovation Narratives

1. **Poor User-Led Innovation.** Approaches that place poor farmers and consumers at the centre of the innovation process as they have superior knowledge of their production and social context.
2. **Public-Private Partnership-Led Innovation.** Approaches that seek to deploy the expertise, and resource and market perspectives of the private sector in an alliance with public actors and policies.
3. **Capacity Development-Led Innovation.** Approaches with a focus on institutional and network development with a view to enhancing innovation system capacity
4. **Below-the-Radar-Led Innovation.** Approaches that seek to nurture emerging innovation models that focus on the opportunities presented by large markets of poor people.
5. **Investment-Led Innovation.** Approaches that rely on financial incentives for innovation through a variety of operational forms
6. **Research Communication-Led Innovation.** Approaches that seek to improve the transmission and availability of ideas to different audiences and make them accessible through databases that use communication as a network building tool.

*Source: RIU Central Research Team Work Plan; May 2009; Box 1*

The ‘Innovation Narratives’ are shown in Box 4. They appear to represent an attempt retrospectively to address a problem identified by the MTR, namely that CRT’s predecessor’s approach to research lacked a strong methodological and analytical framework. However such an attempt was to some extent constrained by the fact that at the point the CRT came into being it was too late to attempt to make fundamental changes in the design (as distinct from the mode of implementation) of the experiments. Hence at least some aspects of the

analytical structure had to be retrofitted onto the experiments. This was no doubt a very challenging – and in many ways frustrating – task for the new research team, and any criticisms of the six narratives has to be viewed in this context. However such criticism needs to be voiced, and they fall under three basic headings: (1) theories and hypotheses, (2) gaps and (3) overlaps. These problems could well have been identified and resolved during research design, had the framework been peer reviewed in accordance with best practice, but this was not done.

### 1.3.1.1 Theories and Hypotheses

There are many definitions of an hypothesis, but since the present review is using a social science perspective, the following (from anthropology) is appropriate:

*A proposition explaining a phenomenon such as the function of a behaviour or the origin of a trait. Hypotheses should be falsifiable (i.e., testable). Hypotheses are derived from theory.*<sup>267</sup>

The relevant theory in this case is the theory of change, but neither the CRT Work Plan nor any earlier RIU document postulates such a theory. The present evaluation team therefore derived one from project documentation, namely “that new forms of partnership will lead to innovation (which in turn contribute to poverty reduction and economic growth)”.<sup>268</sup> The staff of CRT, in response to this formulation, felt that, while this was definitely a part of it, RIU’s real underlying theory of change is “that there are different ways of organising and managing innovation which will work best under a particular set of circumstances at different points in the innovation trajectory (which in turn contribute to poverty reduction and economic growth)”.<sup>269</sup> It has to be said that the expression “different ways of organising and managing innovation” is a rather vague and less-than-satisfactory mode of expressing a formal theory, but at least it makes more the hitherto underlying theory explicit.

In contrast to the CRT, one of the Africa Country Programmes, Nigeria, has developed its own theory of change without prompting, even though this reads rather more like an hypothesis (or set of hypotheses) than a theory:

*By facilitating and promoting multi-stakeholder involvement in the uptake and use of specific RNRRS and NARS outputs to address specific innovation challenges in the cassava, cowpea/soybean-livestock and aquaculture value chains, and by working under supportive national policy and institutional environments related to these value chains, there will be: (i) significant improvements in enterprise productivity among the target stakeholders; (ii) poverty alleviation among rural and urban low-income actors of the target value chains; (iii) a boost in local livelihoods; and (iv) the emergence of sustainable public and private sector mechanisms and institutions*

<sup>267</sup> Department of Anthropology, University of Missouri ([web.missouri.edu/~flinnm/courses/mah/glossary.htm](http://web.missouri.edu/~flinnm/courses/mah/glossary.htm))

<sup>268</sup> Research Into Use Evaluation: *Approach Paper*, October 2010

<sup>269</sup> Dijkman *op cit*.

*that can effectively upscale and out-scale research into use processes across the country.*<sup>270</sup>

Annex 1 of CRT's Work Plan expands on the information given in Box 4 above, stating that "each of the narratives has implicit hypotheses and specific questions", which it then lists. Although it is difficult to understand why the hypotheses are implicit when they could just as easily have been made explicit, or why they are not all stated as propositions, the underlying hypotheses can be determined from the ensuing text. This exercise gives a total of 14 hypotheses (2-3 per narrative) and 17 research questions (2-4 per narrative). Testing so many hypotheses and answering so many questions adds up to a quite daunting research task – and in this case it is not one that is dictated by the need to retrofit the research design to existing experiments. Importantly (in view of the arguments that will be presented later in this paper – see §2.2.2) the text goes on to reiterate the key role the RIU experiments will play in testing the hypotheses and answering the questions: "To explore these different innovation narratives RIU will investigate its own experiments in putting research into use."

### *1.3.1.2 Gaps*

Although one would not wish to expand on an already quite lengthy list of 'innovation narratives', it should be pointed out that if these are the centrepiece of the RIU research design, there is an important gap in the shape of policy-led innovation. This is a surprising omission in a programme with such a strong policy focus. Moreover the policy angle could have been included in the list retrospectively, because most of the experiments have a policy-influencing component. One country in which some important agricultural policy reforms have taken place in recent years, and where there has been significant progress in terms of increasing agricultural productivity and rural poverty reduction, is Viet Nam.<sup>271</sup> The fact that two of RIU's experiments has a research site in that country afforded an opportunity for RIU to study the process of innovation in a very different policy setting from either South Asia or Sub-Saharan Africa, and this could have thrown up some very valuable insights about the role of policy reform in agricultural innovation. In Viet Nam land tenure policy reforms, market liberalisation and promotion of new economic incentives combined to play a critical role in accelerating agricultural growth to a truly remarkable average rate of 3.8 percent per annum between 1986 and 2005, increasing food security and reducing poverty throughout the country in the process and propelling the country into a major global exporter of rice, coffee and other crops.<sup>272</sup> Failure to attempt to learn lessons from this experience represents a serious missed opportunity.

<sup>270</sup> RIU-Nigeria Country Programme: Two Year (2009-2011) Work Plan (Narrative), August 2009 (p.5)

<sup>271</sup> These are (a) the Coalition to Diversify Income through Underutilised Crops in India and Vietnam and (b) *Linking Farmers with Markets for Rural Prosperity* (Nepal, Cambodia and Viet Nam)

<sup>272</sup> Michael Kirk and Tuan Nguyen. *Exiting from Collective Agriculture: Land Tenure Reform in Vietnam*; International Food Policy Research Institute, Washington DC, 2009

### 1.3.1.3 Overlaps

Table 1 tabulates RIU experiments and experimental modalities against CRT ‘research narratives’ (this is the CRT’s own formulation). The table shows that several of the experiments/ experimental modalities are ticked against several different innovation narratives, making it difficult to discern to which narrative they belong. For example: is *Client-Oriented Breeding in Asia* primarily a “Poor user-led” innovation, a “Public-private partnership/ agroenterprise-led” innovation, or a “Capacity development-led” innovation?

RIU Experiment/ Experimental Model	TYPE OF INNOVATION					
	Poor User- Led	Public-Private Partnership/ Agroenterprise Led	Capacity Development- Led	Below-the- Radar Led	Investment- Led	Research Communication- Led
Client-Oriented Breeding, Asia	**	**	**		*	* (Communication for innovation)
FIPS East Africa		**	*		*	* (Knowledge Management)
Real IPM, East Africa		**	*		*	* (Communication for innovation)
Sleeping Sickness		**	*		*	* (Communication for innovation)
Army Worm		**	*		*	* (Communication for innovation)
NERICA		**	*		*	* (Communication for innovation)
Commercialisation of Technologies		**			**	* (Communication for innovation)
Africa Country		*	**	*	*	*

Programmes						(Knowledge management and communication for innovation)
Asian Value Chain Cluster		**	*	*		* (Communication for Innovation)
Asia NRM/Adaptive Collaborative Management Cluster			**	*		* (Communication for Innovation)
Non-RIU gap-filling cases			Policy and innovation: Regulation of Biotechnology	True below-the-radar cases driven by a large market of poor people not in the RIU portfolio. Case to be selected	Investment-led innovation case needed to cover financing arrangements not in RIU portfolio, eg venture capital	** (ICT and research communication in Asia and Africa)
Source: RIU <i>Central Research Team Work Plan</i> ; May 2009, Tables 1 and 2 (matrices inverted for ease of reading); contribution of evidence to innovation narrative: ** = primary * = secondary						

How can this Best Bet generate meaningful lessons about a particular ‘innovation narrative’, when it is classified as ‘primary’ under three of the six, and as ‘secondary’ in two of the remaining three? The same argument can be made about all of the experiments/experimental modalities listed in the Table, since all of them are ticked in more than one box. This raises further questions as to what additional explanatory power this categorisation adds to the analytical framework.

This last point was taken up by one of the African Best Bets projects in one of its quarterly reports:

*In the six innovation narratives, (Real IPM) appears to have elements of both Public-Private Partnership-Led Innovation and Opportunity-Led innovation (large market of poor cereal farmers in Western Kenya). Training of farmers is one of its activities, although not a rationale or objective of the BB. It can therefore be said to also have limited elements of Capacity Development-Led Innovation.*<sup>273</sup>

### 1.3.2 African Best Bets

The ABB does not have an explicit formal research framework, a theory of change or hypothesis or set of hypotheses. It is instead postulated on the proposition that failure to

<sup>273</sup> Real IPM Best Bet: *Lesson Learning Report*; January-March 2010

get RNRRS (and other) research into use in developing countries is a special case of failure in the knowledge market. This was later formalised and further elaborated in the shape of an RIU Discussion Paper,<sup>274</sup> where it is argued that the linear model (which is what the RNRRS primarily was) stands in sharp contrast to the way knowledge is generated in the industrial world, “where there generally exists a complex scientific system whose services may be drawn upon fairly readily by productive units. Typical components of such a system are the R&D departments of firms, specialist engineering and consultancy firms and the network of institutions in the public research sector, which possess a wide range of scientific and technological facilities of relevance to the business of economic production” (ibid. p.4). In contrast to this, the system found in poor countries dominated by subsistence agriculture is characterised by (a) a belief that the appropriate vehicle for agricultural R&D is a publicly funded agricultural research system to produce ‘knowledge’ that will benefit the poor farmer, (b) a publicly funded agricultural extension system responsible for generating technology packages, based partly on research products produced by the national system and (c) handing over responsibility for communicating these packages to agricultural extension agents who are often poorly qualified and always under-resourced to do the job. This is all complicated by the way in which agricultural scientists view and value their work and consider that ‘good science’ can only be pursued under conditions of controlled experimentation (*ibid.* pp 11-12).

Best Bets is designed to address the market failure problem by (a) identifying RNRRS (and other) technologies with high potential to have impact at scale hence maximising the probability of having a research product which will be attractive to poor farmers, (b) creating researcher-private sector partnerships that can circumvent the problems associated with the traditional public sector model as outlined above. This approach makes Best Bets the most innovative experimental modality within RIU, but this also tends to make them relatively high-risk. In keeping with its espoused venture capital approach, then, it must be accepted that there is likely to be a relatively high failure rate for some experiments to be set alongside expected high returns from others.

