NATURAL RESOURCES SYSTEMS PROGRAMME

***FINAL TECHNICAL REPORT*[1]**

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Project Title

Strengthened rural services for improved livelihoods in Bangladesh

Project Leader

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Organisation

Rothamsted Research

NRSP Production System

High potential

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Annexes

Abbreviations and Acronyms

AKIS / KIS	Agricultural knowledge and information system / Knowledge and information system
Aman	Summer (mainly rainfed) rice crop
ASIRP	Agricultural Services Innovation and Reform Project (within DAE)
ASSP	Agricultural Services Support Project
BAU	Bangladesh Agricultural University
BS	Block Supervisor (village-level worker of the Department of Agricultural Extension)
Boro	Winter (irrigated) rice crop
BRRI	Bangladesh Rice Research Institute
CIMMYT	International Maize and Wheat Improvement Centre
DAE	Department of Agricultural Extension (Bangladesh)
DFID	Department for International Development
FFS	Farmer Field School
FIVDB	Friends in Village Development Bangladesh
FLE	Farmer-led exension (an approach piloted by ASIRP)
FoRAM	Forum for Regenerative Agriculture Movement (an 'umbrella' NGO)
FoSHOL	Food Security for Sustainable Livelihoods (EU-sponsored project)
FTR	Final technical report
GKF	Grameen Krishi Foundation (NGO)
IACR	Institute of Arable Crops Research, Rothamsted (now Rothamsted Research)
ICM	Integrated cop management
MS	Microsoft
MTR	Mid-term review
NAEP	New Agricultural Extension Policy (Bangaladesh)
NARS	National agricultural research system
NGO	Non-government organisation
OVI	Objectively verifiable indicator
PDA	Programme Development Activity
PETRRA	Poverty Elimination through Rice Research Assistance (DFID-sponsored project)
PLA/PRA	Participatory learning and action / Participatory rural appraisal
PO	Partner organisation
PPS-BD	PRS Promoters' Society, Bangladesh
RDRS	Rangpur-Dinajpur Rural Service
RSC	Regional Steering Committee (of the Rice-Wheat Consortium)
RTTC	Regional Technical Coordinating Committee (ditto)
RWC	Rice-Wheat Consortium for the Indo-Gangetic Plain
Union Parishad	Union Council (elected)
Upazila	Sub-district (formerly Thana)
USAID	United States Agency for International Development

1 Executive Summary

This project has its origins in NRSP project R7600 (The Feasibility of Integrated Crop Management in Bangladesh, completed in 2001) - and in particular in the model of 'dynamic interaction' which this project put forward to characterise a more productive pattern of knowledge and information exchange between farmers, extension workers and scientists than that implicit in the simplistic 'research-extension-farmer' model. The 'dynamic interaction' model reflected the concept of an agricultural knowledge and information system (AKIS) – a construct developed through the 1990s to enable the reality of complex patterns of information transaction within rural economy and society to be described and analysed.

The starting point of the project was a database of integrated crop management (ICM) technologies, envisaged as an information resource for participants in the 'dynamic interaction' process articulated by R7600. Preliminary user-testing in Bangladesh of a prototype of this database received generally positive feedback. On the basis of this, a programme development activity (PDA) was commissioned in November 2001 to pilot test the database, assessing how readily organisations providing extension and support services to small farmers are able to use an electronic database, add to it, and adapt it to their purposes.

Recognition that a database of ICM-related technologies would form part of an AKIS led to the question being raised within the project team of whether the scope for an intervention such as the database could be assessed in any context *other* than that of a broad understanding of the AKIS used by farmers and by organisations aiming to serve their needs. This led in turn to an enlargement of the PDA into the present project, so it consisted of two components: a database component (scheduled Nov 2001-March 2003) and information strategy component (Feb 2002- March 2005).

In the database component, the project worked with three core organisations and a total of some 10-12 individuals over a period varying between 6 and 8 months. 'Outreach' activities by one of the organisations led to hands-on experience of the database for some 43 people representing some 18 organisations, in the government, non-government, higher education and national agricultural research sectors. The project's Output 1 and Output 2 (that the potential of the database as a extension support tool should be assessed by users as well as its scope for enabling organisations to improve their delivery of rural services) were thus met via reasonably extensive user experience, plus feedback at a two-day workshop at the end of the database component. However, at the end of the project as a whole there is no sustained use of the database. Output 3 (to post the ICM database on the website of a regional organisation i.e. the Rice-Wheat consortium for the Indo-Gangetic Plains in order to make it available to scientists and the agricultural development community throughout the region) was not achieved during the project's life for logistic reasons. However this has now been done.

The project's information strategy component began with an investigation of rural knowledge and information systems (KIS) in two regions of Bangladesh (North-west and North-east); these investigations aimed to be statistically robust, in order to enable generalisations to be made about the KIS of the poor rural people who make up the 'target' populations of the project's two partner development agencies. The project developed, in collaboration with its partners, a methodology which would meet this requirement. This involved, on the one hand, trialling and validating means of interacting with groups of poor rural people to explore knowledge and information systems (KIS), and refining these so they could be replicated across a relatively large sample of groups. On the other hand, it required drawing up a sampling frame, and selecting a sample, which would reflect the varied environments (agro-ecological, social and economic) within which the target populations of poor rural people in each area earned a livelihood. The KIS studies based on this project-developed methodology covered some 67 groups and 900 individuals in all. As well as meeting the project's Output 4 (relating to understanding ways in which poor rural people access and evaluate information from different sources), they have also made a contribution to the experience of using PLA-based methods of field investigation to generate results that can be analysed statistically.

In its final phase, the project team worked closely with its two partner NGOs to translate the findings of the KIS investigation into a plan for a knowledge-based intervention with groups of each partners'

beneficiaries, to implement this plan, and to monitor the impact of the intervention. In the North-west the partner organisation worked during this phase with a total of some 20 farmer field schools (almost 400 individuals in all). In the North-east the partner achieved a smaller cover, working initially with three groups (some 80 individuals) and subsequently with two further groups (50-60 individuals). Recruitment and development of these groups (and indeed to some extent the whole project in the North-east) was hampered by serious flooding in the North-east during the 2004.

In both project locations a four-stage process was adopted, in which group activity to identify information needs is followed up by a village-level workshop with local representatives of (GO and NGO) service providers; this is followed in turn by visits to service providers on the part of group representatives to make specific requests. Meeting the needs reflected in these requests takes various forms, such as attendance at a training course by group members, or village visits by representatives of the service providers to give a talk or method demonstration.

To have established a functioning intervention process of this type, engaging both service providers and poor rural people, achieves Output 5 of the project ('the need recognised and strategy developed and agreed by target institutions for improved information services related to natural capital'). However, even within the short timescale of its final year, the project has gone beyond this output in that interventions following the above process have had a positive impact on the livelihoods of some participants. As importantly, the experience of the project has resulted in one of the partners adopting throughout the organisation important aspects of the approach which it pioneered in collaboration with the project. Thus there are good expectations that the strategy which the project initiated for improving poor people's access to information on rural services will be sustained and scaled-up. A set of post-project uptake promotion activities is proposed, aiming to reach domain Z (in-country) as well as (the more accessible) domain X and Y stakeholders.

2 Background

The origins of both components of project R8083 are to be found in NRSP project R7600 (the feasibility of integrated crop management in Bangladesh) implemented in 2000-01. This found that farmers in Bangladesh have an awareness of ICM, and are already practising elements of it, but identified the need that implementation of an ICM strategy should be aided by 'changes in the way in which scientists and extension workers interact with farmers'. It put forward a model of 'dynamic interaction' in which the conventional concept of information flow from research to extension to farmer is replaced by a process in which farmers, extension workers and scientists are able to exchange information and also to draw on a pool of technical information (ideally without depending on an intermediary) (Gaunt *et al*, 2000).

In order to create a prototype of such an information resource, Project R7600 developed (in MS Excel) a database of ICM technologies relevant to the Indo-Gangetic plain; this was subsequently developed – at Rothamsted Research – into a searchable database in MS Access. Preliminary user-testing in Bangladesh received generally positive feedback (R7600 FTR), on the basis of which project R8083 – initially as a programme development activity (PDA) – set out to test the database at field level; assessing how readily organisations providing extension and support services to small farmers are able to use the ICM database, add to it, and adapt it to their purposes.

