

**NATURAL RESOURCES SYSTEMS PROGRAMME**  
***FINAL TECHNICAL REPORT<sup>1</sup>***

**DFID Project Number**

**R8496**

**Project Title**

Synthesis of RNRRS knowledge on adaptive capacity to climate change

**Project Leader**

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**Organisation**

Drylands Research

**NRSP Production System**

Cross-cutting

**Date**

March 2006

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<sup>1</sup> This document is an output from a project funded by the UK Department for International Development (DFID) for the benefit of developing countries. The views expressed are not necessarily those of DFID.

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## L DRAFT ARTICLE FOR PUBLICATION

**Abbreviations and Acronyms**

|         |   |
|---------|---|
| AFG     | Aquaculture and Fish Genetics Research [Programme]                                |
| ASARECA | Association for Strengthening Agricultural Research in Eastern and Central Africa |
| CBO     | Community-based Organisation  |
| CIFOR   | Centre for International Forestry Research  |
| CGIAR   | Consultative Group on International Agricultural Research                         |
| COB     | Client-oriented Breeding  |
| COP-7   | Conference of the Parties   |
| CPP     | Crop Protection Programme   |
| CPRs    | Common Pool Resources   |
| CRD     | Central Research Department [of DFID]   |
| DFID    | Department for International Development [UK]                                     |
| ENSO    | El Nino Southern Oscillation  |
| ESCOR   | Economic and Social Committee for Research [DFID]                                 |
| FMS     | Fisheries management Science [Programme]  |
| FRP     | Forestry Research Programme   |
| FTR     | Final Technical Report  |
| ICM     | Integrated Crop Management  |
| ICRAF   | International Centre for Research in Agro-Forestry                                |
| ICRISAT | International Crop Research Institute for the Semi-Arid Tropics                   |
| IDS     | Institute for Development Studies   |
| IIED    | International Institute for Environment and Development                           |
| IITA    | International Institute for Tropical Agriculture                                  |
| IUCN    | World Conservation Union  |
| LPP     | Livestock Production Programme  |
| MAS     | Molecular Assisted Selection  |
| MDGs    | Millennium Development Goals  |
| NGO     | Non-Governmental Organisation   |
| NR      | Natural Resources   |
| NRPRI   | Natural Resources Policy Research Initiative [DFID]                               |
| NRSP    | Natural Resources Systems Programme   |

|        |   |
|--------|---|
| PAPD   | Participatory Action Plan Development         |
| PL     | Project Leader                                |
| PM     | Programme Manager                             |
| PSP    | Plant Sciences Programme                      |
| PT     | PARCHED-THIRST [Model]                        |
| PVS    | Participatory Varietal Selection              |
| RNRRS  | Renewable Natural Resources Research Strategy |
| RWH    | Rain-water Harvesting                         |
| SAPS   | Semi-arid Production Systems                  |
| SHG    | Self-help Group                               |
| SUA    | Sokoine University of Agriculture             |
| SWMNET | Soil and Water Management Network             |
| UNDP   | United Nations Development Programme          |

## 1 Executive Summary

### A

This study is an analysis of selected RNRRS projects to assemble, develop and promote new knowledge on poor peoples' capacities to adapt to climate change and variability, in order to formulate research questions and guide policy priorities within or outside DFID.

Variability is identified as the key parameter of climate change to which poor people must adapt. Some 105 research projects are reviewed. These are grouped into 26 Research Lines (suites, sequences or parallels). For each one a summary statement reinterprets its relevance to poor peoples' capacities to manage variability. These Lines are assigned to five thematic Research Areas and ways of taking the research forward are summarised. These activities were carried out in communication with programme managements and a sample of available project leaders.