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<sup>274</sup> Norman Clark and Ian Maudlin: *Putting Research into Use: A Market Failure Approach*; RIU Discussion Paper Series, No. 4, September 2010.

## 2. Research Implementation

As noted at the beginning of this paper, accuracy and reliability of observation, an appreciation of the significance of observations and knowledge of the degree of accuracy that is required in observations are key to good science. In the case of RIU this means that monitoring of experiments in order to test the hypotheses and answer the research questions would play a pivotal role in determining the quality of science. It also means having sufficient flexibility to conduct further investigations on key issues thrown up by the experiments during the course of implementation.

There is, however, some confusion over what type of programme RIU is, and therefore related confusion over what should be monitored. The MTR (p.7) noted that “since inception, the programme as a whole, and between its components, has tended to shuttle between the four objectives within the broad Purpose domain:

- Adding value to RNRRS (and other) research investment, by getting into use
- Having significant impact on poverty
- Learning about getting research into use
- Proof of the Innovation Systems hypothesis

This uncertainty has continued into the second phase. Hence the RIU website states that “RIU is primarily a research programme. In undertaking our research, however, we also aim to put existing research products into use at scale”. The second sentence, particularly the use of the expression ‘at scale’, implies that RIU is also a development programme. This unfamiliar combination has created considerable confusion. While at higher levels in the management structure the view of RIU as primarily a research project dominates, further down the chain – for example at the level of partners and other stakeholders of the ACPs – it is widely regarded as a development project. As noted by one of the Country Co-ordinators, RIU is a research programme, but many stakeholders see it as a development project because they associate DFID with development.<sup>275</sup> This seems almost an admission of defeat. Some of the confusion originates within RIU itself. One stakeholder noted that when they submitted their original bid for funding under the AICF (which happened during Phase 1) they had, in accordance with the research-orientation of RIU, included in the Concept Note a hypothesis that they were to test regarding innovation systems. However, for unexplained reasons, they were asked to remove this element from the full proposal and instead concentrate on maximising impact on farmers. To this end they had to both adopt larger sample size and collect baseline data so that this impact could be measured. This increased costs.<sup>276</sup>

### 2.1 Experiment/experimental modality level

Component 2.1 of the original logframe was ‘Monitoring and evaluation support and

<sup>275</sup> Interview with Dr David Suale, CC, RIU-Sierra Leone, February 2011

<sup>276</sup> Interview with Professor John Witcombe, Centre for Advanced Research in International Agricultural Development, Bangor University, March 2011

synthesis”, whose main aim was to provide “a consistent and comparable approach to and adequate support for monitoring and evaluation, and reflection and learning”.

The MTR found that the Asian Innovation Challenge Funds “appear to have a solid basis for monitoring through their logframes, indicator sets, sampling frameworks and protocols for data management. This has been achieved through additional support from the Statistical Services Centre at the University of Reading, and also through inter-project learning through the Bangkok MIL workshop” (p.12). A review paper conducted across all experiments by the present evaluation broadly agrees with this assessment, noting that all of the AICFs had baseline studies which were intended to be used as a set of starting points against which future impact assessments could be conducted.<sup>277</sup> Monitoring in the AICFs, however, has not been entirely without its problems, as will be shown later (see §2.2.2 below).

#### **Box 5. Data Availability in the RIU**

- Data availability within the RIU project is patchy.
- Data collection was more structured under Phase 1 than under Phase 2
- The only standardised data for the country programmes are the data sent to the MIL based on the forms designed by the MIL component during Phase 1. And of these only the Intervention CVs were generally completed.
- Since Phase 2 started the country programmes are no longer required to collect regular data although some have still done so. Both West African countries have systems in place for the collection of livelihood data connected with their platforms and one or two of the East African countries, aware of the deficiencies in their data collection systems since Phase 2 began, have been planning to do better, but they would like to have more guidance on what to do.
- The Asian projects have generally made a good effort to collect data, but the focus of impact for most of them (not all) is the household rather than institutional change or policy.
- Most of the experiments / projects were very forthcoming with their data (the two exceptions were the fish and the underused crops projects in Asia, both of which set conditions, but I expect these could be overcome). These data can therefore be looked on as available for use.
- The Best Bets activities vary widely in their approach to data collection. FIPS are way in front but again the data are mainly aimed at measuring livelihoods impacts and the process of data collection and entering is in its initial stages. The others only collect process data for their own use
- There are also data that appear in documents associated with the country assessments for the country programmes, but the assessments were carried out by different people and the data in them are therefore inconsistent. I have not been able to ascertain whether the raw data (beyond what appears in the published material) are available for the country assessments.

Source: John Wyeth: *Research Into Use Impact Evaluation: Method Options and Approach Issues*; September 2010 (p.23)

<sup>277</sup> John Wyeth: *Research Into Use: Method Options and Approach Issues*; September 2010 (p.20)

Monitoring arrangements for the African Country Programmes had not yet been fully put in place at the time of the MTR, so little could then be said about them. It was noted, however, that: “It will be important that the Country Programme MIL work is able to establish an M&E system that can compare across platforms and countries to make a meaningful contribution to the understanding of agricultural IS, as well as assess the performance of individual platforms” (p.13). This observation assumes ironic proportions in view of what happened subsequently (see §2.2.2 below).

The review for the present evaluation<sup>278</sup> covered all 14 countries and all experiments and found a very mixed picture with respect to monitoring and data availability. Its main findings are summarised in Box 5. Four important points arise from this categorisation. First, the above MTR recommendation that an M&E system for the ACPs should make it possible to compare across platforms and countries was initially followed, but then discontinued under RIU Phase 2. Second, ACP countries now lack guidance as to how to conduct monitoring operations, even though some have expressed a need for this. Third, the fact that the AICFs collect good data, but that this does not include information on institutional change or policy, indicates that they are working towards fulfilling Output 1 of the current logframe, but not Output 2. Fourth, the fact that Best Bets (other than FIPS) collect and process data ‘only for their own use’ suggests a similar situation. In the case of ACPs, the programmes did collect data on institutional change in the shape of the Intervention CVs, but this was meant to be completed every four months, and by the time the second report was due the MIL system was no longer operational, so the ICV was completed only once and therefore provided baseline data only and did not become the basis of a process monitoring. In the absence of guidance from RIU, monitoring, at least in the three ACPs that were visited as case studies for the present evaluation (Nigeria, Rwanda and Sierra Leone), monitoring activities in most experiments consisted of: ensuring the recommended practices were followed, some rudimentary impact data collection (usually in the shape of sales of recommended inputs) and basic troubleshooting. One ACP (Rwanda) did not collect baseline data at all. Where baseline data were collected, institutional aspects were confined to the single round of the Intervention CV referred to earlier.

There are three additional major monitoring/analysis issues that have not been adequately addressed across RIU experiments, as indicated below.

### **2.1.1 Control Groups**

Control groups are commonly used in scientific research to establish counterfactuals: i.e. what would have happened in the absence of the intervention under investigation. A well-known example is trials involving placebos in medical research. However, almost none of the RIU experiments has established control groups, so that the attribution problem arises: when there are many development initiatives ongoing in a given country with a given

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<sup>278</sup> Wyeth op. cit.

commodity or commodity group, or when the general enabling environment is evolving, how can any observed progress be unequivocally ascribed to the RIU intervention? An exception is the *Linking Farmers with Markets for Rural Prosperity* (LFMRP) experiment under the Asian Challenge Fund in Nepal. Here households were selected in villages that where at least one Village Development Committee (the lowest tier of government) away from the intervention village, and the relevant variables were monitored in both. It was found that, although household incomes in the intervention villages rose, incomes in the control villages also rose, although by a statistically significantly smaller mean. Hence the inclusion of a control group in this experiment showed that the net effect of the RIU intervention, although positive, was less than would have appeared to have been the case had only the intervention households been included in impact studies.<sup>279</sup>

Data have been generated in the baseline of the *Participatory Crop Improvement in South Asia Best Bet* that could, with further input, generate a control group. Fourteen hundred farmers were interviewed at the start of this initiative; some of villages to which they belonged subsequently became intervention villages while others did not. It is planned that if a costed extension of this experiment is approved, at least a sample of these farmers will be re-interviewed, and the sampling frame will be purposefully designed so as to include both beneficiaries and non-beneficiaries, so that a post-hoc experimental-control matching will be achieved.<sup>280</sup>

It must be added that control groups are not needed in all cases. Hence, in the case of the Community Rat Management Project in Bangladesh, no other agency is doing any meaningful work on rodent control in that country, so any impact in the intervention village in the shape of reduced rat infestation can be attributed to the experiment. However, as a general principle, it is not best practice to simply to assume that a given intervention is immune to outside influences that might play a role in creating impact.

### **2.1.2 Outcomes and Up-scaling**

Outcomes in RIU have tended to be measured in terms of uptake of the new technologies. Sales of improved inputs, such as seed and other planting materials, are generally used as a proxy for uptake, but farmers are also often monitored to check that they are using recommended practices. Productivity improvements are also measured to varying degrees. Few experiments measure impact at household level. However there is at least one excellent example of this being done, in the FIPS Best Bet in Kenya, which has a comprehensive baseline and a set of 17 input/output forms used to monitor against this. These forms include measurement in areas such as household level food security and seasonality of household income and food security. However even with this excellent data

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<sup>279</sup> Interview with Dr Luke Colavito, Country Director, and Mr. Madhan Pariyar, Program Development/M&E Director, IDE-Nepal, January 2011.

<sup>280</sup> Interview with Professor John Witcombe, Centre for Advanced Research in International Agricultural Development, Bangor University, March 2011

base it may not be possible fully to review income impact within existing resources.

As in the case of control groups, few experiments, including FIPS, have attempted to measure up-scaling beyond the immediate beneficiaries. An exception is the Participatory Best Bet *Participatory Crop Improvement in Asia*, which conducted studies of up-scaling in India. Here a sample of 100 ‘non-target user households’ were surveyed and the results revealed that over the six years since a new variety had been introduced, the adoption rate by these secondary beneficiaries had followed the classic ‘S-shaped’ curve.<sup>281</sup> Another study commissioned by the same experiment measured the uptake of project-promoted varieties on a total area basis, and found that the rate of adoption was higher than that for varieties from other sources.<sup>282</sup>

### **2.1.3 Financial and Economic analysis**

No innovation is likely to be sustainable unless it is financially viable. Few if any RIU experiments attempt formally to evaluate the net financial, far less the net economic, benefits of research products that are being promoted.<sup>283</sup> Even where this is done, the techniques used are often inadequate. For example, some rudimentary financial cost-benefit analysis is done by some of the platforms in Rwanda, but the cost-benefit streams are not discounted, so that interest rates and/or the opportunity costs of self-financing are not taken into account, and innovations appear to be more economically attractive than they really are. Moreover, as interest rates tend to be higher for the poor (who cannot offer collateral) than for the non-poor, and since the poor cannot self-finance, failure to discount over time has an even greater distortional effect for them than it does for others. A major explanation of this lacuna probably lies in a surprising lack of economic expertise at both programme and experiment/ experimental modality levels.

Similar observations can be made about the paucity of social and institutional analysis in RIU experiments.