The timing of R7600 coincided with initiatives in Bangladesh (and elsewhere in the region) for change in public-sector extension services. Issues highlighted in the Bangladesh NAEP[3] to better meet farmer needs included: working to decentralise the bureaucratic system that evolved around the Training and Visit system in the 1980s, changes in approach to training extension staff, and improving the links between extension and research[4].

The model put forward by R7600 was informed by – and reflected – the concept of an Agricultural Knowledge and Information System' (AKIS), which was developed during the 1990s through both conceptual work (e.g. Röling 1989, Engel and Saloman 1997) and empirical studies (e.g. Rolls et. al 1994, Ramkumar 1995, Ramirez 1997). The AKIS concept has been important in enabling both thinking and practice on rural extension to move away from the linear 'Research-Extension-Farmer' model which both R7600 and the Bangladesh NAEP found inadequate (Garforth 2002).

Recognition that a database of ICM-related technologies would, if used at all, necessarily form part of an AKIS led to the question of how it might relate to other elements of the system. In turn this raised the question of whether the scope for an intervention such as the database could be assessed in any context *other* than that of a broad understanding of the AKISs used by farmers and by organisations aiming to serve their needs (and possibly using – among other tools – an electronic database at 'near-farm' level). The plausibility of this case to NRSP led to an invitation to Rothamsted Research to submit a full proposal for a 3-year project which would incorporate the PDA to pilot the database but which would also explore in a broader sense knowledge and information aspects of service provision for poor rural people, and which would contribute in particular to output (1) of the NRSP high potential logframe (see section 7 below).

The project was able at the planning stage to draw on several sources for insights into farmers' perceptions of information needs:

a) a wide-ranging 'stakeholder analysis' (in 9 Districts of Bangladesh) of the livelihoods and needs of medium and small rice farmers conducted by PETRRA (the timing of which overlapped with that of R7600). This set out to use a range of PRA methodologies to enable both farmers and Upazila/District level intermediaries to identify 'researchable issues'. However, in problem-ranking, farmer groups

[3] New Agricultural Extension Policy

[4] DAE have a number of pilot initiatives including i) farmer led extension, ii) integrated extension initiative (district level – top down), strengthening process at the Upazilla level (12 Thana pilot), iii) Generalist / specialist (block supervisor contact at farm level for a range of service providing agencies, including NGOs.

invariably gave importance less to technical issues than to problems such as availability of inputs (particularly seed), 'lack of capital' (including irrigation facilities) and vulnerability to loss through flood, pest and disease. At the same time knowledge-related problems (e.g. fertiliser use, disease identification, ability to distinguish beneficial pests) did appear consistently in the records of problem-ranking exercises (PETRRA 2000).

b) a set of consultations with focus groups of poor and medium farmers carried out as part of NRSP Project R7600 (under the general aegis of the PETRRA stakeholder consultations). These consultations confirmed farmers' awareness about the poor sustainability of many current farming practices (which however they needed to adopt in order to achieve high levels of yield from very small holdings) and also showed that structural and institutional factors are seen by poor farmers as severe constraints on their improving the productivity and sustainability of crop production. Poor supply of inputs and credit (often traced to corruption) and inefficient marketing structures predominated in scored causal diagrams constructed by groups; 'lack of knowledge' or poor 'extension advice' consistently appeared but typically were assessed as contributing less than 10% to the end problem of 'low income from rice production' which the focus groups were invited to address. (PETRRA 2000, Gaunt et.al. 2000)

c) problem census with groups farmers in the early stages of the ASSP[5]. This assessed that 30% of problems identified by groups of women farmers and 60% of those identified by men farmers 'could be addressed by the DAE' (in the sense of being amenable to a technical or an information-related solution rather than having an institutional or political base). However these problems tended not to be among those ranked highest by the farmer groups: the high-ranking problems related rather to issues such as the cost and poor availability of inputs, and the low price of produce (Walker and Salam 1996).

All of these highlight the issue of the severe inequalities of income, wealth and access to resources which characterise rural Bangladesh, and raise the question of whether facilitating access to knowledge and information alone is a strategy which can enable poor rural households to improve their livelihoods, or whether the constraints lie more in the structures of inequality and lack of access to productive resources. R8083 has contributed to addressing this question by exploring the knowledge and information systems of poor rural people and the extent to which their livelihoods can be improved by development agency interventions which focus on knowledge and information.

3 Project Purpose

Instruments and mechanisms of information exchange that enable better availability of ICM knowledge highly relevant to the improvement of rural livelihoods identified, tested and promoted to enhance provision of rural services primarily in Bangladesh and in other high potential areas in South Asia

OVIs at this level link both components of the project (database and information strategy) to the purpose.

OVIs relating to the database component of the project refer to a national organisation having used the ICM database to improve information exchange on best practices between organisations, and to a regional organisation using lessons learnt from the ICM database to increase information via its website. Neither of these has unequivocally been achieved. Although the output of pilot testing and assessing the potential of the database has been achieved (see section 4 below), this has not been translated into significant use of the database in communication between organizations, as set out in the purpose-level OVI. In case of the regional organisation, versions of the database are now available online, but the experience of the database has hardly contributed to the learning process referred to in the OVI

OVIs relating to the information strategy component of the project refer to one organisation having improved services to its poorer clients through strengthened information provision, and to at least 5 other national institutions recognising opportunities by which information services could be improved.

[5] Agricultural Services Support Project (DFID-funded) - the forerunner to the ASIRP (Agricultural Services Innovation and Reform Project) with which R8083 collaborated.

Assessing the project's experience against these OVIs indicates that the project has contributed to the purpose. By end-of-project, one of the two partner organisations (RDRS in North-west Bangladesh) has recognised the significance to its poorer clients of strengthened access to knowledge and information. In consequence it has 'mainstreamed' into its programmes important aspects of the information-based approach to working with its beneficiary groups which it piloted in collaboration with the project (see output 5 below and Annex A, section 4.6). It also plans to retain the fieldwork teams which were set up in collaboration with the project and partly funded by the project. Specific livelihood improvements have been achieved by some members of these groups (see Annex A, section 4.5, and the project video at Annex F). The other partner organisation (FIVDB in North-east Bangladesh) has identified ways in which the experience gained via the project could inform aspects of several of their programmes; however there is here a much smaller number of groups (and of the organisation's personnel) with successful project-related experience, so the sustainability of the initiative promoted by the project is more in question.

The awareness of other regional organisations in both the North-west and the North-east has been raised through contact with POs and project team members in a series of meetings and workshops at which the project experience has been presented. There has however been some resistance to recognising the significance of this experience (mostly taking the form of incredulity on the part of some government organisations that poor people find it hard to access the services they provide). More could be done in post-project activities at national and regional level to promote awareness of opportunities for improving information services (Annex A, section 5).

In summary, the database component of the project cannot be said to have contributed to the purpose, since the project has not ended with the database as a useable tool. The information strategy component has by contrast made a significant contribution within the lifetime of the project, and important elements of the project promise to be sustained in policy and in practice.

4 Outputs

Output 1: *Potential of the ICM database as an extension support tool assessed by partner organisations, through pilot studies.*

This output was achieved within the time-scale and by the number of partners indicated by the OVI (See report on Activity 1.2 below.).. However this time-scale now appears to have been very short, in that it required both organisations and individuals conerned to undertake a learning process in relation to the database before an assessment of its worth (or potential worth) could be made. without . The maximum period of use of the database in any of the locations was no more than 12 months (mid 2002 to mid-2003). This covers two cropping seasons (Aman 2002 and Boro 2002-03). It is clear that this was an inadequate time for training to be translated into practice within any of the partner or target organisations, and for any organisation thus to have become a confident user of the database and to be able to continue to use and develop it independently.

Proceedings of the February 2003 workshop indicate that users engaged thoroughly with the question of how the ICM database (or a version of it) might serve their own organisation in improving information delivery (the final OVI). However sustainable use of the database has not taken place, the end of the ASIRP project in mid-2003 being an important factor which contributed to this. (See report on Activities 1.3 & 2.1 below).