The first Research Area is *technologies for supporting enhanced NR management under variable conditions* (better adapted crops, improved agronomy, and community-based pest control). They have a capacity to smooth output during extremes in rain-insecure environments. The second Research Area is *strategies for managing assets under variable conditions* (rainfall analysis, seasonal forecasts, rainwater harvesting strategies, livestock asset management, grazing strategies for herds, livelihood buffering for fisherfolk, moisture use in agro-forestry systems and on-farm tree planting, and integrated catchment management. Most of these Research Lines use modeling approaches and their applicability under variable conditions depends on their capacity to assist poor peoples' asset management. The third Research Area is *new approaches to local institutional development and rural service provision* (rural institution building for driving demand for service provision, access to information/ knowledge, and finding entry points through credit provision), in order to strengthen social capital through giving voice to poor people. The fourth Research Area is *strengthening poor peoples' participation in NR management, governance, and policy* (democratic, participatory NR governance based on local knowledge, participatory management of floodplain systems, participatory institutions for the management of island waters, and sustainable management of coastal aquaculture). Enhanced capacity and equity in NR governance will strengthen the management of variability. The fifth Research Area is *building resilience in poor peoples' livelihoods through intra- and inter-sectoral diversification and management capacity* (crop-livestock integration, payments for environmental services, enriching rainfed farming systems with aquaculture, enabling livelihood diversification in semi-arid areas, and learning lessons from peri-urban systems. Exploiting a range of options outside the NR sector counters risk especially in semi-arid environments and signals a necessary diminution in reliance on scarce or degrading natural resources.

Strategic issues are set out in terms of a demand-led model. First a mandate for adaptation research is defined within development. The chosen approach, that of adding value to finished work, is held in tension with a need to evolve to meet new scientific challenges. A broad-based strategy (Option A) is set out in terms of the five Research Areas. Specific and generic knowledge gaps are identified as a guide to potential future research. The concept of 'demand-led' climate change adaptation research is examined further and conceptualised in a simple model linking primary beneficiaries, service providers and DFID. On this basis, a more focused strategy (Option B) is developed around process-enabling research, which aims to strengthen poor peoples' capacity, through appropriate institutions, to manage their resources and the challenge of variability. Option B is preferred. This focus defines certain

strategic questions facing DFID. Linkages with other research in DFID, regional partnerships and international initiatives such as the MDGs are identified.

## **2 Background**

Two implications of climate change affect poor people:

- (1) Increased variability, chiefly in rainfall amount and distribution, may have negative impacts on any agro-ecosystem, but especially in arid, semi-arid and sub-humid areas with seasonal regimes. In these areas variability is already an accepted risk and a barrier to poverty reduction; any increase may threaten food security and will have a major impact on the livelihoods of very large resident populations.
- (2) Long-term changes in temperatures, precipitation and hydrological regimes, though hard to detect at the local scale as they are obscured by short-term variability, pose a cumulative risk to ecosystems on which animal, fish and human populations depend. If critical thresholds are passed, whole production systems may be threatened and the adaptive challenge correspondingly increased.

Poor people are aware of short-term variability and risk but cannot be expected to be aware of longer term risk of cumulative ecological change (on which scientific uncertainty understandably exists), except where such change can be recalled from memory (e.g., in the Sahel).

The focus of this study, therefore, is defined as enhancing poor peoples' capacity to manage environmental variability.

The RNRRS, amongst its 1,617 projects, has substantive and diverse findings to offer in the domain of climate change adaptation, which provide a platform for a research strategy to enhance the adaptive capacities of poor people in managing variability. This is notwithstanding the fact that little of the work explicitly addressed climate change. The RNRRS evolved historically from a range of antecedents. Under DFID's poverty reduction focus, and influenced to a greater or lesser extent by a prioritisation of a Sustainable Livelihoods Approach, it has expanded in scope from strictly technical towards more holistic perspectives of development. Different projects have made predictably uneven progress towards placing rapidly evolving natural science, modelling, systems and other tools at the disposal of poor people and their livelihoods. This effort is particularly relevant to the purpose of the present study, as managing variability well or badly has dramatic implications for livelihoods.

It is expected that given the specific aims, methods and disciplines of RNRRS projects, new knowledge (with respect to climate change adaptation) can be harvested and synthesized to provide a platform for DFID's research. This will enable value to be added to previous research investments and full use made of DFID's comparative advantage in the field, which includes its inter-continental comparative experience. The science must also evolve to meet new challenges, arising from the fact that the future is uncertain.

## **3 Project Purpose**

Capacity of DFID's policy makers and research managers to make evidence-based decisions within DFID's area of comparative advantage on poor peoples' livelihoods

under climate change improved through insights from RNRRS programmes.