### **2.1.4 Financial Constraints**

When asked during the course of this evaluation if he saw RIU as primarily a research project or a development project, one stakeholder replied that it is “a development project with a research budget”. He has a point. The statement quoted earlier about a research programme aiming also to put existing research products into use *at scale* is indicative of this ambiguity. Although a research project would not cost as much as a large development project, good research is not cheap. While efficiency savings could no doubt have been

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<sup>281</sup> Monitoring, Impact Assessment and Learning Components (MIL) of the Research into Use Programme: *New Upland Rice Varieties for India’s Rainfed Agriculture*; Impact Study No.1; Figure 5 (n.d.; not earlier than 2009)

<sup>282</sup> JR Witcombe, KK Lal and KD Joshi. *Scoping Study on Adoption of Rice Varieties from Client-Oriented Breeding in the Nepal Rice Innovation System* (n.d.; not earlier than 2008)

<sup>283</sup> In financial cost-benefit analysis (CBA) the unit of analysis is the project, whereas economic CBA looks at costs and benefits at the level of the entire economy or sector.

made in a number of areas, adding requirements to included control groups, conduct impact studies on non-beneficiaries as well as beneficiaries and also add rigorous economic analysis would have stretched sometimes already tight budgets.

It was noted in 2.1.1 above that the *Participatory Crop Improvement in South Asia* best bet has the potential to conduct impact studies, including control groups, in its work, but this could not be done without additional time and funding. In the *Linking Farmers with Markets for Rural Prosperity* experiment in Nepal, the RIU component was part of a larger multi-donor funded project, and the inclusion of control groups was not RIU-funded.

As noted earlier, risk is an unavoidable part of innovation. The *ShujazzFM* Best Bet in Kenya is one of the riskiest in the entire RIU portfolio, based as it is on the premise that use of mass media to bring innovations to farmers will result in significant uptake, including uptake by the poor. If this hypothesis is not refuted by the evidence, this could represent a pivotal breakthrough in terms of innovation systems and could have extremely far-reaching consequences for the way pro-poor agricultural innovations are promoted in future. *ShujazzFM* has made great, and highly inventive, progress in terms of using the mass media to bring agricultural innovation to the attention of the public, including the rural population, but the idea that this will result in uptake on a significant scale has yet to be rigorously tested. Like IDE, *ShujazzFM* has multi-donor funding, and has used this, inter alia, to fund a large scale audience survey. This has established that the intervention has very substantial reach. However, the study in question was not designed to test impact in terms of actually getting agricultural innovation into use. Impact monitoring has to date been limited to feedback from readers and listeners. This is not only a small sample, but it is also a self-selected sample, and as such is statistically invalid. As of early 2011, *ShujazzFM* has employed a full-time researcher to conduct telephone interviews on a range of topics that will include uptake of agricultural technologies that it has promoted. There are, however, doubts regarding the methodology as a means of assessing agricultural innovation and its impact, particularly on the poor. These include: (a) issues about how the sampling frame will be constructed, (b) representativeness of the sampling frame (despite the mobile phone revolution in Kenya, how many poorer farmers have the level of telephone access that would permit them to be interviewed?), (c) the amount and type of information that can be collected by such an approach, (d) how this information can be cross-checked by on-the-spot observation. A rigorous assessment of impact would require an 'on the ground' sample survey, using either PRA, conventional survey methods or a combination of the two. This could not be done within the existing budget of this Best Bet, and without such evidence it would not be possible to state with any degree of assurance that the underlying hypothesis had been rigorously tested.

## 2.2 RIU programme level

### 2.2.1 Monitoring, Impact Assessment and Learning (MIL)

The MIL component of RIU during Phase 1 was implemented by a UK company, IOD-PARC, which developed a suite of monitoring tools for the purpose. The RIU Sierra Leone Country Programme was most assiduous in completing the range of MIL documents. This raw data was, as required, returned to IOD-PARC for analysis, but RIU-SL report that they had never received any feedback from this exercise.<sup>284</sup> This experience was far from unique. As noted in Box 5, of the full range of MIL data instruments that have been developed, only the Intervention CVs were generally completed and returned to MIL by all ACPs. This instrument contained questions that, as they were updated, could have generated information about institutional impact of RIU, but IOD-PARC failed to find a way of analysing the data that had been collected, so there was no output.<sup>285</sup> This is one of the reasons that MIL was discontinued after Phase 1.

### 2.2.2 The Central Research Team (CRT)

During Phase 2 responsibility for co-ordinating research by the ACPs and AICFs fell on the new Central Research Team. (African Best Bets has a separate co-ordination mechanism, which will be examined in §2.2.3 below.) A good deal of dissatisfaction with the MIL monitoring instruments had been expressed at field level, so CRT could have been expected to either substantially revise these instruments or to develop replacements. The need for specially-designed monitoring instruments is underscored by the following considerations: (a) the CRT research design commits the team to basing its findings primarily on the work of the RIU experiments (see §1.3 above), (b) these experiments are primarily geared towards fulfilling Output 1 of the current logframe (§2.1 above), and (c) the CRT is, as acknowledged by all of its senior staff, geared 100% towards fulfilling this logframe's Output 2.<sup>286</sup> All of this implies that a range of instruments would have to be developed to monitor the variables relevant to Output 2, and responsibility for this could lie only with the CRT.

Rigorous process monitoring is prominent among the requirements for this. Learning Innovation, Knowledge (LINK), which staffs the CRT, had earlier produced a report on process monitoring which containing a sample instrument for this purpose.<sup>287</sup> This paper makes the following observation:

*If innovation is increasingly about institutional change, as is our main argument here,*

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<sup>284</sup> Interview with Dr Foday Matkay, former National Monitoring and Learning Co-ordinator, RIU-Sierra Leone, February 2011

<sup>285</sup> Interview with Dr Andy Frost, RIU Deputy Programme Director, March 2011

<sup>286</sup> Interview with Dr Andy Hall and Dr Jeroen Dijkman, CRT, December 2010; interview with Dr Rasheed Sulaiman V., CRT, March 2011.

<sup>287</sup> Jeroen Dijkman A brief operational guide to process monitoring; Learning Innovation, Knowledge (LINK) (n.d.)

*one needs to be far more serious about how such change is monitored – and thus expand the perspective of normal M&E and impact assessments – which grossly underestimate change because it views this in terms of short-term tangible economic terms only (p.1)*

A range of methodologies for monitoring institutional change – stages of progress/monitoring domains, socio-economic benchmarking, episode analysis – is listed in this document, and the following observation made:

*The emphasis of such activities requires an action research/action development orientation and the need to think about progressive change in these processes, where the different progressive stages need to be defined and redefined throughout the project (p.1)*

CRT distributed this paper to RIU staff in the field, thereby implicitly endorsing its approach (indeed the paper had been written by a senior member of the CRT). If the statements in this paper are to be taken at face value, the experiments would have had to be involved in a range of process and institutional monitoring activities and action research/action using the suite of monitoring instruments listed in the above quotation, particularly the *stages of progress/monitoring domains* approach, which LINK identified as the ‘tool of choice’. But this was not done. Even in the case of the single instrument that was distributed to the experiments, no training was ever given in its use, and it was never deployed in the field. It was simply shared with the country programmes and it was left to them whether they wanted to use it or not. Only in one case, Sierra Leone, was an attempt made to use it (and even then it was a highly-modified version of it). Even in the Sierra Leone case the outcome was never analysed, and CRT has no knowledge what was done with the information generated.<sup>288</sup>

Nor was any attempt made to give the experiments an *action research/action development* orientation. There has never been any request from CRT to any of the experiments to launch a special study of any description. CRT has instead adopted a *laissez faire* approach to what the experiments are doing in terms of generating information in pursuit of Output 2, despite the fact that the experiments were clearly concentrating on Output 1, and despite the fact that many of the stakeholders – including implementing partners – regarded RIU as a development project, and were making little attempt to collect the type of information needed to fulfil Output 2.

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<sup>288</sup> Interview with Dr Andy Hall and Dr Jeroen Dijkman, CRT, December 2010.

### **Box 6. New Modes of Farmer-to-Farmer Innovation Spread in Rwanda**

In Karamuraji District in Rwanda's Eastern District, cassava had been a major staple until a few years ago, when cassava mosaic disease (CMD) had wiped out virtually the entire crop of the District and surrounding areas. The RIU-supported Cassava Innovation Platform introduced CMD-resistant planting materials and spread them through the Platform. Senior office bearers of Kiai Farmers' Cooperative reported to the evaluation team that they had received such materials and had grown this successfully. The information about these new varieties had then spread, and farmers from other parts of the District and from neighbouring districts had begun approaching the cooperative to obtain cuttings of the CMD-resistant varieties. The Kiai Cooperative reported that they had donated a total of 4,000 cuttings to these farmers free of charge. The Cooperative also gave 8,000 cuttings to farmers Rwimbogo Sector. In both cases this was done on the understanding that farmers who had received the new cuttings would follow the practice established by the Platform that, after harvesting their own cuttings, the recipients would distribute twice the number they had received to neighbouring farmers on the same terms. (They had also sold 48,000 cuttings to the Platform to be used in Farmer Field Schools, so they were not completely altruistic!)

Hence a technological innovation (disease free cuttings) appeared to be spreading along with an institutional innovation (exponential up-scaling through the multiplication and free distribution of cuttings) through farmer-to-farmer contact.

Source: Interview with Asletemani Bagara, Didace Maniraguha, Patrice Nyirabahinzi and Saïd Kadicsabe, Chair and other office bearers of Kiai Farmers' Co-operative, Karamuraji, Eastern Province, Rwanda; November 2010.

During the course of the case studies conducted by the present evaluation a number of areas emerged in which action research on institutional change could fruitfully have been conducted. For example during interviews with office bearers of a farmer's association that was a member of the Cassava Innovation Platform in Rwanda, it emerged that a spontaneous process of farmer-to-farmer extension had sprung up. If the information given about this by the co-operative is accurate, this represents an extremely important form of institutional change, and one that could have generated key lessons about the process of (a) putting research into use and (b) sustainably up-scaling this use (see Box 6 for details). On a potentially less positive note, a fertiliser dealer who was a member of the same platform reported that he had joined in order to gain access to customers.<sup>289</sup> This is a perfectly rational response to a market opportunity, but the fact that only one or two private dealers are platform members raises the possibility that they could use the inside information they

<sup>289</sup> Interview with Mr Jonal Mwiseneza, Managing Director, ADICOM Ltd (Agro-Dealer and Input Promotion Company), East Gatisbo Township, Eastern Province, Rwanda; November 2010.

thereby obtain to create a monopoly or cartel, to the detriment of programme purpose. It must be stressed that there is no evidence that this is happening, but it does call for further investigation to see if a special study is indicated.

Instead of looking for areas in which action research might usefully be launched to learn lessons in fulfilment of the output for which they are responsible, the staff of CRT have adopted a more reactive stance of paying occasional (roughly six-monthly) visits to the most of the countries (sometimes including field visits) and interacting with stakeholders. There is a problem with being more precise in terms of what activities CRT staff actually undertake during these visits, as they do not produce any documentation on them, such as 'back to office' reports. Indeed, unlike the other components of RIU, CRT does not even produce quarterly reports, which could otherwise have been used by this evaluation to assess what is studied during visits to the experiments. The only written source of information about what the CRT is doing to implement its component of RIU is the final product, i.e. Discussion Papers (DP) and other publications on the RIU website, and even these do not contain a methodology section.