Output 2: *Opportunities to improve delivery of rural services relating to natural capital identified through target institutions' critical evaluation of pilot studies of the ICM database*

This output was thus achieved in terms of the first of the OVIs (by February 2003 target organisations attend workshops hosted by partner organisations). It was achieved most successfully in one location (Thakurgaon in the North-west), where the ASIRP District Facilitator was particularly active in encouraging and supporting a user group of TIs (see report of Activity 2.1).The second OVI (referring

to target organisations' considering how the database could be used within their own organisation to improve information delivery) was met to time via the national workshop (see report f Activity 1.3), to which target organisations' representatives contributed fully thanks to the facilitation of the partner organisations. Although this output was achieved (as was also output 1) it needs to be noted that sustaining use of the database was not established.

Output 3: *Access made available to a database of agricultural technologies relevant to the Indo-Gangetic Plains via a regional organisation's web-site*

This output refers to the planned collaboration with RWC. Thisfailed to take place to the time-scale specified in the OVIs (i.e. by October 2003, an off-line version of database; by June 2004, the database searchable via the internet; by October 2004, presentation by RWC co-ordinator (or staff) to RSC or RTTC meeting reports use of database). However the various versions of the ICM database are now (June 2005 post end-of- project) available on the RWC website (see reports on Activities 3.1, 3.2 below). The output has thus been partly achieved.

Output 4: *Understanding established of the instruments and mechanisms by which people obtain information from available sources, the perceptions that different client groups have of the quality of information itself and the reasons for choosing information sources.*

The initial OVI provided for the project's engaging with three partner organisations (TIs in the logframe) from the three PETRRA focal areasThe OVI was later down-scaled (at the project mid-term review in July 2003) to confine the project's work to two of the focal areas – the North-west and North-east (see report on ctivity 4.1 below).

In the event, the studies in the two regions taken together covered some 67 groups and over 900 individuals. (See report on Activity 4.2 below.)

Development of a project methodology involved on the one hand adapting and validating methods of interacting with groups of poor rural people to explore with them their knowledge and information systems (KIS), and on the other drawing up a sampling frame and selecting a sample which would reflect the environments (socio-economic, logistic, agro-ecological) within which the (large) target populations of poor rural people served by the partner organizations earned a livelihood and transacted and used knowledge and information (see Annex A, section 3 and Annexes C1, C2). Both these tasks were led by the project team with close collaboration of the partner organisations. The project team attempted to extend this collaboration into data analysis and write up after the surveys, but participation of the partners was not significant in these activities (see report of Activity 4.2 below).

The findings of the KIS studies in North-west and North-east are regarded as robust, based on a strong methodology - which was reinforced by adjustments made to both the strategy for interacting with groups and to the sampling scheme in the North-east. I t is suggested that this This output has been fully achieved in terms of the (downscaled) first OVI. In terms of the second OVI, collaboration with the partners did not carry into analysis and initial interpretation of the field studies but was close and detailed in other respects – and indeed important to the achievement of both this and the next output.

Output 5: *The need recognised and strategy developed and agreed by target institutions for improved information services related to natural capital*

A series of activities has contributed to this output: work alongside project partners to interpret the findings of the KIS studies (output 4) was followed by planning and developing in action research mode an approach to working with poor rural people which built on this (see reports on Activities 5.1-5.3). Attention has been paid throughout to communicating the project's approach and findings to other stakeholders (report on Activity 5.4) Work directed at this output took place within a more compressed time-scale than that set out by the OVIs i.e. no more than a year in either the North-west of the North-east. However the speed at which change occurred within the groups was greater than anticipated,

particularly in the North-west. As early as the middle of the final year of the project a method had been established by which facilitators could enable groups to 'unlock' information about services and subsequently access to the services themselves (see report on Activity 5.3 below). In addition to this, however, farmer promoters and group members were themselves showing confidence in relating to service providers, and by the mid -term review of phase 2 of the project (held in July 2004 in both regions) some farmer participants in the North-west had already achieved livelihood improvements as a result of their participation in the project., The process moved more slowly in the North-east, due very largely to severe flooding which affected the region (although not the North-west) during the 2004 monsoon.

Sustainability of the KIS model after the end of the project is assured in RDRS, which has adopted elements of the KIS approach in new farmer field schools, and has also adopted for all FFSs a reporting format similar to that used in the project (see Annex A, section 4.5). In the North-east sustainability is less certain, although FIVDB recognises points at which the experience of R8083 could inform other – donor-sponsored – programmes (see report on Activity 5.3)

In both the regions, the project has communicated throughout phase 2 with key stakeholders, via meetings of the PETRRA Focal Area Forums. Focused meetings in Dhaka with target institutions (rather than a large end-of-project workshop) have proved effective means of meeting the penultimate OVI at this level, Aplan for post-project, in-country UP activities builds on these meetings (see Annex A, section 5). The international meeting mentioned in the final OVI has not yet been identified.

This output as a whole has been well-achieved, although a little behind the time-scale of the OVIs. This means some uptake promotion (for which resources remain in the project) is still to be done post-project. There are good expectations that the strategy which the project initiated of information-based development interventions will be sustained and scaled-up in at least one of the regions, i.e. the North-west.

5 Research Activities

1.1 Partner organisations are identified

The OVI against activity 1.1 envisaged two intermediary organisations ('partner organisations') undertaking to adopt the database with close monitoring and support and adapt it to their needs. Other organisations expressing an interest ('target organisations') would be given copies of the database together with training in its use, and would develop the database with less support. The distinction between 'partner' and 'target organisation' was based on the assessment that it was desirable to make copies of the database available to any organisation showing an interest, but that, given the resources available to the project, close support could not be offered to more than two organisations.

An inception visit by members of the UK project team to Bangladesh in November 2001 had the purpose of recruiting partner and target organisations. Discussions were held with 6 organisations, building on existing contacts (most importantly those made via project R7600). Three possible partners came forward with a firm commitment, and offered between 20 and 30 possible locations for placing the database in the field. It was recognised that it would be a challenge to match these enthusiastic expectations with the limited resources of the project. However a fairly drastic 'self-deselection' took place in the first half of 2002, in that two of the initial three organisations (Proshika and CARE) effectively dropped out of the project. Recruitment of others (but on a smaller scale of activity than that which the 'drop-outs' had proposed) proved possible from organisations we had previously been in contact with, namely FoRAM and Bangladesh Agricultural University (BAU), Mymensingh.

Training of database users in the partner organisations began in February 2002 (rather than January, as specified in the second OVI at this level) and continued throughout 2002, incorporating workshops in all the locations where the database was used (see Annex A section 2 and Annex B). Technical support (mentioned in the third OVI at this level) was not separate from training, nor was it initially regarded as important to distinguish it from training, in that the key task appeared to be to familiarise users and potential users with the database and to establish them as confident users. Suggestions for modification

to the database (as in the third OVI) did not emerge until a fairly late stage, i.e. the national workshop in February 2003.

1.2 Partner organisations pilot test and monitor the ICM database

As noted above, training of partner organisations (and operationalising the database in the field) began in February 2002 (rather than January as indicated by the OVI), and training/support activities were carried out from February through to December 2002 (see Annex A section 2.2 and Annex B.1). The database was piloted in four different field locations by one of the partner organisation (ASIRP) and in a single location by a second (BAU); a third organisation (FoRAM) developed a process for identifying farmer practices which could be entered as records into the database, and used this in three locations (one of these locations – Thakurgaon – coinciding with one of those covered by the first partner). In addition to the three partners, people from some 18 organisations had some experience of the database through belonging to the 'database user groups' set up by ASIRP in each of their four locations (see activity 2.1 below).

Representatives of 6 organisations who had been active users of the database attended a workshop in Dhaka in February 2003 and fed-back on their experience (see Annex A section 2.4 and Annex B.3). The workshop was attended by some 30 participants in all. Representatives of organisations with which contact had been made at the beginning of the project but which had not become database users attended the workshop as observers.

All of the partners had made some additions to the database (the third OVI against activity 1.2) although the number varied widely. Most interpreted 'farmer-validated' as reflecting farm practice, sometimes by a small number of farmers or even a single farmer. This raised questions which were not resolved as to what validation criteria should be applied to records in a widely-used / networked database.

