Learning and experiences of the PETRRA project, BANGLADESH

Value-based research approach within a competitive grant system

PETRRA – an experiment in pro-poor agricultural research

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INTERNATIONAL RICE RESEARCH INSTITUTE

Poverty Elimination Through Rice Research Assistance (PETRRA), 1999-2004

a project funded by DFID, managed by IRRI in close collaboration with BRRI
Book 5. Value-based research approach within a competitive grant system
INTRODUCTION

Poverty Elimination Through Rice Research Assistance (PETRRA) project focused on five key outputs:

- Improved rice production technologies for resource-poor farmers;
- Improved capacity for demand-led research in the national agricultural research system;
- Greater recognition and broader discussion of key policy issues;
- Improved methods for effective uptake of new technologies; and
- Piloting an effective, competitive rice research management system.

For PETRRA it was poor people first and not technology. PETRRA experimented with a new mechanism for interaction among the four most important stakeholders in developing rural Bangladesh: farmers, scientists, government and private extension officials, and donor representatives. It did so by enabling demand-led, participatory research that linked the best in sustainable science with independently identified priorities that emphasised environment responsibility and gender sensitivity. PETRRA provided a compass rather than a road map. Using a compass meant an evolution of approach and an ownership of approach over time.

Responding to that path over time resulted in the emergence of a value-based approach. The values or guiding principles unfolded as the project moved from one step to the next. The approach in PETRRA was one of joint learning and learning through action and reflection. The value-based research approach was an integral part of the management model for PETRRA. Building capacity within the research and extension system was essential to consolidate the values from being abstract to becoming best practice.

This paper begins with the values and the capacity building that was designed to strengthen practice and finally the management system of PETRRA as a whole. It was the values that guided the competitive grant system.

VALUE-BASED RESEARCH

'Values' are defined as central beliefs and purposes of the society. In this case, it is organisation or the project (Jary, D and Jary, J. 1991).

Articulating a set of values or guiding principles proved an effective way of influencing the way a diverse set of institutions/organisations and individuals within the same conducted their research and development. A poverty focus and inclusion of women was paramount. The sub-project research was demand-led; it was responsive to needs and opportunities voiced by poor households. The research approach was participatory from the identification of the research problems to technology development and validation through to dissemination. Partnership and networking brought together key actors to ensure a conducive environment for achieving the above practices.
An outcome of focus on poor households, across many ecosystems, resulted in working with many scientists and development professionals in a wide range of different organisations and institutions. The need for effective communication emerged as critical, to draw people and organisations together to share learning and dialogue on values and innovations. Its importance was reflected in finally narrating a specific output in the PETTRRA logical framework for communication.

In addition over time the project gave greater emphasis to decentralisation. This is reflected in the focal area piloting, regional cross visits and sharing workshops. Piloting scaling-up activities (in the north-west and south-west regions) also helped learning in the management of decentralisation.

Partners of PETTRRA were identified through a competitive process, in which successful applicants had to give some indication of not just their technical competence but ability to commit to the above values.

Each of the elements taken alone have little meaning but taken together form the foundation of the PETTRRA approach.

**Poverty focus: achievement**

A rigid definition for poverty focus was not given. Sub-projects were expected to engage the issue through active discussion with village groups. In other words it was resource-poor farmer focus according to village definitions. Experience showed that, for both non-governmental organisation (NGOs) and government agencies, thinking about categorisation for poverty focus had to be nurtured. PETTRRA gave a general guideline:

- Households with 3-8 months' net household food security from own rice production (RPA) and where more than half the household income is derived from one's own farm production; and

- Within this categorisation there are households with an RPA of 3-5 months that are more vulnerable to impoverishment and those with an RPA of 6-8 that are marginal but managing to maintain their livelihood. Landholding will vary according to the type of agricultural land.

Importance of better targeting of resource-poor farmers (RPFs) in research activities was a point of discussion on many occasions, especially with the uptake forum members (see 'Uptake methods research: the PETTRRA experience' in this series). At the start of the project observations were:

- Definition of poor varied from one organisation to another but the justification was often not articulated;

- Some had no targeted approach;

- Some had a definition but vague and not in the context of agriculture;

- Most had no experience of using participatory approaches in identifying intended beneficiaries; and

- There was a general gap in understanding the utility of a targeted approach in agricultural research.