This statement of purpose may be elaborated as follows:

- (1) To select, from the range of current and completed research in the RNRRS programmes, lines that realise or offer potential benefits for planning future research on adaptation to climate change [Climate Change was not included in RNRRS logframes]
- (2) To link natural resources research, climate change adaptation and poverty reduction within a developmental framework, for implementation in partnership with national or international institutions and local stakeholders

## 4 Outputs

**Output 1:** *A body of knowledge from RNRRS projects that is specifically relevant to DFID's principled interest in the poor and their capacity to adapt to climate change and its impacts identified*

Five thematic Research Areas are identified (Annex A, Chapters 2 – 6) as follows:

- *Technologies for supporting enhanced NR management under variable conditions* (Annex A, Chapter 2). RNRRS work is highlighted on new or improved technologies or tools to address the challenge of managing variability – crop varieties resistant to drought or pests, agronomic methods that enhance the efficient use of scarce moisture, and the control of pest outbreaks.
- *Strategies for managing assets under variable conditions* (Annex A, Chapter 3). RNRRS work is highlighted on modelling asset management and natural resource decision making, with an overall aim of optimising poor peoples' asset strategies, improving their livelihoods, and increasing their capacity to manage variability. These Research Lines include rainfall analysis and weather forecasting (Annex B), assistance in managing scarce moisture on farms (Annexes C1, C2), optimising smallholder livestock keeping (Annex D) and grazing strategies for mobile herds, protecting fisherfolk against fluctuating stocks, tree planting strategies (Annex E) and land use management in river catchments (Annex F).
- *New approaches to local institutional development and rural service provision* (Annex A, Chapter 4). RNRRS work is highlighted on facilitating institutions at the local level, which aims to develop poor peoples' social capital in ways that can exert effective demand on service providers. These include the 'dialectic approach' to self-help group formation (Annex G), improving access to information and knowledge, and using credit as a lever to move poor peoples' production systems to higher productivity.
- *Strengthening poor peoples' participation in NR management, governance, and policy* (Annex A, Chapter 5). RNRRS work is highlighted on improving poor peoples' participation in governance and policy, based on work in Ghana and Uganda (policy process between local and district levels; local governance through byelaws), on managing floodplain fish-farm systems under multiple use, on participatory institutions for coastal resources, and on stabilising aquaculture at a sustainable level.

In these diverse ways, greater participation achieves enhanced management capacity for poor people which is the best insurance against risk.

- *Building resilience in poor peoples' livelihoods through intra- and inter-sectoral diversification and management capacity* (Annex A, Chapter 6). It is important to recognise that livelihood strategies are multi-dimensional (especially where variability is routine), dynamic and complex, embedded in social relations, and do not necessarily prioritise the natural resource sector. An example taken from outside the RNRRS portfolios, is annexed to illustrate these features (Annex H). This chapter highlights RNRRS work on supporting livelihood diversification in uncertain environments, including crop-livestock integration, payments for environmental services, the promotion of on-farm aquaculture, supporting livelihoods in semi-arid areas to diversify off-farm, and peri-urban diversification. Diversification both within and beyond the natural resource sector should receive recognition and support as a strategy for countering risk.

In Chapters 2 and 3, the Research Lines focus on *finding solutions*: in the form of *technologies* for enhanced management of natural resources and *strategies* for managing assets (most of them based on modeling approaches). In Chapters 4, 5 and 6, the emphasis shifts to *enabling process* through facilitating institution building and service provision, strengthening participation in governance, and supporting resilient livelihoods.

The body of RNRRS knowledge on climate change adaptation is thus ordered in four stages: (1) selection of 105 relevant projects from 1,617 candidates; (2) their grouping into 26 Research Lines; (3) the grouping of Research Lines into five Research Areas; and (4) a grouping of Research Areas into two strategic foci. These entities are not merely methodological, but represent substantive findings of the study. They provide a platform for determining future priorities.

A preliminary distillation of knowledge was included in a presentation to DFID on 6 July, 2005 (OVI, Output 1).

**Output 2:** *Implications for DFID's future research and development policy with regard to adaptation to climate change pinpointed*

**Output 3:** *Knowledge gaps identified, and research questions formulated with respect to an appropriate model of natural resource-based livelihood systems under climate change, that capitalise on DFID's comparative advantage*

These outputs are reversed and re-ordered in Annex A, Chapter 7 in order to develop a strategy ('implications for DFID's future research and development policy') which is presented in a logical sequence. The strategy is set out in terms of a demand-led model.