1.3 Partner organisations document and analyse use of the ICM database

The February 2003 'national' database workshop in Dhaka brought together partner organisations plus members of some of the target organisations from database users' groups. The workshop gave the opportunity to a large proportion of the most active database users to feed back on their experiences of the database (which amounted to between 6 and 8 months depending on organisation and location). All of the issues detailed in the OVI against this activity were addressed during the workshop, although largely in terms that most of the directions in which the project envisaged the database might have developed (and which are reflected in this OVI) did not become apparent to the users as opportunities. Given the short time-span of the database component of the project, the steep learning-curve which faced most of the people engaging with the database, and to some extent hardware limitations, users found they were overwhelmingly preoccupied – throughout the whole period – with gaining familiarity with the software and making it work. (see Annex A sections .4, 2.5 and Annexes B.3 and B.4).

2.1 Target organisations evaluate the ICM database pilot studies

The project envisaged a distinction (mentioned under activity 1.1.above) between 'partner organisations' (core database users in close contact with the project and supported by it), and 'target organisations' (local 'satellites' of the partner organisations, learning from the partner organisations and also feeding back to them on the potential of the database to support their field extension activities). A structure reflecting this model existed in the four locations where ASIRP District Facilitators convened database user groups. Recruitment of 'target organisations' to form the database groups was done *ad hoc* within the Districts by the District Facilitators after they were posted (in March 2002, rather than December 2001 as indicated in the OVI). The pattern of membership of the database groups was broadly similar throughout. Groups consisted of between 9 and 11 members, drawn from District-level representatives of the Departments of Agricultural Extension, Fisheries and

Livestock, together with representatives of one or more local NGOs and local representatives of a national NGO. In Bagerhat two staff members of Khulna University joined the group, while in Chapainawabganj representatives of the NARS (the Lac and Mango Research Stations, both situated in the District) were members. It is estimated that some 43 individuals from 18 organisations had some experience of the database via user groups (see Annex A section 2.3 and Annex B.1).

The database user group model appeared to the project team (during the course of 2002 and at the workshop in February 2003) to have worked most effectively in Thakurgaon where the ASIRP District Facilitator (DF) was active in supporting the target organisations. However a workshop at Thakurgaon in July 2003 – just before the end of ASIRP and the withdrawal of this resource-person from the District – showed how limited had been the scope of most target organisations to use the database in the terms of the OVIs against this activity, namely to develop the potential of the database to 'extract, input and adapt content to support their extension activities', and to use the database in a bi-directional way to meet farmers' needs. The only user to have reached the point of operationalising the database in this way (albeit on a limited scale) is CARE Thakurgaon (see Annex A section 2.5, and Annex B.4).

3.1 Regional organisation creates a demonstration SQL database drawing on lessons learnt from pilot testing of the ICM database

The regional organisation is the Rice-Wheat Consortium for the Indo Gangetic Plains (RWC) based in CIMMYT New Delhi. Discussions with RWC initiated in February 2002, and continued during a visit by the Systems Manager to UK in April 2002, established the basis for collaboration with RWC, and to a plan for developing a web-based version of the database. This would have drawn on experience with the CD version of the database to design an interface for a web version; and then user feedback on draft and dummy versions would have been elicited from throughout the RWC to enable a web version to be finalised. This plan failed because the Systems manager left CIMMYT in June of 2002 and was not replaced until early 2003, very close to the end of the database component of the R8083. Renewed contact has led to the partial achievement of activity 3.2.

3.2 Regional organisation hosts and maintains the technology database on their website and modifies it to suit users' requirements.

In April 2005 (i.e. just after the end of the project) versions of the ICM database have (after numerous delays, detailed in Annex A section 2) been posted on the RWC website, so providing a 'home' for (in particular) the farmer-validated data which had been collected in Bangladesh during the project. However, there is no particular plan to modify the database, nor is feedback facilitated on the website.

4.1 Target institutions identified and scope of work transacted

The collaboration between the project and PETRRA (referred to in the OVI against this activity) was informal but very significant. Early contact with PETRRA (building on the collaboration between the earlier project R7600 and PETRRA) led to important links being recognised between PETRRA's outputs and those of R8083 (see Annex A, section1). Since dissemination and exchange of knowledge and information was not addressed directly by any PETRRA sub-projects (i.e. PETRRA-commissioned research activities), it was seen that R8083 would add value to PETRRA's work.

It was agreed with PETRRA (at meetings in Dhaka in February-April 2002) that the fieldwork of the information strategy component of R8083 should take place in the PETRRA focal areas and that PETRRA should facilitate access to rural development agencies in the focal areas to enable R8083 to recruit partner organisations for the information strategy component of the project. Thus the partners of R8083 would also be PETRRA partners (i.e. implementing PETRRA 'sub-projects'). However it was recognised that any attempt to link R8083 activities directly to PETRRA sub-projects might well be counter-productive (leading to tensions of timing/scheduling).

In the event, the information strategy component of R8083 was implemented in only two of the three

PETRRA focal areas, namely the North-west and the North-east, and not in the South-west. It was recognised by the project MTR that to implement the KIS study in three (widely-spaced) locations would have stretched the project's resources, and that allocation of the necessary extra funding would not be cost effective.

4.2 Project sampling and fieldwork methodology developed

The first phase of the information strategy component of the project involved a detailed study of the knowledge and information systems used by poor rural people in the two areas selected in consultation with PETRRA and confirmed by the project MTR. The study was regarded as likely to better meet its immediate objective if it were also to (a) advance the methodology of investigating knowledge and information systems in interaction with their users, and (b) use a robust sampling design to enable generalisations relating to the partner organisations' working areas be made on a statistically valid basis. (See Annexes C.1, C.2)

Two pilots were carried out in the North-west in pursuit of objective (a), in May and November 2002. In November a sampling frame for the North-west was devised in collaboration with RDRS and a sample drawn. A survey was carried out in the North-west in January 2003 covering a sample of 32 groups and almost 400 individuals. In the North-east a sampling frame was constructed and a sample drawn in April 2003, immediately followed by a field survey of 11 groups.

The project MTR in July 2003 questioned the adequacy of the field study in the North-east, in terms of its sample size and its poverty focus. Following this, some alternative methods of interacting with groups were piloted in the North-east (in August and October 2003), resulting in a protocol which was not identical to that used in the North-west, but which was better suited to identifying and dialogue with very poor people, as well as to the pattern of livelihoods in the North-east. This was then used during November 2003in a 'second-round' survey in the North-east, with a new sample drawn from a simpler frame and covering a total of 24 groups.

Analysis of the field data was carried out jointly by members of the UK team and the Bangladesh research collaborator, PPS-BD, in two working sessions (of several days each) in Dhaka, in September and December 2003. Partners were invited to make short visits to these working sessions. This did happen but cannot be seen as representing collaboration in any significant sense. The September working session was followed by a meeting in the North-west with RDRS and members of the Focal Area Forum, at which preliminary findings of the field study were shared, and the process of dialogue with partners to plan phase 2 of the information strategy component (activity 5.1) thus initiated. The analysis of the North-east study was completed - and work with FIVDB begun to plan phase 2 – only in February 2004. (The methodology and findings of the field studies in the North-west and North-east are summarised in Annex A, section 4 and reported in detail in Annexes C.1 and C.2).

5.1 Target institutions plan information interventions based on data collected on KIS in their location

Planning for phase 2 of the information strategy component of the project involved interpreting with the project's two partners the phase 1 KIS studies and examining how these might inform a programme of work. A series of meetings and workshops with the PO began in the North-west in September 2003 (ahead of the scheduled date of October 2003) but in the North-east (due to the need to carry out a second round study) only in February 2004. The final planning workshops were held in January in the North-west and March in the North-east. Field work started immediately afterwards in each region, so this phase of the project was operational for no more than a year in either. However progress was made towards achieving project outputs even within this limited time.