Orientation and training on the participatory rural appraisal (PRA) tools for wealth ranking proved useful. Partners were encouraged to develop their own experience in targeting RPFs and then to debate in forum meetings. Table 1 shows the shift in focus over three years for several member organisations in the uptake forum.

All six achieved significant improvement in targeting RPFs over time. Shushilam and Proshika were consistent in their performance and stood out from the others. Agricultural Advisory Society (AAS), Rangpur Dinajpur Rural Service (RDRS), Grameen Krishi Foundation (GKF) showed significant shifts over the year. The Adaptive Research Division
Table 1. Performance in targeting RPFs in uptake sub-projects

<table>
<thead>
<tr>
<th></th>
<th>Phase I</th>
<th></th>
<th>Phase II</th>
<th></th>
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<tr>
<td></td>
<td>% RPF</td>
<td>% NRPF</td>
<td>Total Hhs</td>
<td>% RPF</td>
<td>% NRPF</td>
<td>Total</td>
</tr>
<tr>
<td>ARD, BRRI</td>
<td>not</td>
<td>not</td>
<td>64</td>
<td>36</td>
<td>300</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>reported</td>
<td>reported</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GKF</td>
<td>43</td>
<td>57</td>
<td>44</td>
<td>75</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>AAS</td>
<td>15</td>
<td>85</td>
<td>124</td>
<td>34</td>
<td>66</td>
<td>761</td>
</tr>
<tr>
<td>Proshika</td>
<td>85</td>
<td>15</td>
<td>40</td>
<td>90</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>RDRS</td>
<td>39</td>
<td>61</td>
<td>500</td>
<td>91</td>
<td>9</td>
<td>500</td>
</tr>
<tr>
<td>Shushilan</td>
<td>98</td>
<td>3</td>
<td>40</td>
<td>91</td>
<td>9</td>
<td>70</td>
</tr>
<tr>
<td>% Overall</td>
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<td>60</td>
<td>64</td>
<td>36</td>
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<tr>
<td>Total</td>
<td>748</td>
<td></td>
<td>1,691</td>
<td></td>
<td>1,359</td>
<td></td>
</tr>
</tbody>
</table>

RPF is resource-poor farmer and NRPF is non-resource-poor farmer

(ARD) of the Bangladesh Rice Research Institute (BRRI) had totally changed its approach. Instead of working mostly with Department of Agricultural Extension (DAE) alone, they initiated work with NGO partners and DAE together (e.g., AAS, RDRS). From a block demonstration approach in phase 1, ARD moved to a number of plots owned by resource-poor farmers in the same or adjacent blocks. The overall shift in the performance was significant, poor-non-poor ratio changed from 40:60 in phase 1 to 64:36 in phase 2 and 95:5 in phase 3.

As per brown 2003 information supplied by all SPs the overall achievement in terms of achieving resource-poor as participating farmers was about 80%. It showed that uptake SPs were much better (96%) compared to technology development SPs (66%).

In the uptake forum debate covered:

- Should landownership be a criteria for targeting RPFs; area of land owned and cultivated is critical for the livelihoods of RPFs. In the past land ownership was frequently used as a criteria but household livelihood strategies are now more complex;
- Whether the targeting may be different from one technology to another; and
- Whether we need to work with the non-poor in some cases for beneficial inclusion of resource-poor households.

These are ongoing issues and will continue to be raised. Targeting the right category depends very much on the commitment of the organisation concerned. The skill to research for it in a participatory manner is also very important. Evidence from the SPs showed that moving together with the community in the identification and in the continuous assessment process contributed to better targeting. A continual vigilance for quality was crucial.

**Gender equity**

"Include women in all of your activities, not just the activities in which they work directly."

This was the key message from the project management unit (PMU) to its partners. Ensuring participation of women in every stage of the project cycle received greater emphasis over time. In the beginning the sense was that SPs gave lip service. An early observation was that SPs for their gender component simply gave training in post-harvest processing. However, it was expected for all research funded under PETRRA that women were included. This was regardless of whether women were engaged physically in the practice or not. This was not the automatic position of PETRRA in its
early period. It was actually learned through a SP champion. The NGO Shushilan in its uptake methods SP simply trained their target women in all aspects of rice production. This way women were able to contribute more. In the present transitional rural society, temporary migration is also a common phenomenon for men. In such situations women may need to play an expanded role in agriculture. PETRA encouraged research partners to ensure that both men and women of the participating farm households attended any training.