- First a mandate for adaptation research is defined within development. Adaptation research aims to respond to the actual, impending, or probable impact of climate change within the broader context of poverty reduction. Variability in climate parameters and that originating from other sources cannot always be separated. The most common usage of the term 'adaptation' concerns policy and planning responses in the public sector and the individual appears as a recipient of education and advice, and as an agent of mitigation. The present study however refers to autonomous adaptations to increased risk of livelihood damage, as assisted by research-development products such as technologies, new participatory institutions or enhanced opportunities. This usage reflects the orientation of most (though not all) RNRRS research.



- Two possible approaches are available to DFID: an *issue-led* or a *value-added* approach. DFID's comparative advantage is defined first as its RNRRS portfolios of multi-disciplinary, research-based knowledge, and second, the strategic benefits of DFID's international coverage. The term, value-added, does not, however, mean 'more of the same', but rather identifies an opportunity to build on the existing knowledge platform to meet new scientific challenges.
- Option (A) for DFID, in formulating its research strategy for climate change adaptation research, is to adopt a broad-based approach encompassing the range of five Research Areas (though not necessarily every Research Line), taking them forward through dialogue with research partners and building on new research priorities defined essentially through identifying unanswered questions in respect of each Line.
- Specific and generic knowledge gaps are identified as a guide to potential future research. These include: better indicators of impact; stronger links with the local political economy; more attention to resource users' capacity to use new knowledge; more attention to economic drivers of change; a multi-sectoral approach to rural livelihoods including the use of scattered resources and mobility between places; and the development of an adaptive response to cumulative ecosystem change.
- The next question is 'How is demand articulated for knowledge and services?' A model (Annex A, page 49) shows in very simple terms an interface between the knowledges of primary beneficiaries (PBs) and of service providers (SPs). Demand-led service provision is positioned as a bridge between the two systems, and is facilitated in an ideal, power-equal way by a circular flow of knowledge, in which the local fertilises the scientific, and research creates more options to feed local demand.
- Based on this demand-led approach, a more focused strategy for DFID (Option B) is developed around the process-enabling principle defined above. This approach has the virtue of transferring ownership of the adaptive response to climate change into the hands of its beneficiaries, rather than external actors. Voice, empowerment and enhanced capacity are achieved through appropriate institutional and knowledge management changes. This approach, for which arguments can be built based on RNRRS projects, will call for a redefinition of the roles of technological development and modeling methodologies, in relation to climate change adaptation. Option B is preferred. Its adoption will call for using a systems approach in climate change adaptation research.
- Research undertaken by the Climate Change theme area of DFID has relevance to the programmes: Getting Agricultural Research Into Use; Sustainable Agriculture in Africa and Other Rain-fed Regions; possibly those proposed with the UK Science Research Councils; and to risk-screening in policy development work under National Adaptation Plans of Action to climate change. This will need a process of consultation to ensure that adaptation receives enough emphasis within the broader development agenda. At the regional level (to which DFID intends to devolve more responsibility), a regional focus is appropriate since climate change will take regionally specific forms and adaptation research needs to be tailored to them. At the international level, there will need to be scale-linkages with the Millennium Development Goals and other initiatives if the RNRRS's place-specific strengths are to be fully capitalized.

The draft FTR and Annexes were completed two months behind schedule and submitted

for review by 31 December, 2005 (OVIs, Outputs 2 and 3)

**Output 4:** *Communications effected with stakeholders within constraint imposed by time* (Annex K)

Communication activities were integral to the study and are listed below under ‘Research Activities’.

- Communication with the client (DFID): in addition to consultations with CRD staff, three presentations were made at Palace Street (July and September, 2005) and East Kilbride (January, 2006).
- Consultations with RNRRS programme managements and a selection of project leaders were maintained though other commitments made it difficult for some to give time. The pre-FTR meeting (at which a presentation was made) and the NRSP project review process were integral to developing the thinking of this project.
- A country visit to Tanzania and Kenya was undertaken to interview stakeholders from farmers (Same District) through researchers (Sokoine University of Agriculture) to regional organizations (SWMNet, UNDP, ICRAF). These have strengthened the study and the authors are grateful to the individuals who gave their time.