Each of the partner organisations set up dedicated 'KIS teams' (a term coined by RDRS) to implement this phase of the project. In each region, two separate locations were identified. In the North-west 10 farmer groups were recruited in each of the two locations, while in the North-east only one group was initially recruited in each location. Although this discrepancy was large, the project team accepted that

the partners should move at a pace with which they felt comfortable in terms of the number of beneficiaries they engaged with. In the North-west the partner was fairly ambitious: RDRS was in process of 'mainstreaming' (i.e. establishing throughout their working area) farmer field schools, and found the initiative promoted by the project appeared to offer a useful means of engaging with an FFS. In the North East the context into which the R8083 approach could be introduced was less clear, since the FIVDB Livelihoods Enhancement Programme does not work with groups. In the event, it proved possible to recruit groups which had been formed under the FIVDB's long-established Community Learning Circles (CLC) programme and the much more recent farmer-led extension (FLE) initiative – in which FIVDB had collaborated with ASIRP between 2001 and 2003.

The risk and assumption against output 5 mentioning restrictions on ability to assess institutional situations refers to the disempowerment of poor people which the project proposal had referred to[6] and which it was anticipated might make ineffective an approach to development intervention based on nothing more substantial than information. In the planning process, the partners showed that they were aware of the issues involved but considered that they would be able to facilitate links between farmers (including poor farmers) and information providers – a confidence which proved well-founded.

Monitoring initially caused some difficulty in that a framework for reporting was agreed with the partner organisations but the monthly record sheets (submitted to the team leader and thence to the project team) which were intended to be a key instrument of the process were being completed quite inadequately, with much too little narrative included[7]. This problem was remedied around June 2004; and RDRS has now adopted the recording/monitoring process developed in the project throughout its farmer field schools.

5.2 Target institutions implement information intervention strategy to improve their rural services delivery.

Implementation of phase 2 began in February 2004 in the North-west and in March 2004 in the North-east. In the North-west the KIS team of the project's partner, RDRS, worked with a total of some 20 farmer field schools in 2 separate locations (almost 400 individuals in all). In the North-east the FIVDB team (which was itself smaller) achieved a smaller cover: initially it worked with 3 groups in two locations (some 80 individuals) and subsequently with two further groups one in each of these locations (50-60 individuals). Recruitment and development of these groups (and indeed to some extent the whole project in the North-east) was hampered by serious flooding in the North-east during the 2004 monsoon (June-August). Fortunately the North-west was not affected by flooding that year.

The project team gave close support to the partners, which included helping to facilitate initial workshops between service providers and participating farmer groups, and also ensuring that the system of reporting and recording established with the partners was followed adequately). The April 2004 focal area forum meetings provided for by the OVI were not held (since this was the crucial period for establishing contact between the farmer groups and service providers); but forum meetings were held in both North-west and North-east in September 2004 and in January/February 2005. The September meetings gave the opportunity to communicate progress up to the mid-term review and the January/February meetings (reported on in Annex A, section 4.3 and in Annex D.3) were termed a 'final debriefing'.

5.3 Monitoring interventions enables target institutions to develop information methodology to meet poorer clients' needs

Phase 2 interventions have involved engagement by the target institutions (project partners) both with

[6] **'**Observations by the project team, and dialogue between the project team and TIs, will explore structural and institutional constraints: these may limit the extent to which their poorer clients and members of vulnerable groups are able to benefit from the information interventions and/or to have a voice…' (PMF section 6.2)

[7] The monthly record sheet is in Annex D1, Appendix 3(H)

beneficiary groups and rural service providers, followed by an element of engagement directly between beneficiaries and service providers (facilitated by the project partners). A four-stage process has emerged in which dialogue between group members and facilitator to identify information needs is followed up by a village-level workshop to which the facilitator invites local representatives of (GO and NGO) service providers; this is followed in turn by visits to service providers on the part of group representatives to make specific requests, which then lead to action in any of several forms (such as attendance at a training course by a group member, or village visits by representatives of the service providers to give a talk or method demonstration). (Annex A, sections 4.4, 4.5; Annex D.1.)

At the mid-term review of phase 2 held in July 2004 in both regions, the experience of phase 2 was shared between the KIS teams, the project team and senior members of the two partner organisations (Annex A, sections 4.5, 4.6, Annex D.2). In spite of the restricted time-scale of the final phase of the project, some important achievements were noted. Some participants had already achieved livelihood improvements (all associated with training); the very significant role of the facilitator was recognised in 'unlocking' information about services (and subsequently the services themselves); however the farmer promoters and group members who had had related to service providers showed a real confidence in their ability to ask for services. (This is recorded in the project video at Annex F, and in Annex D.1.)

Sustainability of the KIS model after the end of the project is assured in RDRS, which recognises how important – and how cost-effective – identifying and linking with other information and service providers can be. RDRS has adopted elements of the KIS approach in new farmer field schools started from mid 2004, and has also adopted for all FFSs a reporting format similar to that used in the project.

Sustainability is less certain in the North-east, where there is a smaller 'critical mass' of farmers and facilitators who have experienced change brought about by the project. However FIVDB has identified areas of its work in which insights gained from involvement in the project would be important. These include furthering child-to-adult communication (which is already promoted within FIVDB's large primary education programme) and the development of the role of the Union Parishads as resource centres (possibly as an element of a USAID funded project on strengthening of Union Parishads). (See Annex A, Section 5.)

5.4 Project findings communicated to a wider audience through an appropriate regional or international forum

OVIs against this activity in the logframe refer to the project's participating in PETRRA's end-of-project communication fair, to an end-of-project workshop, and to representatives of the Partner Organisations (called 'Target Institutions' in the logframe) presenting a paper at a regional or international meeting. In the event the project participated only in the PETRRA North-west regional fair in Rangpur and not the national event in Dhaka. The project video (in the initial edit of its Bangla version) generated much interest at the North-west fair but probably did not reach a significant new audience (since it was shot in the North-west and a certain amount of the interest was from stakeholders who themselves appear in the video). In the North-west, the project had some exposure in March 2005 via an item on a national television news programme, which in two broadcast slots covered several aspects of RDRS's work (Annex H).

Within the regions, the project has communicated throughout the information strategy component with key stakeholders, via meetings of the PETRRA Focal Area Forums (5 meetings in the North-west, 3 meetings in the North-east, either convened by the project, or to which the project has made an input). The decision was taken in consultation with NRSP at the pre-FTR meeting not to mount a single end-of-project workshop but to replace this by 'in-office' meetings with key stakeholders. Two meetings were held in Dhaka in February, which have both opened further opportunities for upscaling activities. These are reported on in Annex A section 5, which also puts forward proposal for further uptake promotion activities which aim to reach across the domains of the NRSP Conceptual Impact Model. No regional or international forum has been identified; a concept note was submitted to the international NGO conference 'Reclaiming Development' to be held at IDPM Manchester in June 2005 but was not accepted.

6 Environmental assessment

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

The project, having no technical component is unlikely to have had any significant environmental impact.

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

No impact can be forseen

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?

N/A

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

N/A

7 Contribution of Outputs

7.1 NRSP Purpose and Production System (PS) Outputs

The NRSP's purpose is: *to deliver new knowledge that enables poor people who are largely dependent on the NR base to improve their livelihoods* (Programme logframe)

An important characteristic of this project is that it has not developed or disseminated new technical knowledge but, in both its components, has focused on the transaction of existing knowledge and information. It has aimed to better understand the processes of such information transaction in rural Bangladesh (output 4), and also to develop and pilot strategies (and, in the case of the database, a tool) which might enable service providers and their poorer clients to carry out information transaction more effectively (outputs 1-3, output 5). The project's contribution to the NRSP purpose level OVIs (which specify use of new knowledge at various levels) needs to been seen in this light. On the other hand, a contribution to the High Potential output has been made via the first OVI. The project has identified constraints to the delivery of rural services which lie in the lack of knowledge on the part of rural people how to gain information about what services are available and how to access such services. It has also made a contribution to a repertoire of approaches to work with poor rural people that facilitate access to services as a central objective.