Gender was systematically addressed within PETRA through:

- Planned inclusion of women in the stakeholder analysis process;
- Inclusion of women facilitator/scientist in the stakeholder team so that access to women became easier in the community;
- Inclusion of gender focus in the formats (concept note and research proposal; CN & RP respectively) so that the applicants had to make a conscious effort to address gender issues;
- Preparation of a gender strategy;
- Orientation on gender and development by renowned national and international gender specialists;
- Gender and participation training in collaboration with PRA Promoters Society (PPS) Bangladesh by national and international gender specialists;
- A specific call for CNs: Women by Women;
- Inclusion of a section in the quarterly monitoring format on gender progress in SPs;
- Organising peer review and allowing joint learning around gender focus;
- Encouraging women to take the lead in the research and increasing the number of women in the research team; and

- Visiting SPs to assess the progress in terms of inclusion of women as participating farmers, as participants in the training, field days, workshops etc.

PETRA developed a gender strategy with the input of Dr. Thelma R. Paris of IRRI Social Sciences Division.

There was an emphasis given to orienting and training SP partners on gender. In July 2000 PETRA organised a meeting with collaborators for the seed uptake SPs and the gender specialist at IRRI. Gender impact assessment training was organised by PETRA in 2001 for seed uptake partners. One-day orientation on Gender and development was organised on February 2002 for all partners, BRRI scientists and PETRA project team members. This was followed by a six-day training on Gender and participation. Participants from eight SPs attended this training. Kamala Bhasin, gender specialist from India, was the resource person in the latter two events. These were organised by PPS Bangladesh. In November 2003 one PI, one BRRI Principal Scientific Officer (PSO) and a PETRA Researcher looking after gender issues attended a course on 'Leadership training for Asian women in agriculture research and development (R&D) in IRRI for 2 weeks.

A special call for CNs on women-led extension was made with bonus points if the leader was a woman.

In management, the following were observations:

- Within PETRA PMU, 3 out of 8 were women;
- In 45 ongoing SPs, 8 (18%) had women Principal Investigators (PIs);
- About 10% of the total research team members were women;
- For the Technical Committee (TEC) of 17 members, 2 were women;
- Eight women of 59 receiving
fellows for Master’s degree were women.

There has been an increasing trend in targeting women as participant farmers and for them to directly engage with the research teams. Table 2 below shows the trend. In some SPs targeting of women was equal or even higher than men. Best performers for targeting women were RDRS, Bangladesh Agricultural Research Council (BARC), Shushilan and Proshika with each achieving equal to or more than 50%. Four SPs (SP 37 02, 39 02, 41 02, 42 02) worked exclusively with women. The organisations were Rural development Academy (RDA)-Thengamara Mahila Sabuj Sangha (TMSS), RDRS, Environment and Population Research Centre (EPRC) and AAS. For 895 training courses conducted by SPs of 53,280 participants 35% were women (PETTRA, 2003a).

Insights from reviews give an indication of the importance PETTRA placed on inclusion of women:

Waterhouse & Sultan Huq, 2004 wrote:

- "PETTRA seems to have taken a more analytical approach, not only to gender roles but also to the potential impact of a project. ...PETTRA gender strategy sets out the need to begin with a gender analysis in any planned area of intervention, as an initial step in designing the research project. ...One of their flagship projects on seed health improvements has had a direct focus on working with women" (p. 7).

- "PETTRA management felt that their value-based approach to research design and project approval criteria had helped them to take gender on board" (p. 12).

- "...PETTRA for example, is to ensure that gender sensitivity is included as a criteria in all project documents from Terms of Reference, CN, project proposals, memoranda of understanding, project reviews and so on. This calls attention to gender and reinforces a shared sense of responsibility between partner organisations" (p. 23).

Paris et al, 2005 wrote:

- "PETTRA SPs trained village women in two specific ways: i) on technologies in which they are actively engaged such as post-harvest; and ii) on overall rice production so that they can contribute more in decision-making. Latter emphasis was seen as a pro-active development for empowering women, an important element of participatory research".