Stakeholder perceptions and interests were fully reflected in project products (OVI, Output 4)

Policy Brief, published by NRSP 13 March, 2006 (*Climate change: enhancing adaptive capacity*, by Michael Mortimore and Adam Manvell (MS, Output 4)

Draft article in preparation at time of writing for publication (MS, Output 4)

**Products:** The study has generated a body of knowledge appropriately ordered which is reported comprehensively in Annex A. This is the basis of a strategy set out in two options which provide possible platforms for future research development.

## 5 Research Activities

### research Activities

**Outputs 1, 2, 3:** Our purpose was to interrogate research carried out by the RNRRS in 1995-2006 with respect to its contribution to climate change knowledge for development. This necessitated an inductive approach based on project analyses. Given that the RNRRS commissioned 1,617 projects during this period, screening was necessary. The sample was chosen on the ground of perceived relevance to the management of variability by poor people. The use of programme managers’ advice, titles, website summaries and key words provided the basis for the selection. In total, 105 projects were reviewed from seven programmes:

Aquaculture and Fish Genetics Programme

Crop Protection Programme

Fisheries Management Science Programme

Forestry Research Programme

Livestock Production Programme

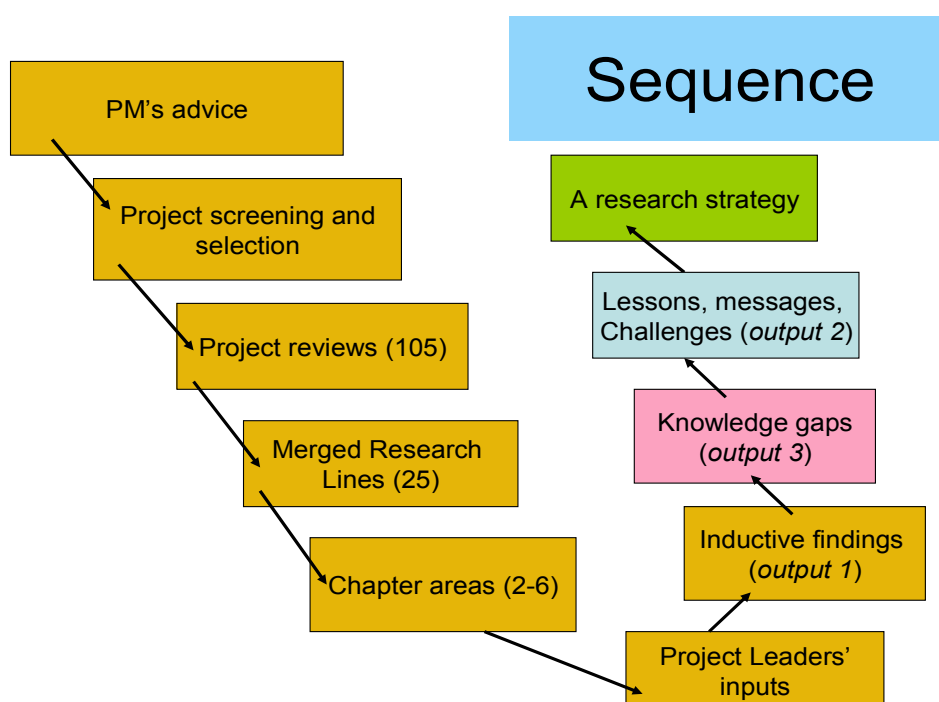
## Natural Resources Systems Programme

## Plant Sciences Programme

Outputs 1, 2 and 3 were integrated in a sequence of activities is shown in the diagram below.

**Output 4:** Consultations were carried out as follows:

| <i>Month</i> | <i>Activity</i>   |
|--------------|---|
| June 05      | Initial PMs' advice   |
| 6 July 05    | First DFID (London) consultation with senior management – <i>ppt. presentation</i>                |
| 12 Sept      | DFID Fisheries Workshop (London), scientists from fisheries programmes – <i>ppt. presentation</i> |
| Sept-Oct 05  | Selected project leaders invited to contribute inputs*  |
| 31 Oct 05    | Pre-FTR meeting, NRSP Programme Management and scientists – <i>ppt. presentation</i>              |
| Oct-Nov      | Incorporation of inputs from PMs and PLs  |
| 13 Dec 05    | Consultation with DFID Climate Change focal group (East Kilbride) – <i>ppt presentation</i>       |