Research Fellows are working on a range of topics: value chains, regulatory frameworks, gender, innovation brokering, agricultural policy, innovation intermediation, adaptive collaborative approaches in agriculture and natural resource management, below-the-radar private sector development, social entrepreneurship, public-private partnership, emerging development-relevant enterprises, and linking microfinance and technology supply.<sup>290</sup> All of these subjects are relevant to putting research into use, but there are two issues to be raised. First, as in the case of the senior staff of RIU, the Research Fellows produce neither basic 'back-to-office' reports nor quarterly reports. Not only does this make it difficult for an evaluation team to comment of the quality of science in some of the RF's work (i.e. those who have yet to produce DPs), but it also compromises any mentoring that is done by more senior CRT staff. Indeed there does not appear to be a very strong degree of mentoring from these staff in any case – certainly not in comparison with the mentoring that is done by the African Best Bets team (q.v.).<sup>291</sup> Research Fellows are expected to produce draft Discussion Papers, at which point senior CRT staff produce written comments on this output.<sup>292</sup> The only other mentoring is done in the course of the CRT general meetings, which are held in conjunction with the RIU's annual staff meetings.

The second issue is that the degree to which the Research Fellows' work is embedded in the work of the experiments is very variable. One is completely embedded, as the Nigeria-based Research Fellow is also the Co-ordinator of the Nigeria Country Programme; wearing his RF hat, he also works closely with the Co-ordinator of the Sierra Leone ACP. At the other end of

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<sup>290</sup> This list was compiled from the CRT's *Research Into Use Paper-O-Meter*; January 2011

<sup>291</sup> Interview with Dr Andy Hall and Dr Jeroen Dijkman, CRT, December 2010; interview with Dr Rasheed Sulaiman V., CRT, March 2011.

<sup>292</sup> To date three Research Fellows (Ann Kingiri, Vamsidhar Reddy T.S. and Utiang Ugbe) have authored or co-authored papers in the Discussion Paper series. See Table 3 below for details.

the spectrum, staff of three of the six experiments visited by the evaluation team reported that they had never been visited by a Research Fellow. Generally speaking, reports from the level of the RIU experiments indicate that the work of the Research Fellows is not integrated into the empirical work they are doing. There can, of course, be no objection to the Research Fellows working outside of the experiments – indeed this is part of the research design – but failure adequately to link their work into the experiments represents a missed opportunity to capitalise on the considerable investment (77 per cent of RIU’s total budget) that is being made in the experiments/experimental modalities.

### **2.2.3 African Best Bets**

At programme level, this is by far the most carefully monitored experimental modality within RIU.<sup>293</sup> It is mainly geared to serving Output 1 of the logframe, although it also aims to generate lessons learned in accordance with Output 2. Hence the O1-O2 asymmetries mentioned above concerning CRT do not arise. There are three part-time staff members, (a) a UK-based Senior Advisor (who works approximately 15% of full time on ABBs), (b) a technical support professional, based in Africa (roughly 75% of full-time) and (c) a Research Fellow, whose RIU time is split roughly 50-50 between Best Bets and the CRT.

The technical support professional visits all of the ABB experiments at approximately at 3-monthly intervals and produces a separate quarterly report on his findings on each. These reports follow a common format of: (a) Achievements/ progress/ outputs for the quarter just completed, (b) Activities planned for the next quarter, and (c) Discussion/comments. These quarterly reports are shared with the Senior Advisor, who synthesises the information across ABB and distils lessons learned from this. It is intended that lessons learned in the course of these activities will be the subject of a special report towards the end of RIU. Meanwhile this team has recently produced a report summarising progress to date on the ABBs.<sup>294</sup>

The Best Bets support team has arranged/conducted two special studies arising from issues thrown up by the monitoring process:

- A staff member of the Army Worm Best Bet reported that there had been some success in using RNRRS outputs in cocoa; the Best Bets support team requested RIU for additional support which was provided, to go back to the RNRRS team that had worked on cocoa to find out if any further use had been made of their research outputs
- The response from West Africa to the original Best Bets call for proposals was much weaker than that from East and Central Africa, despite the fact that all the variables in the calls had been the same; the ABB team therefore conducted a study (still in progress) on possible underlying reasons.

<sup>293</sup> There is also one Best Bets programme in Asia, *Participatory Crop Improvement in South Asia*. This is also carefully monitored, but for obvious reasons it is not monitored by African Best Bets and is not included in the analysis for this section of the report.

<sup>294</sup> Norman Clark and Andrew Ward: *The RIU Best Bets programme: A Progress Report*, April 2011.

The Research Fellow who has been assigned to ABB has been carefully mentored in the course of his work. During his first field trip (to the *Army Worm* experiment in Tanzania) he accompanied the ABB technical support professional and thus benefited from on-the-job training. Subsequent trips are preceded by phone conversations with the same professional and an agreed programme of work is established.<sup>295</sup> All of these field trips are focused on the relevant Best Bet experiment (*Army Worm* in Tanzania, and Real IPM (*Stop Striga*) in Kenya. The RF then reports back to the Best Bets support team on findings.

### 3. Research Outputs

RIU's main output (Output 2 in the logframe), which carries 70 per cent of the impact weighting, is meant to "increase understanding of how to promote and expand use of agricultural research and technology". Lesson learning is therefore at the heart of this exercise. The history of this programme, with its prolonged inception phase and radical shift in emphasis half way through the remaining four year period, must be kept in mind when attempting to assess the lessons it has learned and other outputs it has generated to date. In many cases it is simply too early to judge. Some outputs are still in the pipeline, while others are unlikely to emerge at all unless the programme (or at least parts of it) is extended in some shape or form. However the lack of action by the CRT to initiate the type of empirically-based research required to deliver against Output 2 makes it questionable whether the potential width and breadth of lesson learning is ever likely to be achieved.

#### 3.1 Lesson Learning from the Experiments

Most of the quarterly reports (QRs) of the experiments contain a section in which any lessons that have been learned in the previous quarter are to be reported. This section is completed in most cases, but there is huge variation in the quantity and quality of the output.

##### 3.1.1 African Country Programmes

In the quarterly reports of the ACPs the lessons that are reported to have been learned range from frankly banal observations of little practical use (such as "Partnerships are important to achieve results or get research into use" and "Partnerships are the only way for sustaining innovation systems and developing financially sound business enterprises") to some very perceptive, insightful and valuable observations. Among the latter, the Nigerian and Tanzanian CPs have provided particularly useful insights, some of which are quoted in Box 7 using gender issues by way of illustration (many other issues are also covered in these countries' reports).<sup>296</sup> However, these lessons are primarily focussed – like the ACPs themselves – at the level of Output 1 and are often quite context-specific. This is not in any way meant as a criticism of these ACPs, which are simply fulfilling their remit. However in

<sup>295</sup> Interview with Andrew Adwera, RIU Research Fellow, November 2010

<sup>296</sup> It must be stressed that these two country programmes are not alone in having garnered meaningful lessons in the course of programme implementation, but they are particularly strong in this respect.

terms of the broader picture, there is a corresponding lack of transferability in such recommendations, so that they provide at best a series of starting points from which lessons of wider applicability, and hence relevance to Output 2, might be have been drawn.

### **Box 7. Examples of Lessons Learned from Quarterly Reports in the Area of Gender**

#### **1. Nigeria**

*The issue of women seclusion in northern Nigeria is still high. It was observed that in the entire demonstration event that took place, very few women attended. This may not be unconnected with restriction in mobility of women due to cultural/religious practices and norms that exist in that part of the country. In view of this problem, directing safe storage messages to women in farm households may require the use of female extension agents for an effective means of increasing compliance*

Source: RIU-Nigeria Quarterly Report, April-June 2010

#### **2. Tanzania**

*The programme has indentified that the diversity in types of households is influencing the decisions of farmers (especially women) to engage in agribusiness activities. The types of household that farmers come from influence the ownership of the enterprise, decision making, sharing of income and labour. Although the programme is continuing to use a household approach to reach farmers, exceptions are made to accommodate and respond to emerging gender needs.*

(The report then goes on to list various categories of household – monogamous, polygamous, female-headed and elderly-headed – identifying strategies for each)

Source: RIU-Tanzania Quarterly Report, July-September 2010

In addition to the lessons included in its Quarterly Reports, the Nigeria Country Programme organised a “Learning Event”, a workshop that brought together RIU staff (including the RIU Head of Communications), members of the Innovation Platforms, staff of CGIAR institutions based in Nigeria, staff of research institutes and other public sector bodies.<sup>297</sup> This three day discussion thrashed out a number of lessons learned, particularly at the platform level. Somewhat surprisingly the report contained no section that pulled together the lessons from across the Platforms. There is, however, a separate document from the Nigeria CP which outlines such across-the-board lessons, reproduced here as Box 8. Some of these lessons are extremely important and could have formed the basis of a study to investigate whether similar conclusions could be reached in the Innovation Platforms of other ACPs. Any lessons emerging that were of wide applicability could then have provided a valuable contribution to Output 2.

<sup>297</sup> *DFID-RIU Learning Event, 9-11 November 2010: Evaluation of the Event*; Nigeria Country Programme, 2010.

### Box 8. RIU Nigeria: Early lessons learned

- *RIU Nigeria has benefitted from its business planning process which has helped to build a shared understanding of the work programme and build a sense of ownership and team spirit around the new business plan. This is in marked contrast to the previous plan which was prepared by consultants and given to team to implement.*
- *Working with value chain-based fora of self-interested stakeholders (the innovation platforms), has give the team valuable flows of business information, enabling the platform members to clearly identify innovations, raise questions and explore ways of adopting improvements in their businesses.*
- *RIU can benefit more people and organisations if most members of the innovation platform are representatives of occupational associations rather than stand-alone businesses or individuals. However, the internal organization of these associations can help or hinder uptake or delivery of research into use.*
- *Policy has a strong impact in the downstream sector where most of the innovation platform members operate. But the downstream sector is not a homogenous group; therefore, the most powerful interests tend to be more effective at influencing policy, while the weaker interest groups must learn to adapt to the policy environment as given. Thus, facilitating change in policy is very slow and difficult.*
- *RIU Nigeria has developed a strong working relationship with the Agricultural Research Council of Nigeria (ARC�) which is now convinced of the importance of getting research into use. Technical assistance has been provided to ARC� on the knowledge management of the research outputs from its member institutions over the last 10 years.*
- *Perhaps the biggest impact at scale can only be achieved through policy and mainstreaming of effective research into use processes and institutional arrangements. While there are indicators of progress, impact at scale will not be fully attainable as a short-term proposition (i.e. before June 2011 - the end of the current DFID investment).*
- *Changes at the RIU head office helped with the management of the RIU Nigeria programme - this included greater autonomy for the programme; delegated locally managed funds; more working capital in the business; increased investment; a more focused work plan; and better internal communications from the streamlined head office team.*

Source: RIU Nigeria Country Programme (not dated)

### 3.1.2 Asian Innovation Challenge Funds

In the AICFs a different reporting format is used from that of the ACPs, one which has not changed since the outset of RIU. This format does not, therefore, reflect the new logframe. The AICF format has no *separate* section for reporting on lessons learned, but does have a section entitled 'Highlights/Lessons Leaned'. Combining the two under the same heading has transpired to be unfortunate, because in most cases the former component tends to take precedence over the latter – a tendency which is no doubt encouraged by the

accompanying instructions, which also tends to downplay the importance of lesson learning:

*RIU Management would like to promote the achievements of the ICF teams as soon as possible. Please use this section to describe **significant achievements** resulting from the project team's activities. They may include examples of interesting observations about the propensity of target communities to **innovate** within the initiative. They can also include **unintended outcomes**. In the lessons learnt section we would encourage **negative as well as positive observations**. (emphasis in original)*

In fact no report detailed unintended outcomes or contained negative observations.