- "At first men objected to women participation, but after discussing their potential role in smaller groups and later on in the large group meeting, men agreed to include women as an equally important partner to learn all aspects of rice production. ... Later on they (men) even asked the project to invite the women to the PETTRA communication fair in Dhaka".

- "In the SP ‘Development of high yielding rice varieties for the coastal wetlands of Bangladesh’ (SP 13 00) women alongside their husbands rated unreleased lines prior to harvest of the ‘mother trial’. Scientists learnt that women prefer coarse grain for consumption and fine grain for sale, while men are mostly interested in yield and plant type”.

Table 2. Trend in targeting women in sub-projects over time

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>1629</td>
<td>5473</td>
<td>4180</td>
<td>12983</td>
</tr>
<tr>
<td>Male</td>
<td>1444</td>
<td>3982</td>
<td>2609</td>
<td>7641</td>
</tr>
<tr>
<td>Percent</td>
<td>90</td>
<td>73</td>
<td>62</td>
<td>59</td>
</tr>
<tr>
<td>Female</td>
<td>161</td>
<td>1491</td>
<td>1571</td>
<td>5342</td>
</tr>
<tr>
<td>Percent</td>
<td>10</td>
<td>27</td>
<td>38</td>
<td>41</td>
</tr>
</tbody>
</table>

Ref: Based on information supplied by 20 sub-projects, September 2002; and

* Figures based on total participants of all projects in boro 2003.
Orr et al, 2007 wrote:

- "Gender awareness has replaced a naive, unitary model of the farm household with one based on separate gender roles. This is useful for analysis. But it has also led to "separate spheres of knowledge' when it comes to new technology. By treating women and men equally, as members of one household, PETTRA has given women access to knowledge that they were denied before. ...treated the household as a single unit has given women unlimited access to new knowledge, with remarkable results".

**Demand-led process**

Stakeholder analysis was the basis for identification of researchable issues and themes. Between 1999-2000 PETTRA conducted 13 consultations at the village-level with men and women, at the upazila and at the district-level, to allow stakeholders to identify research problems and to ensure research calls responded to demand. Of 10 research problems identified by stakeholders, seed quality, high input costs, knowledge of modern rice cultivation and irrigation were most common across the rice environments. Women gave higher ranks to lack of knowledge of modern rice cultivation. The synthesis of the stakeholder analysis is reported under 'Stakeholder synthesis report' in this series.

The engagement of the demand-led process was not limited to the initial stakeholder analysis. Village consultation became an integral way of work. It is further discussed in the sections on capacity building and participation.

In the preparation of the RP development stage, applicants were given an opportunity to sit together with RPIs for proposal finalisation. However, only a few applicants took advantage of this opportunity. It was more evident in the ongoing implementation of the SPS. After each season, researchers often sat together with farmers to review their experience and to plan the next year's activities. The quality of this interaction varied from SP to SP.

**Participation for greater impact for the poor** (Orr and Magor, 2007; PETTRA, 2001a and b; PETTRA, 2002a-i, PETTRA 2003a and b)

In PETTRA it was not simply 'people focus' but the emphasis was on 'poor people focus'. The claim of scientists had been that "We are already working with the farmers; and since farmers in Bangladesh are generally poor we are therefore working with the poor or for the poor". This had been the claim even for on-station research. It was even considered that the stakeholder process of prioritisation of research delayed the commissioning of research and that the scientists already knew the issues. This attitude was reflected at the start of PETTRA. The pre-project consultancy inputs focused on the technical issues of pest management and salinity research priorities. In the priority setting, there was no mention of engagement with farmers and more specifically with the RPIs.

Within PETTRA, participation was a very strong core value and it can be claimed that PETTRA with the overall capacity building and consistent commitment to promote participation, had strong impact on its mainstream activities and on its partners.

Several important issues had to be addressed in order to raise awareness regarding pro-poor research. These were:

- Conceptual: whether there is a need to engage in it and what is the use of it?
- Methodological: how to approach? and
- Strategic: whether we can do it?
- The overall objective was to ensure a continued focus on poor men and women through a process of participation.
Participation was encouraged in the different steps of research. The steps identified were: 1) stakeholder analysis; 2) project cycle management; 3) RP development; 4) research designing and planning; 5) partnership development; 6) monitoring and evaluation (M&E); 7) gender planning, 8) capacity building planning; 9) peer review; 10) seasonal learning sharing and planning; and 11) forum discussion.