\* The project leaders and other scientists who contributed inputs are:

|               |   |
|---------------|---|
| Dr R Cheke    | Natural Resources Institute (CPP-1)               |
| Dr E Allison  | University of East Anglia (FMS-1)                 |
| Dr A Dorward  | Wye College, Imperial College London (LPP-2(a))   |
| Dr A Illius   | University of Edinburgh (LPP-2(b))                |
| Prof I Calder | University of Newcastle (FRP-3)                   |
| Mr M S Ashok  | Cirrus Management Services, Bangalore (NRSP-3(a)) |
| Prof N Hatibu | SWMNET, ASARECA, Nairobi (NRSP-6)                 |
| Prof H Mahoo  | Sokoine University of Agriculture (NRSP-6)        |
| Dr S Tumbo    | Sokoine University of Agriculture (NRSP-6)        |
| Dr R Stern    | University of Reading (NRSP-12)                   |
| Dr P Cooper   | ICRAF, Nairobi (NRSP-12)                          |
| Dr K P C Rao  | ICRAF, Nairobi (NRSP-12)                          |
| Dr A Manvell  | Co-author of this report (NRSP-7)                 |

The six East African consultations took place during the country visit to Kenya and Tanzania (Oct 18-30, 2005), when fruitful interactions took place with various additional stakeholders: Prof J Ngugi (University of Nairobi), Dr K P C Rao (ICRAF), Dr E Patrick (UNDP-Drylands Development Centre), pastoralist representatives at the IUCN's Pastoralists Manyatta held concurrently with COP-7 of the UN Convention to Combat Desertification, the entire Soil and Water Management Research Group at Sokoine University of Agriculture, district level stakeholders at Same District, Kilimanjaro Region, and farmers at three research sites in Same District.

## **6 Environmental assessment**

### **6.1 What significant environmental impacts resulted from the research activities (both positive and negative)?**

None

### **6.2 What will be the potentially significant environmental impacts (both positive and negative) of widespread dissemination and application of research findings?**

Depends on the use made of outputs by client

### **6.3 Has there been evidence during the project's life of what is described in Section 6.2 and how were these impacts detected and monitored?**

DFID-CRD (Climate Change Theme) has taken a very active interest in this project and given views on presentation

### **6.4 What follow up action, if any, is recommended?**

A structured debate and strategizing exercise will be valuable in defining policy priorities

based on a new, scientifically integrated approach to climate change adaptation (see Chapter 7, Annex A)

## 7 Contribution of Outputs

### 7.1 NRSP Purpose and Production System Output

This study falls under NRSP Programme Logframe Output 2 (Means to realize improved integrated NR management strategies for specific groups of the poor identified, tested and promoted with target institutions that are stakeholders in the various projects in the NRSP's portfolio), Activity 2.1.3 (Programme level assignments undertaken to synthesise findings of projects and programme development assignments), and is extended to the RNRRS as a whole.

- It is hoped that it will provide a resource for DFID's research development on the Climate Change theme. However the use DFID will make of the findings and strategic options is not within the authors' influence.
- The value of some RNRRS research has been demonstrated in relation to climate change adaptation and if this platform is used constructively, research continuity and innovation may be effectively linked. This will reap dividends from previous investments and form research questions for the future.
- An opportunity has been identified for developing a coherent research mandate around climate change adaptation which will form a basis for interaction between DFID, its regional partners and international institutions goals and conventions. Such a coherent mandate is necessary if enhancing adaptive capacity is to receive the priority it deserves within the framework of poverty reduction. If it is not followed up, other poverty reduction efforts may suffer from climate change impacts that were not prepared for.

### 7.2 Impact of outputs

The Purpose level OVIs set for the project were:

*By Summer 2005/06, RNRRS Climate Change knowledge distillation used in one research call by DFID CRD*

*By March 2006, 4 DFID policy division (PD) teams across two groups consider the capability and needs of the poor to adapt to climate change in their policy formulation.*

Evidence against which to assess these OVIs is awaited but imminent. The CRD bi-lateral programme research call for the Climate Change (see first OVI) at the time of writing (March 2006) had been delayed and was scheduled for "first half - 2006 following scoping work" (Source: <http://www.dfid.gov.uk/research/research-calls.asp>). However, this project is part of the relevant scoping work cited and, given the close engagement of the project with the CRD SPEC team (who are responsible for this call), it is anticipated that this OVI will be achieved by mid-2006.