Only in one case, the *Linking Farmers with Markets for Rural Prosperity* (LFMRP) project in Nepal, did an AICP report on lessons of any major substance.<sup>298</sup> These are reproduced in Box 9. Interviews with LFMRP staff suggest that there is a great deal more to be learned from this experiment than appears in the quarterly reports, particularly regarding the participatory approach to putting research into use.<sup>299</sup> This is yet another area in which the CRT might usefully have initiated a special study, on participatory approaches as a generic issue feeding results into Output 2.

#### Box 9. *Linking Farmers with Markets for Rural Prosperity*: Lessons Learned

- *Formation of Apex Body as an apex institution at district level helped to unite the scattered MPCs and work together in a coordinated manner*
- *Regular Thematic Group meetings can raise awareness about application of PMCA and its benefits among neighbouring households*
- *High level personnel visit to farmers can encourage and enable the PMCA actors or thematic group actors to work closely for win-win benefits*
- *MPC Bimonthly/Quarterly meeting was very effective in participatory decision-making, work in enabling situation with transparent transactions and trustworthy environment*
- *Supervision and follow-up by MPCs themselves have made them feel ownership on MPCs and Thematic Groups as it is for their own benefit*

Source: LFMRP Quarterly Report for July-September 2010. PMCA is the *Participatory Market Chain Approach*; MPCs are elected Marketing and Planning Committees, which supervise project activities at grassroots level.

### 3.1.3 Best Bets

As in the case of AICF, the format for quarterly reporting on Best Bets accords relatively little prominence to lesson learning, listing it last among a number of issues to emerge from the activity, under *Communication, advocacy, policy influence or lesson learning issues that have*

<sup>298</sup> The *Reducing Poverty through Innovation Systems in Forestry* project also generated a number of interesting 'lessons learned', but these were more concerned with conflict resolution and conflict avoidance than about getting research into use *per se*. (Quarterly Report for July-September 2010)

<sup>299</sup> Interview with Dr Luke Colavito, Country Director, and Mr. Madhan Pariyar, Program Development/M&E Director, IDE-Nepal, January 2011.

*arisen that might need action by RIU management.* Perhaps as a result, not all quarterly reports contain a ‘lessons learned’ section, while some Best Bets produce none at all. Nevertheless some BBs have reported lessons that are of a generic nature (Box 10).

## 3.2 Research Publications

### 3.2.1 Peer-Reviewed Publications

Acceptance of a paper for publication in a reputed and peer-reviewed journal is *prima facie* evidence of quality of science. RIU has internal lists of articles published in such journals by its staff and associates, but on examination most of these transpire to be mainstream scientific research publications, rather than papers that report findings on the process of putting research into use. Hence the majority are irrelevant to RIU’s *raison d’être*. A number of other papers generated from RIU research are reported as having been submitted to internationally-recognised refereed journals, but not yet accepted for publication. In the case of Phase 2 papers, this fact has to be viewed in the context of the typically lengthy gestation period between submission to, and acceptance of, papers by academic journals.

Three papers already published, or accepted for publication, in such journals do address the issue of putting research into use. Two of these are by an RIU Research Fellow and address the important subject of the relationship between a developing country’s (in this case Kenya’s) emerging regulatory framework on biotechnology and the issues this raises for getting agricultural technologies into use by farmers.<sup>300</sup> However, as in so many other cases with work emanating from the CRT, this research is not embedded in any of RIU’s experiments. As noted earlier (see §1.1 above), the Army Worm Best Bet, which has one of its intervention sites in Kenya, faced regulatory obstacles to using the pheromone that was to bait the moth traps, as this biotechnology fell under regulations meant to deal with pesticides, rather than biological pest control agents. An examination of the process of confronting and overcoming this obstacle could have both embedded this work in an RIU experiment and provided a practical illustration of the importance of the regulatory framework to getting research into use.

The third paper originated from the *Participatory Crop Improvement in Asia* and is well embedded in this, the sole Asian Best Bet.<sup>301</sup> Noting the failure of previous donor-funded efforts to establish sustainable seed producer groups in Nepal, it identifies failure to create business management and marketing skills within such groups as a key factor in their post-project collapse. Under RIU auspices, the authors revisited three seed producer groups in

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<sup>300</sup> Ann N. Kingiri 2011. Conflicting advocacy coalitions in an evolving modern biotechnology regulatory subsystem: policy learning and influencing Kenya’s regulatory policy process; *Science and Public Policy*, 38(3), April.

Ann N. Kingiri 2011. *The contested framing of Biosafety Regulation as a tool for enhancing public awareness: Insights from the Kenyan regulatory process and BioAWARE Strategy*; Tailoring Biotechnology (forthcoming: May)

<sup>301</sup> J.R. Witcombe, K.P. Devkota and K.D. Joshi 2010. Linking Community-Based Seed Producers to Markets for a Sustainable Seed Supply System; *Experimental Agriculture*, Volume 46 (4) pp 425-437

Chitwan District which had been established in 2002 under an RNRRS project which had paid close attention to building up the groups' business and marketing expertise. The RIU study found that two of the three groups were not only still functioning, but were doing so with increased turnover, expanded shareholder income and higher capital reserves. Given the length of time these groups have remained in existence, this paper provides clear and peer-reviewed evidence of a key condition required for putting research into use sustainably, and therefore contributes significantly to fulfilment of Output 2.

#### **Box 10. Lessons of a Generic Nature Emerging from Best Bets Experiments**

- Once the GCS have started their business plans ... there is a change seen as Self Help Groups started investing in the GCS banks. Thus GCS banks are slowly gaining in importance and getting wider acceptance. Women's involvement in GCS banks helps in the sustainability of the banks. Women were already well aware of the concept and functioning of the SHG's, therefore it took no time for them to understand the concept of GCS banks.
- Refresher training in account keeping is very effective for quick understanding and adoption by CBSP members by regularly mobilizing local resource persons
- Engaging government line agencies in monitoring project activities opened up windows for producer groups to receive additional (public sector) support
- Field level training and field coaching was found effective for farmers.
- Mobilization of local trainers with practical experience (e.g. having their own seed business) is very effective to transfer institutional learning on seed marketing and business promotion.
- The matching fund approach through public-private-partnership is very effective in developing infrastructure for CBSP enterprises. Most of these enterprises are building storage and buying seed processing machines by mobilising support from different public and private sources
- Contract farmers' knowledge and technical skills regarding seed production should be reinforced frequently by radio programs and regular visits by seed company extension workers.
- The Farmer Field School (FFS) approach has proven to be an effective way of disseminating upland rice seed production technologies. The exponential effects of this approach seem to be working effectively ... This process empowers farmers to own the intervention; this has been a critical attribute towards enhancing the adoption of upland rice (NERICA) technology.
- The sustainability model appears to be sound; real IPM fronts itself purely and directly as a private enterprise which although looking at the bottom line, is operating to improve the livelihoods of the farmers in western Kenya. There is no ambiguity as to its nature; the BB coalition however is a hybrid organisation – more like a North South public private partnership involving 2 private companies and 3 public organisations. So far, Real IPM seems to have figured out how to do partnerships to make research work.
- There appear to be linkages and similarities in some of the activities and methodologies used by the BBs. An example is use of novel ways of getting and disseminating information e.g. mobile phones, GPRS and GIS technology by WTS and Real IPM, and training farmers by Real IPM and NERICA BB. Perhaps there is scope for the BBs to learn from each other and exchange experiences and pointers.

Sources: Adapted from various quarterly reports of *Participatory Crop Improvement in Asia*, *Army Worm* and *NERICA*.

### 3.2.2 The RIU Discussion Paper Series

The principal research outputs of RIU are to be found in a series of Discussion Papers (DPs) issued during the second half of 2010 (more are in the pipeline). In terms of quality of science, however, a considerable drawback is the fact that these papers are not normally peer-reviewed and are published only on the RIU website, so that their status as scientific papers should be treated with some caution. Details of already-published papers are provided in Table 2. The most recent of these revisits the six ‘innovation narratives’ that were discussed earlier (see §1.3.1 above) and deserves special attention (see §3.2.2.1 below). The remainder of the series may be classified under three broad categories: (i) theoretical papers written by RIU programme staff, (ii) papers written by RIU programme staff that aim to incorporate the outputs of RIU experiments and/or findings from other sources into a theoretical construct, (iii) papers written by the staff and affiliates of RIU experiments and experimental modalities. This categorisation reveals a crucial gap. No DPs have yet been published which are co-authored by RIU programme staff and RIU project (experiment level) staff. Such papers would have had the potential for synergy, by combining the theoretical background and across-the-(RIU) board experience of programme staff with the in-depth knowledge that project staff have gained of particular experiments and experimental modalities. It is a gap which provides further evidence a point made several times in this report, namely the fact that RIU as a programme is not sufficiently embedded in its own empirical work to generate the level of evidence required under Output 2.

#### 3.2.2.1 Research Design Revisited

A second gap in the coverage of the DP series is absence of papers analysing any of the six ‘innovation narratives’, which had been described as the ‘centrepiece’ of the CRT’s research design for RIU Phase 2 (see Box 3 above). A good deal of dissatisfaction has in fact been expressed from various quarters regarding these ‘narratives’, and the existence of such a gap might have answered these concerns. What actually happened was that at the end of 2010 the CRT published DP 11, which implicitly criticised its own original research design, billing it as having been based on what it called “stylised innovation narratives” (sic). This new paper, it is stated, “builds upon and further clarifies the research design of RIU”. It is aimed at developing a more robust framework and uses this “to map some of the experiences in the RIU projects in Asia (drawing) out the main innovation management tactics being observed”.<sup>302</sup> Citing an earlier paper,<sup>303</sup> the authors argue that the innovation process entails a range of tasks, which take place in three domains:

- Technical application (farming, agro-processing and marketing);

<sup>302</sup> R. Sulaiman, A. Hall, V. Reddy and K. Dorai: *Studying Rural Innovation Management: A Framework and Early Findings from RIU in South Asia*; RIU Discussion Paper No 11, December 2010

<sup>303</sup> C. Leeuwis and A. Hall. *Facing the Challenges of Climate Change and Food Security: the Role of Research, Extension and Communications institutions*; Report Commissioned by the Research and Extension Branch of the UN Food and Agricultural Organization, October 2010; Rome.