7.2 Impact of outputs

Examination of purpose level OVIsLeads to the conclusion that, while the database component of the project has not succeeded in establishing an '*instrument (or) mechanisms of information exchange… relevant to the impovmement of rural livelihoods'* as stated in the project purpose, the information strategy component has unequivocally done so, at least in terms of the third purpose-level OVI. One of the two partner organisations (RDRS in North-west Bangladesh) has recognised the significance to its poorer clients of better access to knowledge and information about services, to technical advice and to training from a range of sources. It has also recognised that its own effectiveness as a development agency can be improved by strengthened awareness on the part of its field staff of services offered by other providers to its target population. It has thus 'mainstreamed' into its programmes important aspects of the approach which it piloted in collaboration with the project; and it plans to retain the 'KIS' field teams which were set up in collaboration with the project. Examples of direct impact on the livelihoods of some participating rural people are mentioned above. While – as indicated above – these benefits have been achieved by both women and men, it must be said that the beneficiaries have in

general been poor rather than extremely poor. Indeed most of the members of the groups which the partners formed and worked with in the second phase of the project fall into this category. (The exception is members of one group in the North-east who were recognised as vulnerable at the beginning of 2004 when phase 2 of the information strategy component of the project started and who were severely affected by flooding in mid-2004; work with them has necessarily been focused on recovery).

It cannot be said that the final OVI has been achieved by as many as 5 organisations. The partner in the North-east (FIVDB) has, it is suggested, clearly recognised opportunities for improving information services in the way this OVI mentions; but the next step of translating this recognition into a programme plan or into collaboration with other organisations is still putative (see Annex A, section 4.6.2). The project has been fairly assiduous in engaging with members of the North-west and North-east Focal Area Forums (comprising mainly domain W and X stakeholders) to communicate project progress and outcomes; but although a number of these stakeholders could probably be said to have recognised the importance of improved information, they have hardly translated this general recognition into consideration of specific *opportunities* for improving their programmes or their field work practice. (It should be mentioned that within the Forums the project met a certain amount of denial – from the District-level representatives of government organisations – that poor people find it hard to access the services which they provide. On the other hand, the cooperation that the partners have achieved with government service providers at local – Upazila – level has in general been good).

7.3 Uptake promotion

The project has developed a clear view of its constituency. In the two regions, North-west and North-east this is based on the Focal Area Forums for each region (see above). At national level it has established contact with a number of NGOs, including the partners of he successor project to PETRRA i.e. FoSHOL (Food Security for Sustainable Household Livelihood) and also those in the PPS-BD (PRA Promoters Society Bangladesh) network of some 75 members, who represent a wide range of development organizations, mainly national, but including international NGOs and also some international donors. Thus the targets are mainly in domains W and X, although the PRA forum gives some access to domain Y stakeholders. Within domain X also fall DFID Bangladesh and the Department of Agricultural Extension at national level.

The objective of further uptake promotion would be to facilitate vertical scaling-up. Following the end of fieldwork in February 2005 and final debriefing meetings of the North-west and North-east Focal Area Forums, in-office meetings were held with some TIs in Dhaka which indicated scope for further uptake promotion. (Thus FoSHOL (Food Security for Sustainable Livelihoods) offered suggestions of other stakeholders with whom the project should communicate,while Action Aid Bangladesh expressed interest in the Bangla-language manual which the project has developed (Annex H) and in adopting/adapting this for use in its ‘Reflect’ programme. Based on this experience, a set of activities for uptake promotion to be carried out post-FTR (with resources remaining in the project) is set out in Annex A section 5.5. The first-stage activities would be with existing contacts, which we would invite In interacting with individual stakeholders we would seek to identify possible ‘leverage points’, exploring with a stakeholder which of the project’s research products might be helpful to their own planning, and giving what support is possible with available resources.

8 Publications and other communication materials

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

Huda, E. 2005 'Strengthening access to knowledge and information: a strategy against poverty?' Submitted to *PLA Notes* London, IIED.

8.3 Institutional Report Series

None

8.4 Symposium, conference and workshop papers and posters

Best, J and Huda, E. 2005 *Strengthening Access to Knowledge and Information as a Strategy Against Poverty*: project brief. (English) End of Project debriefing meetings of Focal Area Forums in North-east (27 Jan 2005) and North-west (9 February 2005) Dhaka Bangladesh, PPS-BD 4pp

Best, J and Huda, E. 2005 *Strengthening Access to Knowledge and Information as a Strategy Against Poverty*: policy brief. (English) End of Project debriefing meetings of Focal Area Forums in North-east (27 Jan 2005) and North-west (9 February 2005) Dhaka Bangladesh, PPS-BD 4pp

8.5 Newsletter articles

Best, J. and Huda, E. Review of Project R8083 and RDRS involvement in *RDRS Annual Report 2004-5*. Rangpur, Bangladesh. RDRS. 1 p

8.6 Academic theses

Islam, Md. Shafiqul. 2004. *Extent of Knowledge and Information System in the Rural Community for Improving Rural Livelihood of Farmers.* Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh. xi + 132 pp.

Khatun, Mst. Masura. 2004. *Extent of Farmers' Knowledge and Contact with Information System on Sustainable Livelihoods.* Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh. xvi + 127 pp.

8.7 Extension leaflets, brochures, policy briefs and posters

Huda, E. & Best, J. 2004. *Strengthening Access to Knowledge and Information:a strategy against povety. (English/Bangla). Dhaka,* PPS-BD 8pp.

Huda,E. 2004. *No knowledge or Information, no solutions. (English/Bangla) Dhaka,* PPS-BD. 1pp (A2 poster).

Huda,E. 2004. *Steps in strengthening knowledge and information. (English/Bangla) Dhaka,* PPS-BD. 1pp (A2 poster).

Huda,E. 2004. *DFID/NRSP Project R8083:Strenghened RuralServices for Improved Livelihoods in Bangladesh. (English/Bangla) Dhaka,* PPS-BD. 1pp (A2 poster).

White, S., Best, J., Norrish P & Huda E. 2004. *Strengthening Access to Knowledge and Information: a strategy against poverty. Project Brief (English/Bangla).* 6pp.

8.8 Manuals and guidelines

White, S. 2001 Integrated Crop Management Database: Users Manual. Rothamsted, UK. Rothamsted Experimental Station. 66 pp.

Huda, E. 2004 *Communication and Information Flow at Grassroot Level:TrainingManual and Users' Guide. (Bangla)* Dhaka, PPS-BD 18 pp

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

Huda, E and Bhuiyan, N. 2004. '*Development Information'* PPS-Bangladesh / Desh Productions. Video (Bangla 29 mins, English 15 mins)

Huda, E, Best ,J. and Bhuiyan, N. 2005. '*KIS video'* PPS-Bangladesh / Desh Productions. Video (Bangla 29 mins, English 15 mins)

Neogi, M.G. and Huda, E. 2005 *Interview plus footage of field activities of RDRS-facilitated Farmer Field Schools using a KIS approach (including farmer interviews).* Channel 'i' TV News, Dhaka, 18 March 2005.

8.10 Reports and data records

8.10.1 Citation for project Final Technical Report

White, S., Best, J., Abeyasekera, S., Huda, E., and Norrish, P. Project R8083: Strengthened Rural Services for Improved Livelihoods in Bangladesh. Final Technical Report. 6 vols. / 185 pp (bound) plus CDs, posters, leaflets. Harpenden, UK, Rothamsted Research, July 2005.

8.10.2 Project technical reports including project internal workshop papers and proceedings

White, S.K., Best, J.R. and Noor, T.R. 2003. *A Report of the National Integrated Crop Management Database Workshop* held at BRAC Centre, Dhaka, 4th-5th February 2003. Harpenden, UK. Rothamsted Research.. 25 pp

Huda E and Best J. 2004 *NRSP Project R8083: Mid-term review of Phase 2 in the North-East (partner organisation FIVDB) July 6 - 8, 2004.* Dhaka, Bangladesh, PRA Promoters' Society

Huda E and Best J. NRSP Project R8083: *Mid-term review of phase 2 in the North –West (partner organisation RDRS) July 26-27 and 31, 2004.* Dhaka, Bangladesh, PRA Promoters' Society

Huda, E., Abeyasekera, S. and White, S.K. 2004. *DFID NRSP Project R8083: Field Study on Knowledge and Information Systems in* ***the North-West Region of Bangladesh: report and analysis.*** Dhaka. PRA Promoters' Society of Bangladesh.