Assessment against the second OVI is dependent on achievement of the first OVI. This is because the strategy defined by the Climate Change research call will set the parameters against which other DFID departments and divisions attention to *the capability and needs of the poor to adapt to climate change in their policy formulation* can be assessed. The

potential that this OVI will also be achieved will be good if DFID accepts a key message from R8496 – on the need to ensure effective links between climate adaptation research and related activities and between scales ranging from local to global.

### 7.3 Uptake Promotion

The project's communication and uptake promotion activities have been completed although it is too early to assess their full impact. The main features are the NRSP Brief 'Climate Change: enhancing adaptive capacity' published in March, 2006 (see under Outputs and 8.7 below); a peer reviewed journal article prepared for publication in 2006 (see under Outputs and 8.2.3 below) and presentations to DFID CRD and other stakeholders (see under Research Activities). Close engagement with DFID CRD was the uptake promotion pathway selected by the project in order to maximize the impact of a short-duration project and the imminent closure of NRSP.

## 8 Publications and other communication materials

None

### 8.1 Books and book chapters

None

### 8.2 Journal articles

#### 8.2.1 Peer reviewed and published

None

#### 8.2.2 Pending publication (in press)

None

#### 8.2.3 Drafted

Mortimore, M and Manvell, A, 2006 (Provisional) *Climate change adaptation: bringing externally funded development research into line with poor peoples' demands*. Publisher to be decided.

### 8.3 Institutional Report Series

None

### 8.4 Symposium, conference and workshop papers and posters

Mortimore, M, 2005 *Preliminary findings of a review of RNRRS research relevant to climate change adaptation*. Presented at a Workshop on Climate Change and Fisheries organised by the Fisheries Management Science Programme and held at DFID, 12 September.

Mortimore, M, 2006 *Adapting to climate variability*. Contribution to a British Council Workshop on Climate and Society organised by the Tyndall Centre in Paris, 12 January.

Mortimore, M and Manvell, A 2006 *Climate change adaptation: bringing externally funded development research into line with poor peoples' demands*. Contributed to a Conference on 'Culture, nature, future: perspectives on science and development in Africa', arranged by the Centre of African Studies at the University of Edinburgh, 13 April.

### 8.5 Newsletter articles

None

### 8.6 Academic theses

None

### 8.7 Extension leaflets, brochures, policy briefs and posters

Mortimore, M and Manvell, A.. 2006 *Climate change; enhancing adaptive capacity*. Hemel Hempstead, UK: DFID-NRSP. 8 pp.

### 8.8 Manuals and guidelines

None

**8.9 Media presentations (videos, web sites, TV, radio, interviews etc)**

None

**8.10 Reports and data records**

**8.10.1 Project technical reports including project internal workshop papers and proceedings**

None

**8.10.2 Literature reviews**

None

**8.10.3 Scoping studies**

None

**8.10.4 Datasets**

None

**8.10.5 Project web site, and/or other project related web addresses**

None

**9 References cited in the report, sections 1-7**

## 10 Project logframe

|  |  |
|--|--|
| <b>Project Number</b><br>(leave blank)<br>document)<br>R8496 | <b>Log frame and Production System reference number (complete from tender</b><br><br>NRSP 2.1.3(a) |
|--|--|

| <b>Narrative summary verification</b>  | <b>Objectively verifiable indicators Important assumptions</b> | <b>Means of</b> |
|--|--|-----------------|
| Goal   |  |                 |
| Contribute to realising improved integrated NR-management strategies for specific groups of the poor identified, tested and promoted with target institutions that are stakeholders in the various projects in NRSP's portfolio Options and programmes for improving integrated NR management relevant to the poor in at least two target audiences or institutions enhanced as a result of engagement with study products | Project FTRs and peer-reviewed publications                    |                 |
| NRSP Annual Reports  |  |                 |
| Target institution reports   |  |                 |

### Purpose

Capacity of DFID's policy makers and research managers to make evidence-based decisions within DFID's area of comparative advantage on poor peoples' livelihoods under climate change improved through insights from RNRRS programmes By Summer 2005/06, RNRRS Climate Change knowledge distillation used in one research call by DFID CRD

By March 2006, 4 DFID policy division (PD) teams across two groups consider the capability and needs of the poor to adapt to climate change in their policy formulation

Summer 2005/06 CRD research call covering on climate change

Relevant DFID research and development policy or strategy statements or documents.