- “Organisations involved in supporting application (research, finance, advisory services, input supply, market players and companies), and
- The policy domain (legislation, regulation, routine practices)

<b>No.</b>	<b>Publ. Date</b>	<b>Title</b>	<b>Author(s)</b>	<b>Paper Type*</b>
1	Jul 2010	Research into use: Investigating the Relationship Between Agricultural Research and Innovation	Andy Hall <sup>1</sup> , Jeroen Dijkman <sup>2</sup> and Rasheed Sulaiman V. <sup>3</sup>	i
2	Jul 2010	Bottom-Up, Bottom-Line: Development-Relevant Enterprises in East Africa and their Significance for Agricultural Innovation	Andy Hall <sup>1</sup> , Norman Clark <sup>4</sup> and Andy Frost <sup>5</sup>	ii
3	Sep 2010	Innovation systems, Economic Systems, Complexity and Development Policy	Norman Clark <sup>4</sup>	i
4	Sep 2010	Putting Research into Use: a Market Failure Approach	Norman Clark <sup>4</sup> and Ian Maudlin <sup>6</sup>	i/ii
5	Oct 2010	It May Take a While: Insights on Agricultural Research for Innovation and Development in Nigeria	Utaing P. Ugbe <sup>7</sup>	iii
6	Oct 2010	Gender and Agricultural Innovation: Revisiting the Debate through and Innovation Systems Perspective	Ann Kingiri <sup>8</sup>	i
7	Oct 2010	New Organisational and Institutional Vehicles for Managing Innovation in South Asia: Opportunities for Using Research for Technical Change and Social Gain	Vamsidhar Reddy, T.S. <sup>9</sup> , Andy Hall <sup>1</sup> and Rasheed Sulaiman V. <sup>3</sup>	ii
8	Oct 2010	The Innovation Trajectory of Sleeping Sickness Control in Uganda: Research Knowledge in its Context	John Morton <sup>10</sup>	iii
9	Nov 2010	Africa Matters: Emerging Lessons from the RIU Country Programmes	Jeroen Dijkman <sup>2</sup>	ii
10	Nov 2010	What does Innovation Smell Like? A Conceptual Framework for Analysing and Evaluating DFID-RIU Experiments in Brokering Agricultural	Utaing P. Ugbe <sup>7</sup>	iii

		Innovation and Development		
11	Dec 2010	Studying Rural Innovation Management: A Framework and Early Findings from RIU in South Asia	Rasheed Sulaiman V. <sup>3</sup> , Andy Hall <sup>1</sup> , Vamsidhar Reddy T.S. <sup>9</sup> and Kumuda Dorai <sup>11</sup>	ii
<p>Authors' Affiliations:</p> <p>1. Head, Central Research Team; 2. CRT Africa; 3. CRT Asia; 4. RIU Senior Advisor;</p> <p>5. RIU Deputy Director; 6. RIU Director; 7. Country Co-ordinator, RIU-Nigeria</p> <p>8. Research Fellow, East Africa; 9. Research Fellow, Asia; 10. Professor of Development Anthropology, Head, Livelihoods and Institutions Department, Natural Resources Institute, University of Greenwich, and advisor to <i>Stamp Out Sleeping Sickness Best Bet</i>; 11. CRT Consultant</p> <p>* For an explanation of this numbering system see §3.2.2 above.</p>				

It is then argued that the key insight in the above is that 'these three domains have little meaning on their own' and that 'adaptation is about managing innovation at these multiple levels'. Based partly on earlier work by themselves and others, the authors then proceed to elaborate a set of "generic innovation management tasks that one would expect to see in a research-into-use-type experiment". These are: (i) functions, such as network development, (ii) actions, such as brokering, (iii) tools, such as innovation platforms, and (iv) organisational formats, such as for-profit hybrid companies.

The authors then examine the experience of an RIU-funded experiment under the Asian Innovation Challenge Fund, viz. *Decentralised (fish) Seed Production (DSP) in Bangladesh*, based on an unpublished report by a CRT Research Fellow. The experiment in question has set up a 'decentralised micro enterprise-based supply network to supply fingerlings of an improved breed of tilapia', in a particularly poor area of Bangladesh where rice-fish farming systems have become a key livelihood strategy. This experiment builds on fisheries work supported by a number of agencies, dating back to the early 1990s, and DP 11 identifies from this an 'innovation trajectory for application of DSP through RIU', showing how the RIU experiment built on the platform provided by earlier work to address constraints that had been identified on the process of putting research into use.

The paper notes that the AICF projects were 'at best set up with a rather simplistic theory of change' and proceeds to identify three types of hypotheses that were implicit in their design: 'the RIU hypothesis', 'specific implementation hypotheses' and 'innovation management hypotheses'. The AICF projects and the various components of the Asian Best

Bet project are then tabulated against these three types of hypothesis and a series of ‘insights’ (which are really questions) developed for each (*ibid* Table 1). In this paper’s Table 2, a similar format is developed, cross-tabulating AICF and Asian BBs against functions, actions, tools and organisational formats as described above.

While this new formulation represents a considerable improvement on the ‘innovation narratives’ (indeed, far from ‘building upon and further clarifying them’, it bears little resemblance to them), it is difficult to escape the conclusion that, in terms of research design, it represents too little too late – at least as far as RIU is concerned. It is too late to develop in the last six months of a programme a set of research questions (posed in the paper’s Table 1), which could have been the topic of specially-commissioned studies, had they been identified and acted upon earlier. (After all the AICF is the oldest experimental modality in RIU, dating back to the first half of RIU’s first phase.) The formulation can be described as ‘too little’ in that it draws mainly on what was probably the least innovative experimental modality of RIU (i.e. the AICF), and excludes the insights that have been gained from the ACPs as well as those accumulated from Best Bets (see §3.1.1 and §3.1.3 above). Even in the case of the AICF experiments, the questions seem, in at least some cases, to have been derived from the design of the experiments, rather than from experience gained in their implementation. This is evidenced by the fact that the present evaluation team learned during interaction with the staff and affiliates of three Asian projects (two AICFs and the sole Asian Best Bet), that visits by CRT staff have been very few in number and very limited in scope.<sup>304</sup>

### 3.2.2.2 Theoretical Papers

This subset of papers collectively demonstrates that the authors are closely familiar with the ‘state of the art’, in terms of theoretical aspects of putting research into use. DPs 1 and 3, together with the first part of DP 4, constitute a very useful scene-setting exercise. The first states the conceptual underpinnings of RIU. It reviews the theoretical literature on the subject of innovation systems and identifies a number of explanations as to why agricultural research so often fails to generate agricultural innovation, and the antecedent and ongoing roles that research may play in the innovation process within different market, social, technical, institutional and policy settings. It then goes on to set out a number of overlapping and non-competing ways of organising agricultural innovation that can reorganise the relationship between agricultural research and innovation before setting out the CRT’s research design (see §1.3.1 above). DP 3 begins with ‘evolutionary models to aid in the practical process of development policy’ and seeks to link this thinking to the IS approach in general and the RIU model in particular. The first part of DP 4 essentially sets out the theoretical underpinnings of the Best Bets experimental modality as described in

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<sup>304</sup> Interviews with the staff of CARIAD, LIBIRD and FOWARD in Nepal, January 2011, with the staff of AID-Comilla in Bangladesh, January 2011 and in the UK (NRI-University of Greenwich and CARIAD Bangor University, March 2011)

§1.3.2 above. DP 6 is a review of the literature on the role of gender in agricultural innovation. This paper notes that “There is an abundance of literature that brings out the possible negative effects of ignoring the different roles adopted by men and women in the innovation process linked to rural agriculture” (p.21). Yet, despite this observation, and despite the evidence about the importance of the gender dimension that is beginning to emerge from the RIU experiments (see Box 10 above), no lessons about gender and agricultural innovation are included in the ‘emerging lessons’ which have been identified by RIU as having been generated by the Programme (see the Appendix to this annexe). Nor has any special study of the role of gender in agricultural innovation been launched at programme level in order to generate such lessons from RIU’s empirical work. This represents yet another serious gap in efforts to produce Output 2.

### *3.2.2.3 Practical Examples from RIU Placed in a Theoretical Construct*

DP 11 also falls into this category, but as it was discussed earlier (§3.2.2.1) it will not be examined further here. DP 2, begins by discussing “a new class of private enterprise in East Africa which ... appears to occupy a niche that sits between mainstream for-profit enterprises and the developmental activities of government programmes, NGOs and development projects”. The paper notes that this is not the same as corporate responsibility, but “an altogether new type of business model that is blending entrepreneurial skills and perspectives with mission statements that seek to both serve the needs of poor consumers and address their welfare.” Whether this is an ‘altogether new type of business model’ is a matter for some dispute,<sup>305</sup> but there is a more basic issue that needs to be addressed.

The case studies on which this paper is based are five of the African Best Bets. The fact that this DP was written by RIU Programme staff illustrates a critical gap in the DP series to which reference was made at the beginning of this section, namely that those leading the work at project level were not co-authors of the paper. More seriously, two of the Best Bets in question – FIPS Africa and *ShujazzFM* – were case studies in the present evaluation and in both cases their senior staff reported that they were not consulted, or even shown first drafts of the paper in question before it appeared on the website.<sup>306</sup> While *ShujazzFM* was happy with what had been written in DP 2, FIPS Africa was not. The RIU website contains a section that allows readers to comment on any DP, and a senior staff member of FIPS Africa wrote a quite lengthy comment here setting out the areas in which the paper did not reflect what the project was currently doing. Similarly, in the case of the *Real IPM* Company, the

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<sup>305</sup> A very similar business model was developed in the Nineteenth Century by the great ‘Quaker’ families Cadbury, Fry and Rowantree in their own quest to ‘serve the needs of poor consumers and address their welfare’. They did this by attempting to wean the British working class away socially damaging reliance on often-adulterated and contaminated alcoholic drinks, and accustom them instead to the pleasures of drinking chocolate! That these families did indeed have a developmental and poverty-reduction business ethic is well illustrated by their terms and conditions of employment, which were far more generous than those provided by the vast majority of contemporary British industrialists.

<sup>306</sup> Interviews with David Priest of FIPS Africa and Rob Burnett of *ShujazzFM*, November 2010.

manager – although ‘basically happy with the piece’ – had to use the ‘comments’ section of the website to provide some ‘suggested corrections/comments’ on the paper. This suggests another case in which project staff were not involved in producing the paper and were not shown a pre-publication draft.

The theoretical part of DP 4 was discussed earlier (§1.3.2). The theory is illustrated by four practical examples, two from RIU (FIPS-Africa and SOS-Uganda) and two from earlier attempts to put research into use (ILRAD’s Livestock Disease Control programme and the Indore Watershed Project in India), all four of which ‘arguably’ represent attempts to reduce market failure in the supply of, and demand for, knowledge. Together the four case studies are seen as generating important lessons about the way forward. Two features of future interventions are seen as pivotal: first the necessity for close integration of supply and demand, and second the key role that the private sector needs to play, ‘since allowing relevant entrepreneurship to take root decreased the need for central bureaucratic control’.

Output 2 of the RIU logframe seeks to ‘research the experimental investment models’ (i.e. the RIU experiments) ‘disseminate findings and, thereby, increase understanding of how to promote and expand use of agricultural research and technology’. While DP 7 does indeed research a number of experimental investment models, and generates a considerable amount of useful light in the process, none of them is an RIU experiment. The CRT research design does, with good reason, create space for ‘gap-filling case studies will be selected from outside the programme’s activities’ (see point 6, Box 3 above). However, it is difficult to see which gaps in the RIU portfolio this DP is filling. Four main mechanisms “which may have the potential to act as a mechanism to organise and manage the innovation process for both sectoral and social development aspirations” (p.8) are identified. These are (a) contract farming, (b) organised food retailing, (c) social business enterprises (hybrid enterprises) and (d) social venture capital funds. A basic problem with this paper is that it restricts itself to South Asia, where such models are not widely used within the RIU portfolio. It is difficult to see why the paper restricts itself in this way, when RIU has a wider geographical remit. Examples of the first, third and fourth of the above models are to be found in both ACPs and African Best Bets, so it is not at all clear why lessons were not drawn from these mechanisms, when the lesson learning remit of RIU is meant to be firmly rooted in its own empirical work.