Huda, E., Abeyasekera, S. Arif, R. H. and Best J.R. 2004 *DFID NRSP Project R8083:Field Study on Knowledge and Information Systems in the North-West Region of Bangladesh: report and analysis.* Dhaka, PRA Promoters' Society of Bangladesh.

Huda E and Best J. 2005 ***Project R8083: Summary output from final debriefing meetings of NE Forum / FIVDB on January 28, 2005 and of NW Forum / RDRS on*** *February 09, 2005.* Dhaka, PRA Promoters' Society of Bangladesh.

8.10.3 Literature reviews

None

8.10.4 Scoping studies

None

8.10.5 Datasets

White, S.K. 2001 *Integrated Crop Management Database* Rothamsted Experimental Station. MS Access, CD.

8.10.6 Project web site, and/or other project related web addresses

www.rwc.cgiar.org (versions of the ICM database, available for download)

9 References cited in the report, sections 1-7

Engel, Paul G.H. and Salomon, Monique L. 1997. *Facilitating innovation for development: a RAAKS resource box.* Amsterdam. Royal tropical institute (KIT).

Gaunt, J.L., Best, J., Hossain, Z,, Norrish, P., Robinson, E., Sutherland, A. and White, S.K. 2000. *The feasibility of Integrated Crop Management in Bangladesh: Discussion Document, NRSP Project R7600.* Harpenden, UK. IACR Rothamsted [unpublished report].

PETRRA 2000. *Stakeholder Analysis Reports: An initial prioritisation of rice production issues within the context of the livelihoods of resource-poor households*. Reports of nine Districts in Bangladesh. Dhaka, Poverty Elimination through Rice Research Assistance (PETRRA) Project [mimeo].

Ramirez, R. 1997. *Understanding farmers' Communication networks: Combining PRA with Agricultural Knowledge Systems Analysis.* Gatekeeper Series no. 66. London, IIED.

Ramkumar, S.N. 1995. The analysis of farmer information systems for deeding dairy cattle in two villages of Kerala State, India. Reading, UK, The University of Reading [unpublished PhD thesis].

Röling, N. 1988. *Extension Science: information systems in agricultural development.* Cambridge, UK. Cambridge University Press.

Walker, M. and Salam, A. 1996. 'Bangladesh: avoiding the jump - institutional strengthening in public sector extension.' *The Rural Extension Bulletin No. 9* April 1996. pp 17-23. The University of Reading, Agricultural Extension and Rural Development Department. UK.

10 Project logframe

Narrative Summary	Objective Verifiable Indicators	Means of Verification	Risks and Assumptions
GOAL			
Efficient systems for the provision of rural services to the poor developed and promoted	By 2001 knowledge constraints to the delivery of rural services essential to the livelihoods of the poor identified and disseminated. By 2003 cost efficient delivery systems for the provision of agricultural services (including inter alia marketing, market infrastructure, input supply, mechanisation, storage, financing) adopted by target institutions in two targeted countries.	Dissemination outputs	
PURPOSE			
Instruments and mechanisms of information exchange that enable better availability of ~~ICM~~ Integrated Farm Management knowledge highly relevant to the improvement of rural livelihoods identified, tested and promoted to enhance provision of rural services primarily in Bangladesh and in other high potential areas in South Asia	By April 2003, at least 1 national organisation used the ICM database to improve ~~the service it offers to poorer farmers~~ information exchange between organisations on best-practices. By November 2004, a regional organisation uses lessons learnt from the ICM database pilot study to modify their database so that it increases the information available via its web-site. By December 2004, at least ~~2~~ 1 target institution (TIs) in Bangladesh has improved services to poorer clients through strengthened information provision By December 2004, at least 5 other national institutions recognise opportunities by which information services could be improved	Project records and minutes of meetings with organisations Minutes of meetings of RWC Web-site for the database Records of TIs Minutes of meetings/ workshops with national organisations and project records	Interest of target institutions sustained after project completion leading to further investment of resources in database maintenance and development Target institutions are willing to recognise institutional situations and still able to adopt interventions

Notes:

The logframe underwent two significant revisions, the first in August 2003 following the MTR, and the second in April 2004, to incorporate upscaling and promotion activities which were agreed with NRSP. Wording of the earlier versions of the logframe is struck-through where it has been amended. August 03 changes are highlighted in green and the April 04 changes in yellow.

Black text refers to the database component of the project and blue text to the information strategy component.

The terms 'partner organisations' 'target organisations' and 'target institutions' are used in the logframe in ways which are not consistent with the usage in NRSP's conceptual impact model (CIM). Subsequently in the project the organisations with which the project worked closely to (variously) pilot the database, carry out the KIS studies in the NW and NE and pilot an approach to knowledge and information intervention were all known as 'partner organisations' (POs), and they are referred to as such in the text of this report. (Partner organisations are to be distinguished from the project's 'research collaborator' in Bangladesh i.e. PPS-BD, with which the lead institute has had a contractual relationship.)

OUTPUTS			
1. Potential of the ICM database as an extension support tool assessed by partner organisations, through pilot studies	By January 2002, at least 2 partner organisations in Bangladesh identified and adapt the ICM database to meet their needs. By March 2003, at least 2 partner organisations have pilot tested the ICM database in at least 3 different locations over 2 cropping seasons By March 2003, at least 2 partner organisations provide favourable feedback on their experiences using the ICM database to support interactions with farmer clients By January 2003, partner organisations prepare findings for presentation to workshop By March 2003, evidence that project partners have assessed the benefits to their own organisation of using the ICM database to improve information delivery	Reports of partners, records of correspondence and documentation of agreements Project reports, annual reports, etc. of partners Reports of partners Project reports Overheads and handouts for workshop Reports and records of partner organisations	Political unrest does not delay the process of engaging partner organisations. Partner organisations find transaction costs of managing the database too high to enable its sustained use
2. Opportunities to improve delivery of rural services relating to natural capital identified through target institutions' critical evaluation of pilot studies of the ICM database	By February 2003 target organisations attend workshops hosted by partner organisations By March 2003, evidence that target organisations have considered how the database could be used within their own organisation to improve targeting information delivery	Project reports Project reports, output of workshops and records of intermediaries	
3. Access made available to a database of agricultural technologies relevant to the Indo-Gangetic Plains via a regional organisations web-site	By October 2003, lessons learnt by the project are drawn on appropriately by RWC and InterSARD in their development of web-based databases ~~By October 2003, an off-line version of database.~~ ~~By June 2004, the database is searchable via the interne~~ By November 2003, a version of the database is user tested, with appropriate individuals by InterSARD By February 2004, an off-line version of database is user tested, with appropriate individuals by RWC By December 2003, InterSARD is searchable via the internet By June 2004, the RWC database is searchable via the internet By October 2004, presentation by RWC co-ordinator (or staff) to RSC or RTTC meeting reports use of database	Off-line database, reports and records of the RWC Off-line database, reports and records of the RWC Reports and records of the RWC Minutes of RSC / RTTC of meetings	Language does not constrain the use of the web database.
4. Understanding established of the instruments and mechanisms by which people obtain information from available sources, the perceptions that different client groups have of the quality of information itself and the reasons for choosing information sources	By April 2002, 3 TIs recruited in at least 3 separate areas following consultation with PETRRA	Project inception report	
	By July 2003, in each PETRRA focal area, project methodology developed, implemented and evaluated in collaboration with TIs and other stakeholders.	Project methodology reports field reports, output of workshops and records of institutions	