Records of PD team correspondence with PL

Outputs

1. A body of knowledge from RNRRS projects that is relevant specifically to DFID's principled interest in the poor and their capacity to adapt to climate change and its impacts Identified.



By 30 June, 2005, a coherent distillation of knowledge achieved with collaboration of PMs and PLs of relevant programmes and projects  
 Statement of Preliminary Findings submitted to DFID  
 Necessary cooperation with personnel achieved within time-frame

2. Implications for DFID's future research and development policy with regard to adaptation to climate change pinpointed.

By 31 October, 2005, key lessons, development messages, and challenges for DFID's poverty reduction policy identified  
 Six-page summary of key findings and lessons learnt, prepared for publication.

FTR Main Report completed to DFID specifications

3. Knowledge gaps identified, and research questions formulated with respect to an appropriate model of natural resource-based livelihood systems under climate change, that capitalise on DFID's comparative advantage

By 31 October, 2005, RNRRS-based knowledge contextualised in the literature, work of other organisations (including CGIAR, DDC, GM-CCD), and research questions formulated.

FTR Main Report completed, plus annexes

Journal article prepared for publication (31 January, 2006)  
 linkages made and visits carried out

Necessary

4. Communication effected with stakeholders within constraint imposed by time  
 Stakeholder perceptions and interests reflected in project products

#### FTR and other products

Activities  
 Activity)

Milestones (and budget if budgeting by

**Output 1 A body of knowledge from RNRRS programmes identified** All dates refer to 2005

O1 Activity 1 Using the *Systems Characterisation Study*, select a sample of RNRRS projects for analysis  
 project sample by 19 May  
 MS 1a Agreement with PMs on initial

O1 Activity 2 With assistance, search, record and synthesise new knowledge from the selected projects  
 MS 1b Employ assistance by 15 May

O1 Activity 3 Distil Preliminary Findings as requested by DFID  
 MS 1.c Preliminary Findings submitted by 30 June

**Output 2** Implications for DFID's future research and development policy pinpointed

O2 Activity 1 Develop a 'typology of adaptation initiatives' by which policy has built on

climate adaptation potentials at local level, successfully or otherwise  
complete by 31 July MS2a Typology

O3 Activity 2 Identify key lessons, development messages and challenges for DFID MS  
2b Draft FTR/six-page summary prepared for consultation by 31 October

**Output 3** Knowledge gaps identified and research questions formulated

O3 Activity 1 Analysis of DFID's comparative advantage taking account of scoping studies  
(IIED, IDS) and in relation to other players (e.g., CGIAR) MS 3a Scoping  
studies taken into account by July IIED and IDS studies completed on schedule

O3 Activity 2 Synthesise new knowledge and re-interpreted knowledge under O1 and O2  
using a model of adaptation that can guide DFID policy MS3b Model  
complete by 30 Sept

O3 Activity 3 Knowledge gaps identified for DFID's research agenda MS 3c Draft  
FTR/six-page summary prepared for consultation by 30 November

O3 Activity 4 Draft FTR MS 3d FTR/six-page summary completed  
by 30 December

O3 Activity 5 RNRRS experience prepared for publication MS 3e Article for publication in  
draft by 31 January, 2006

**Output 4** Communication effected with stakeholders

O4 Activity 1 Links set up with PMs, PLs and other RNRRS sources MS 4a Working  
relations initiated by 19 May

O4 Activity 2 Review early work, prioritise, and plan further work with available interested  
parties MS 4b Inception meeting before 15 June

O4 Activity 3 Visit selected countries where NRSP has invested to incorporate TI and other  
stakeholder interests in climate change adaptation policy MS 4c Visits carried out by 31  
October Logistics can be arranged

O4 Activity 4 Consultation on draft FTR MS 4d By 31 October  
Pre-condition

## **11 Keywords**

Climate change adaptation, livelihoods, natural resources, poverty reduction, risk, variability