DP 9, on the other hand, is very firmly rooted in RIU’s African work. It describes one activity, or platform, under each of the six African Country Programme and then identifies a set of four ‘emerging lessons’ from these. They are (a) Solving problems versus identifying opportunities, (b) the role of research in innovation, (c) ‘institutional architecture’, and (d) the role of the private sector. While this type of cross-cutting analysis is valuable, the emerging lessons themselves do not contribute very much to what is already well known. It is difficult to avoid repeating yet again the observation that had the CRT commissioned Output 2-focused studies from the ACPs, the lessons that emerged could have been so

much more insightful.

#### 3.2.2.4 Papers by Staff and Affiliates of RIU Experiments

There are three DPs in this category, two of them written by the RIU-Nigeria Country Co-ordinator and the other by a British academic affiliated to the Best Bet on Sleeping Sickness in Uganda.

The first of Ugbe's papers (DP 5) begins with a detailed account of the RIU Nigeria Country Programme within the national and regional (Sub-Saharan African) context. The strategy behind this programme is shown to have been twofold:

- Promotion of demand for research outputs from both the RNRRS and Nigeria's own national agricultural research system, and
- "Learning and dissemination of evidences generated under the multi-stakeholder, value chain-based Innovation Platforms to inform policy, support related national processes and priorities, advise on strategies for scaling up the size and impact of successful efforts, and contribute to the debate on how DFID might best support agricultural research for development in Sub-Saharan Africa"

The paper then goes on to delineate the emerging findings from the RIU-Nigeria experiment and distil a series of seven lessons that may be of broader, regional, applicability. It is an excellent thought piece, which with some contextual modification could prove a template for broad brushstroke Platform-level learning for the other ACPs.

Ugbe's second paper (DP 10) examines what innovation might look like in a specific national context – how it can be recognised when it happens. He looks at three conceptual frameworks (the national agricultural research system, agricultural knowledge and information systems and the agricultural innovation system and how these paradigms have been changing. He then goes on to develop four domains in which innovation can occur, before looking at the implications of this framework for impact assessment and programme evaluation. In some ways, Ugbe himself represents a fusion of the programme and experimental modality levels of RIU, in his dual roles of Country Co-ordinator and Research Fellow for West Africa. This perhaps makes an important contribution to his ability to meld national and regional perspectives.

Morton's paper (DP 8) begins with a chronology of the *Stamp Out Sleeping Sickness* campaign in Uganda, which developed into the Sleeping Sickness Best Bet. He uses this experience to distinguish three ways in which research of various types from various countries came together to form a knowledge base using a 'trichotomy' of context, evidence and links. It is clear that his intimate and first-hand experience of the research, the campaign and the development of an effective campaign strategy from many strands that enable him to trace the trajectory of putting research into use in this particular context. This makes a clear and important contribution to Component 2.

## 4. Conclusions

### 4.1 Research Design

- There are some fundamental contradictions at the heart of this programme which tend to compromise prospects for good quality science. It is recognised on the RIU website that ‘risk is an unavoidable part of innovation’. Yet the combined requirement of learning about how to put research into use and simultaneously expecting impact *at scale* militates against experimentation with risky initiatives. This is not in accordance with accepted scientific methods, as it could induce the investigator to produce hypotheses which have been found on the basis of previous work to hold up under investigation. Pressure to produce results (in the shape of impact on the ground) creates incentives for RIU experiments to veer towards tried-and-tested approaches that may have high probability of producing impact, but correspondingly little probability of adding anything of much value to existing knowledge. Fortunately several RIU experiments have resisted this temptation.
- A further contradiction is that all of the above is to be achieved by a project which covers 45 experiments in 12 countries spread over two continents all on a budget of just over £20 million (Phase 2).
- The above points are well illustrated by one of the African Best Bets, *ShujaazFM*, which is one of the most innovative experiments in RIU. It also one of the most risky. Using the mass media as a means of inducing poor farmers to put agricultural research into use has the potential to be a very cost-effective way of increasing their land and labour productivity, and hence contributing to significant poverty reduction. Alternatively it may have virtually no impact at all. This does not mean that this approach should not have been tried, but it does mean that it has to be recognised that if this experiment fails to achieve impact it must not be regarded as a failure, provided it generates useful insights about the relationship between the media and technology adoption by the poor. The truth cannot be established, however, without a rigorous assessment of impact, including an assessment of why impact was or was not achieved; but there is no budget for this.
- Apart from its failure to take account of the risk-innovation-impact nexus, RIU’s research design is flawed in another respect. The logframe requires only that demand for research products be created, implying an assumption along the lines of: “Take care of the demand and the supply will take care of itself”. Unfortunately, in developing countries conditions of market failure are both widespread and multifaceted, and militate against this. In at least one experiment, the result has been that demand was successfully created, but failure to simultaneously create a supply chain for the research product has meant that non-sustainability is virtually guaranteed. Fortunately there are other RIU experiments which have recognised that creating the necessary supply chain

is as important as creating demand, and have taken steps to correct this design fault.

- A five year time horizon is rather short for good science in the context of putting research into use in developing countries, but the history of the programme, with a lengthy inception phase and an implementation phase that had to be radically redesigned half way through the remaining four years, seriously compromised prospects for scientific rigour. It has also compromised prospects for producing research outputs (especially in the shape of publications in refereed journals) within the programme's lifespan, as the gestation period for producing such outputs is too long.
- Variations in scope and coverage of the Country Assessments indicate that this aspect of the 'state of the art' was not rigorously assessed at the outset of RIU, which in turn meant that the experiments may not have been as well-designed as they could have been
- While recognising that pre-existing conditions placed difficult design constraints on Phase 2 research, the attempt to retrofit the six 'innovation narratives' onto the existing system has not added significant explanatory power to permit this to be described as a sufficiently-robust approach. The framework is confused, and has significant gaps and overlaps, a fact that is illustrated by the failure to structure any of the DPs around this framework, and the need to revisit research design towards the end of the programme. This problem could have been avoided had a peer review process been put in place from the outset, in accordance with best practice.

## 4.2 Research Implementation

- RIU has gone from a situation of a highly centralised (and basically dysfunctional) monitoring system developed under Phase 1 to a situation where there is no overarching monitoring framework at all and the decision as to what to monitor seems to be taken at country or experiment level. One consequence is a high degree of variability across the experiments and experimental modalities, and this will compromise efforts to learn lessons across RIU as a whole.
- CRT's failure to put in place an adequate monitoring system to capture lessons that could be used to inform the requirements of Output 2 has meant that its lesson learning has been largely restricted to a combination of (a) those derived from theory, (b) those generated by non-RIU empirical work, and (c) those thrown up almost as a by-product of work done by the experiments in pursuit of Output 1.
- The above problem has both external and internal roots. Externally (but still within RIU), the CRT has not been held adequately accountable to RIU central management, as is illustrated by management's evident failure to require quarterly reports and other process documentation that could have facilitated a greater degree of quality control. Internally this lack of accountability has been echoed in the relationship between CRT

management and the work of its own Research Fellows, with failures in terms of both mentoring and expectations regarding feedback. This is an especially serious problem in the case of relatively junior RFs. In all of these respects the performance of the CRT compares very unfavourably with that of its smaller counterpart, the African Best Bets backup team.

- ABBs apart, and perhaps reflecting a lack of economic expertise among the staff of other programme components, there has been a lack of emphasis on economic aspects of putting research into use. In a programme that aims to interest the private sector in carrying the work forward on a broad range of fronts, this is unlikely to be conducive to success. The approach of the Discussion Paper on Market Failure was not properly integrated into the programme as a whole.
- The current logframe indicates an impact weighting of 30 per cent for Output 1 and 70 per cent for Output 2. The RIU Business Plan for July 2009 to June 2010 indicates a budget of £15,560,541 (76.8% of total) for Output 1, and £2,573,310 (12.7%) for Output 2, of which almost three-quarters is allocated to the CRT. This apparent imbalance is, of course, partly explained by the relatively high costs of the various experimental modalities. Nevertheless the CRT's budget of £1,822,500 is a very significant amount of money for a social science research exercise. With a leaner staffing structure, some of this money could have been used to fund special studies to generate data in pursuit of Output 2. There was also a budget held at central level for commissioned work, some of which could presumably have been allocated to fund special studies under CRT auspices, had the Team made a case for this. In addition, some of the experiments and experimental modalities – such as the African Country Programmes – have an element of flexible funding which could also have been used to generate findings for Output 2, but this tended instead to be used for activities under the ACPs. In any case, not all special studies need be expensive. Much could have been done to learn from the experience of FIPS Africa, which mobilised additional low-cost but highly motivated resources in the shape of university students looking for topics for their research papers.

#### **4.3 Research Output**

- Research outputs at the theoretical level indicate a high level of awareness of the state of the art in terms of the theory of putting research into use.
- At the empirical level, the quarterly reports of the individual experiments indicate a large degree of variability in the quality of output, and they do not tend generally to be very analytical. Nor is much attention paid to lesson learning. However there are notable exceptions. In particular, several of the country programmes have both included a significant degree of reporting on lessons learned in their quarterly reports and a few have organised workshops structured around the 'lessons learnt' theme.

- Acceptance of papers in refereed journals constitutes *prima facie* evidence of quality of science, and the volume output of RIU staff and associates appearing in peer-reviewed journals is high according to RIU's internal listing. However examination of the papers themselves reveals that most are in fact mainstream scientific research papers, rather than being structured around the central focus of the RIU programme. Just three can unequivocally be placed in the category of research about putting research into use. One, from the *Participatory Crop Improvement in Asia Best Bet* provides some very useful and insightful information about the process. So too do the other two, which, interestingly, were produced by a CRT Research Fellow, rather than a more senior member of staff.
- The principal vehicle for the scientific output of the programme is the DP series, eleven of which have been released to date. While the theoretical papers in this series and the papers authored by staff and associates of RIU experiments and experimental modalities are of a high standard, the problem with the third category – i.e. those that combine theory and practice – fail, with few exceptions, adequately to reflect the empirical work of RIU. The final paper in the series revisits the research design and in so doing implicitly acknowledges that inadequacies of the Phase 2 research design which took the six 'innovation narratives' as its centrepiece. While this reformulation represents a considerable improvement on the original, this set of ideas represents too little too late. It is too late, because it has appeared too late in the programme's history to have any significant influence on the information gathering process. It is too little because it focuses solely on the Asian experiments (and is primarily based on the experienced of only one of them). In the case of the others it generates a series of research questions, which should have been identified at the outset of Phase 2 and answered during its implementation.
- Although it is too early to comment on the full range of scientific papers that will emerge from RIU, there are some crucial gaps in the range of outputs at the moment, and these should be addressed if possible before programme completion. An outstanding example is the lack of outputs on gender issues emerging from RIU, despite the fact that one of the earlier DPs was a literature review that identified lack of attention to the gender division of labour as a key issue in failure to put research into use. This gap is the more surprising in view of the statement on the RIU website that one of the programme's key principles is to 'recognise the vital role that women play in agriculture', and despite the fact that some of the experiments are generating information about gender aspects of putting research into use. Another gap is that in terms of authorship: there is as yet no Discussion Paper that is co-authored by programme staff and staff of the experiments/ experimental modalities, despite the fact that their different perspectives could lead to highly complementary contributions, and therefore synergy.