OUTPUTS cont. 5. The need recognised and strategy developed and agreed by target institutions for improved information services related to natural capital [*Output 5 replaces (and incorporates) 2 separate outputs in the original database:* 5 Capacity for improved information services relating to natural capital recognised by target institutions, *and* 6. Strategies for improved information services relating (in a wide sense) to natural capital tested and promoted by participating target institutions]	By July 2003 October 2003, TIs: a) identify gaps and opportunities for natural capital-related improved information provision that will enable them to better meet the needs of their poorer clients b) assess the differences between poorer and richer client groups' access and use of the information and rural services available c) assess methodology, time scale, personnel requirement for implementing and monitoring strategic interventions for improved information services	Reports and records of target institutions, outputs from workshops Records from institutions Records from institutions Project records	Political sensitivity restricts ability to assess institutional situations
	~~By December 2004, action research undertaken to~~ By January 2004, action research initiated and monitoring process understood and in place to promote provision of and access to improved natural-capital related information to meet the needs of poorer clients ~~By December 2004, monitoring and assessment of intervention strategies informs participatory development of indicators for monitoring the efficacy of improved information interventions~~ By August 2004 monitoring and assessment of improved information strategies informs target institutions and the project of indicators for monitoring the efficacy of improved information interventions. These findings are communicated to other organisations in a manner (face-to-face, policy briefs, video, project reports) that a) raises awareness and b) enables them to adopt a similar method By end of project, ~~2~~ 1 TI presents at least one paper to an international meeting on improving information services to poorer clients	Project reports and records from institutions Outputs from workshops, project reports and records from institutions PLA manual for determining client's KIS Case studies document action research of phase II Video TI paper for international meeting	

ACTIVITIES			
1.1 Partner organisations are identified	By November 2001, at least 2 partner organisations agree to pilot test the ICM database in at least 3 different locations By January 2002, key individuals identified and trained, for a) managing the ICM database b) monitoring use of the database By January 2002, technical support needs identified and met and proposed modifications to the ICM database made as agreed	Letters of agreement and communication Documentation of training required Documentation of technical support required	
1.2 Partner organisations pilot test and monitor the ICM database.	By January 2002, partner organisations identify and incorporate ICM relevant material into the database to enable field-based pilot testing to begin. By March 2003, partner organisations pilot and monitor the ICM database with technical support as agreed. By March 2003, partner organisations enter into the ICM database farmer-validated technologies	Documentation of database Documentation of pilot study Documentation of database	

ACTIVITIES Cont. 1.3 Partner organisations document and analyse use of the ICM database.	By April 2003, approach taken by partner organisation in each pilot study documented and assessed for: a) Interrogation by users and clients of the database through to actions taken by clients b) Farmer actions that define potential for uptake of ICM technologies identified from the database c) Skills required by users and clients (farmers and scientists) to use the database in the field d) Non-electronic methods of access e) Hardware capacity f) bi-directional communication of ICM technologies	Project reports	
2.1 Target organisations evaluate the ICM database pilot studies.	By December 2001, target organisations identified based on initial discussions. By March 2003, partner organisation conduct workshops in order to communicate experience of the pilot test By March 2003, target organisations attend partner organisations' workshop and indicate the potential of the ICM database a. To extract, input and adapt content of the database(s) to support their extension activities. b. For bi-directional use in order to identify interventions that better meet the needs of farmers.	Project reports Reports and records from workshops and intermediaries Workshop reports and project reports	
3.1 Regional organisation creates a demonstration SQL database drawing on lessons learnt from pilot testing the ICM database	~~By August 2001, project facilitates and stimulates organisations at regional workshops to identifies training needs, IT tools protocols on procedure and functional design for target organisations.~~ ~~By September 2003,~~ necessary programming undertaken by RWC By October 2003, project stimulates organisations at regional workshops to identify IT tools protocols on procedure and functional design for target organisations By November 2003, necessary programming undertaken by InterSARD to account for user recommendations By February 2004, necessary programming undertaken by RWC	Record and communications with RWC On-line database Offline database	
~~3.2 Expert individuals (1 from each region of the Indo-Gangetic Plains) are recruited to identify and enter records on to the demo- database~~	~~By December 2003, at least 4 expert individuals recruited~~ ~~By June 2004, records entered can be viewed on-line via the RWC web-site~~	~~Record and communications with RWC~~	
~~3.3 Panel of advisers recruited to assess and give feedback on the demo-database~~	~~By April 2004, changes to the demo-database suggested by the panel of advisers have been implemented.~~	~~Record and communications with RWC~~	
~~3.4 Regional organisation hosts and maintains the technology database on their web-site~~ 3.2 Regional organisation hosts and maintains the technology database on their web-site and modifies it to suit users requirements	By December 2003, InterSARD have made available a database of best-practice via the Internet and continue to evaluate its effectiveness for users By June 2004, the RWC technology database is available via the RWC web-site and users continue to assist in evaluating the database	InterSARD project workshop reports InterSARD web-site Record and communications with RWC Web-site	

ACTIVITIES Cont. 4.1 Target Institutions identified and scope of work transacted	By March 2002, PETRRA agree to collaborate with the project in providing support within, and a full exchange of information from, the 3 PETRRA focal areas	Letters of agreement and correspondence	
4.2 Project sampling and fieldwork methodology developed	By April 2002, at least 3 TIs agree to participate to improve services to client groups within the 3 PETRRA focal areas via information intervention strategies. Key individuals from TIs collaborate with project partners to identify different locations within the PETTRA focal areas for investigation of KIS using the project methodology By ~~March 2002~~ November 2002, project methodology and information themes and strands in focal area 1 determined using appropriate tools (quantitative and qualitative) By September 2003, data collected in focal area 1 with project methodology analysed, interpreted and, shared with TIs and Stakeholders as agreed By April 2003, project methodology adapted for focal area 2 and information themes and strands relevant to that area determined By ~~May 2003~~ October 2003, data collected with project methodology in focal area 2 analysed, interpreted and, shared with TIs and Stakeholders as agreed	Letters of agreement and correspondence Reports and records of TIs and intermediaries Project reports Project reports Project reports Project reports	Local elections planned for February and March delay the project further
5.1 Target Institutions plan information interventions based on data collected on KIS in their location	By ~~July 2003~~ October 2003, 2 TIs attend workshops to a) negotiate strategic information interventions based on analysis and interpretation of ~~information networks~~ KIS information collected b) recognise institutional constraints in terms of strategic interventions and outline approaches to mitigate these c) define and plan within organisations' capacity the monitoring process of the information interventions	Reports and records from workshops and TIs	
5.2 Target institutions implement information intervention strategy to improve their rural services delivery	By January 2004, at least 2 TIs adapt their rural services in at least 2 different locations to implement improved information intervention processes for poorer clients using feedback from household questionnaires of poorer clients By April 2004, plans of 2 TIs discussed in PETRRA facilitated focal area workshops ~~and a National level uptake forum meeting~~ By September 2004, TIs host and facilitate focal area forum meetings, with both local and National providers attending	Project reports, completed questionnaires and records from TIs Outputs from workshops Proceedings from workshops, action plans on how to continue improving information provision to poor farmers	
5.3 Monitoring interventions enables target institutions to develop information methodology to meet poorer client needs	By August 2004, at least 2 TIs monitor, adapt and assess rural services within their capacity and develop indicators for improved information interventions to meet clients needs By June 2004, 2 TIs participate in exchange visits to learn how each is improving information provision as part of action research of phase 2.	Project reports and records from TIs Exchange visit reports feed into TIs presentations at future workshops and the action research method	

ACTIVITIES Cont. 5.4 Project findings communicated to a wider audience through an appropriate regional or international forum *Activities 5.2-5.4 replace the following activities relating to (deleted) output 6 in the original logframe:* ~~6.1 Target institutions implement information intervention strategy to improve their rural services delivery~~ ~~6.2 Monitoring interventions enables target institutions to develop information methodology to meet poorer client needs~~ ~~6.3 Project findings communicated to a wider audience in South Asia through an appropriate regional or international forum~~	By June 2004, project findings are presented in final PETRRA Conference in Dhaka By July 2004, project hosts a stall at the PETRRA Communication Fair to share project findings By November 2004, project host an end of project workshop together with TIs to explain and promote research findings to other organisations	Proceedings of PETRRA conference Feedback and follow-up with communication stakeholders on project activities Video in Bangla and English Proceedings from final project workshop, feedback from participants	
	During June to October 2004, TIs develop papers on information services that reach poorer clients	Working papers Pro-con paper	Project core team is able to engage the interest of at least 3 TIs in Bangladesh to participate in the project
	By October 2004, papers presented by TIs at RWC or another appropriate regional/international meeting	Papers presented by TIs	

11 Keywords

Rural services, knowledge and information systems, livelihood, PLA, PRA, knowledge intervention, knowledge bank, electronic database