- Of the six lessons that RIU claims to be emerging from its portfolio, only two – ‘new types of entrepreneurs emerging in poor countries’ and the experience of creating ‘innovation champions’ – can really be regarded as emerging lessons. It is noted on the RIU website that the aforementioned set of six lessons “reflect current thinking and will be updated and refined as further evidence is generated”. If research outputs still in the pipeline do not add significantly to this list over the 2-3 months this project has left to run, this will represent a fairly meagre return of a more than £2½ million investment in producing Output 2.

## APPENDIX: RIU'S VIEW OF LESSONS LEARNED AS A RESEARCH OUTPUT

The RIU website carries a section entitled 'Emerging Lessons', which are "Drawn from across the RIU portfolio. They reflect current thinking and will be updated and refined as further evidence is generated." These six lessons are reproduced in Box 11 and annotated below.

### **1. Research products are just one element needed to 'enable innovation in agriculture'**

It is difficult to see this as a lesson in any real sense. The wording is implicit in the IS approach, and the statement seems more akin to a reiteration of the RIU hypothesis (quoted in §1 above) than evidence from a systematic set of experiments to test it.

### **2. Brokering networks and alliances is a critical role**

The 'innovation platform' and 'innovation coalition' approaches, which are central to the African Country Programmes (the largest and most expensive experimental modality in of RIU) is based on this premise. The other RIU experimental modalities are also implicitly based the approach of networking and building alliances. However, in the absence of any alternative IS modality with which RIU experimented and against which its main modality could therefore be tested, implies the absence of an experimental control, and this in turn signifies that it would be difficult to demonstrate empirically that this approach has been shown to play a 'critical' role.

### **3. New types of entrepreneurs are emerging in poor countries**

There is considerable evidence to support this view. The 'bottom billion business' approach is not, of course, new in itself<sup>307</sup>, but in terms of the definition of an innovation used by RIU (see p.2 above), it can clearly be regarded as such. This approach lies at the heart of the Best Bets experimental modality, which has further innovated by adding a 'Dragon's Den' (DD) slant to the 'bottom billion' approach. However the DD approach has been greatly modified under Best Bets by (*inter alia*) using RIU funding to finance this new type of entrepreneurship, rather than having the venture capitalists undertake the risk at their own expense. Clearly this has the potential to influence the selection process. Until this modality has been rigorously evaluated it is wise for RIU to go no further in its conclusions than to suggest that "such enterprises *might represent attractive and more sustainable alternatives* to investment through NGOs" (emphasis added).

The 'Below-the-Radar-Led' innovation narrative also uses the 'bottom billion' approach, but, as noted in the CRT research design, "True below-the-radar cases driven by a large market of poor people (are) not in the RIU portfolio," so in this case any lessons that emerge cannot be regarded as having surfaced from the RIU portfolio.

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<sup>307</sup> See, for example, Paul Collier: *The Bottom Billion: Why Poor Countries are Failing and What Can be Done About It*; Oxford University Press, 2007

#### 4 . RNRRS legacy

This lesson had already emerged from the RNRRS evaluation and was part of the process that led to the design of RIU (see Box 1 and §1 above). Hence it is perhaps a little exaggerated to infer that this lesson emerged from the RIU portfolio. It would perhaps be more accurate to say that RIU has added further support to conclusions that had been drawn from earlier research.

#### Box 11. 'Emerging Lessons' from the RIU Portfolio

1. **Research products are just one element needed to 'enable innovation in agriculture'**  
Addressing other pressing constraints, such as access to markets, credit and appropriate inputs and information, and establishing more supportive policy and institutional environments can, however, create effective demand for appropriate research products. These include new and improved crop varieties, better ways of managing pests and diseases, and more effective agricultural practices.
2. **Brokering networks and alliances is a critical role**  
in putting research into use and enabling innovation in agriculture. These brokerage roles need to be recognized as indispensable and unavoidable research costs, but currently investors appear unwilling to fund this crucial role and the capacities and competencies required are scarce in both the public and private sectors.
3. **New types of entrepreneurs are emerging in poor countries**  
which could be the key to enabling innovation in agriculture. These 'bottom billion businesses' are starting to supply goods and services to poor farmers and other consumers. Naturally the goods and services supplied need to be accessible, affordable and acceptable by the poor, which can be achieved by providing low-cost small packs/units. With relatively modest short-term investments by development partners, these entrepreneurs can unlock potential (including from publicly-funded agricultural research) and remove barriers to enable sustainable and responsive businesses to become established. As such they might represent attractive and more sustainable alternatives to investment through NGOs. The private sector is, however, unevenly developed amongst African countries and measures to enhance entrepreneurial skills and capacity are required.
4. **RNRRS legacy**  
A significant number of RIU's activities are building on research undertaken during the RNRRS. Relatively small additional investments, often with private sector partners, appear to be an effective way of putting this research into use.
5. **Innovation champions**  
Under the RNRRS, whilst much of the research undertaken succeeded in developing innovative approaches, usually these did not become institutionalised and failed to displace existing approaches. To put research into use requires a champion who is able to navigate complex political and institutional landscapes, building networks of practitioners and policy actors willing to advocate and promote the approach – and this is unlikely to be the originator of the research. It appears that, to be successful, champion need limited ownership of the research; a stronger ownership of outcomes; strong networks with policy and entrepreneurial actors – and they may work in a private company. Although these findings are preliminary, a clear implication is that for research to be put into use, creative ways need to be found to transit from scientific champions to innovation champions. Understanding the motivations of champions under different circumstances will help develop better ways to deploy championing as a research into use strategy.
6. **Flexible, fleet-of-foot and bold management**  
An important feature of RIU is its management style and general approach which enables it to be flexible, fleet-of-foot and to take calculated risks. For example, in 2009 the Africa Country Programmes were made more anonymous and flexibility funds were established to enable them to pursue promising opportunities and try things out as pilots with a minimum of bureaucracy. At programme level, the Commissioned Work strand serves a similar purpose. This organisational flexibility is now paying dividends: some of the most promising initiatives in the Africa Country Programme have emerged from the flexibility funds and programmes supported through the Best Bets initiative continue to evolve and adapt, responding to new opportunities, overcoming constraints and adapting their approach and models in the light of emerging lessons and experience.

Source: RIU Website

## 5. Innovation champions

Evidence in support of this statement has emerged from both the public and private sectors. It is much easier to demonstrate this in the latter case, (as evidenced by the experience of Best Bets, including the sole Asian Best Bet, *Participatory Crop Improvement in South Asia*). However the private sector has always supported innovation in competitive markets, driven by the profit motive. The main lesson learned from the RIU experience in this arena should probably be couched in terms of its success in addressing failure in knowledge markets.

Creating and supporting innovation champions in the public sector is a very different kettle of fish, and under the circumstances a much more difficult one to handle, given that, unless there is strong political support and impetus for reform, supporting innovation is not always viewed as a career-enhancing strategy for a public servant. Even where there is strong political support for reform, RIU's record has been mixed. This is illustrated by the case of Rwanda, where the present government is strongly reform-minded. Nevertheless, the RIU's Innovation Platform in that country has declined in influence in line with government agencies deciding to allocate increasingly junior civil servants to the Coalition, with corresponding loss of whatever influence this group had previously gained through this mechanism. On the other hand, the warrantage scheme, which was developed by the RIU-Rwanda maize platform, has attracted a number of champions and elicited strong support from the Minister of Agriculture, who has expressed interest in rolling the scheme out nationally. This is one of the areas in which it is so disappointing that the CRT has not adopted a more proactive approach to lesson learning, rather than apparently being content to observe what the experiments were doing. It could have been extremely instructive to commission a study to test the 'innovation champion' hypothesis within a positive policy environment, where on the one hand a purposeful attempt to create innovation champions failed, while on the other a successful attempt to create a organisational innovation in agricultural marketing seems to have generated influential champions as a result.

The Nigeria Country Programme provides a very good example of innovation champions in action. Here the country programme is embedded in the Agricultural Research Council of Nigeria (ARCN), which was founded in 2007 with a mandate to build relationships with the private sector and so put research products from the public sector research system into use. This happened at the same time as RIU-Nigeria, with its clearly similar mandate, was searching for a suitable institutional home. The possibilities for synergy were soon clear to both parties.<sup>308</sup> ARCN now has an MOU with RIU-N and has championed the RIU approach in many fora; an early example is that the ARCN's Director of Extension accompanied an RIU consultant to visit public sector research institutions to 'sell the concept' of an IS approach. The same stakeholder's observations on public-private sector interactions is worth quoting at some length:

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<sup>308</sup> Interview with Dr Utiang Ugbe, Country Co-ordinator, RIU-Nigeria, February 2010

*A key contribution of the RIU has been to put the private sector in the driving seat, when all previous attempts to put research into use had been firmly placed in the public sector. When the Stakeholder Review was conducted it was clear that there was antagonism to this idea from the public sector; for example extension saw the innovation platforms as something it was meant to compete with, and ultimately replace them, so there was a great deal of hostility. The private sector was not hostile, and had always been keen to collaborate. A basic problem of the public sector is that they don't know how to communicate with the private sector in a way that is attractive to them. Their only idea seems to be that all they have to do is organise workshops and invite private sector representatives. The private sector does not respond to this type of approach. The RIU-Platform approach is completely different, and draws in both sectors, fostering collaboration.*<sup>309</sup>

Professor Chikwendu went on to note that the innovation systems and value chain approaches, which gained greatly from the work of RIU's Nigeria Country Programme, is now at the centre of the ARC strategy, and NCP has been involved at all stages in developing the Council's Strategy and Operational Plan.

Tellingly, it was added that no assessment had as yet been conducted 'as to how this (public sector) mindset might have changed as a result of interaction with RIU and its champions at ARC' (ibid). The need for, and evident demand for, such an assessment is of such pivotal relevance to the fulfilment of Output 2 of the RIU logframe that it is difficult to understand why the CRT, for which delivering on Output 2 as its sole area of responsibility, could have failed to identify such a need.

### **6. Flexible, fleet-of-foot and bold management**

There is little doubt that after the reorganisation of RIU in 2009, the greater degree of autonomy given to the African Country Programmes resulted in more pro-active programmes and much more activity on the ground that was relevant to experimenting with the process of putting agricultural research into use. However, this is a point of such widespread application, and one which is already so well known that it is difficult to regard it as an 'emerging lesson' of the RIU programme. Probably the single most important historical example of agricultural innovation through research being put into use was the 'green revolution' in Asia during the 1960s and 1970s. This was funded in its crucial start-up phase by two large international foundations, Ford and Rockefeller, both of which are well-known for imposing the absolute minimum of bureaucratic constraints on grantees and allowing them the scope to use their initiative to the maximum, and may therefore be described as examples of 'flexible, fleet-of-foot and bold management'.

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<sup>309</sup> Interview with Professor Chikwendu, Director of Extension, Agricultural Research Council of Nigeria, February 2011.