**Stakeholder analysis:** It was the basis for themes and issues on which calls for research were given. There were 13 district consultations (comprising district, upazila and village meetings), 2 versions of stakeholder analysis guidelines, a compilation report on all early 13 studies above and a project strategy paper on which the project is operating, that had their origins in stakeholder consultations. Besides, financial support was provided to interested applicants to develop RPs with additional engagement with stakeholders.

**Participatory designing and planning:** In January 2003, a participatory designing and planning training workshop was organised for eight SPs. The SP 'women-led farmer field schools for disseminating rice-potato-rice cropping patterns in northern Bangladesh' (SP 41 02) that was led by RDRS, was used as the training classroom. The objective was to assist the eight newly commissioned SPs to establish participatory research elements from the beginning of the project cycle.

**Participatory proposal development:** Several SPs went through a farmer participatory proposal development process with facilitation support. These were 'integrated rice-duck farming' (SP 19 00), 'integrated crop management (ICM) in north-west' (SP 25 01), 'rice diversity and production in south-west' (SP 22 01), 'livelihood improvement through ecology (LITE)' (SP 27 02), 'development and utilisation of coastal water resources' (SP 20 01), 'pathways from poverty: processes of graduation' (SP 26 02) and 'participatory group farming' (SP 31 02).

**Partnership development:** Partnership development for better access to poor (in each example several workshops were held for team building and participatory concept development):

- **BRRI** in rice-duck farmer in the north-east region with Friends In Village development Bangladesh (FIVDB) and Barisal Development Society (BDS);
- **BRRI** in urea super granule (USG), south-central region with International Development Enterprises (IDE);
- **BRRI** in ICM north-west region with RDRS and Grameen Krishi Foundation (GKF);
- **IRRI-BRRI** in LITE with NGOs; and
- **IRRI-BRRI** in rice diversity with NGOs.

**Seasonal learning sharing and planning:** This concept was first introduced in the rice-duck SP to have farmer assessment on the aman season experience and to plan for the following season. It was found very effective in understanding farmer priorities on impacts, adjustment needed in the research as feedback and necessary actions to be taken in the subsequent season. Bangladesh Academy for Rural Development (BARD) in their technology uptake SP used the approach and found it useful. This approach later linked to participatory monitoring and evaluation. A training workshop for this was held in Sylhet in December 2002 for which there were participants from 11 SPs. PPS facilitators helped develop a guideline based on the case study on rice-duck SP that was then used by the participants from other SPs who attended the workshop.

**Peer review exchange visits:** The first round of peer reviews was conducted for the technology uptake SPs in 2001. The partners were enthusiastic and considered
it an opportunity to learn from each other and to reflect on how their own SP could be improved. Many of them used the learning in their SPs. A similar approach was used in the north-east region in early 2003 in the name of exchange visit. Here, in addition to researchers, the farmers also participated in visiting each others’ SPs and exchanged views both at SP-level and at regional-level in a workshop. The workshop was attended by participants from DAE and focal area members. In September 2003 three teams involving TEC members participated in exchange visits that took place in three different regions (north-west, south-west and south-central).

Forum discussion: An uptake forum was formed immediately after the commissioning of the SPs uptake methods for new varieties. This was a useful forum to share information, for discovering strengths and weaknesses, forming relevant partnerships, identifying needs for collaboration, accessing each other’s resources and receiving feedback from fellow researchers who were working on similar issues. The focal area forum was another innovation that strengthened participation of different actors in the north-east and north-west regions.

Almost every SP had some kind of closing workshop in which a cross section of stakeholders participated and provided comments for fine tuning the results and for taking forward the innovations for scaling-up. Farmers (representatives) also participated in the focal area forum meetings, farmers’ exchange visits and communication fairs. In both the north-east and north-west focal area forums, farmer representatives regularly attended meetings. In the farmers’ exchange visit held in Sreemangal in March 2003, 56 male and female farmers attended the programme, and the workshop followed the visit. 142 participants, including farmers, DAE, NGO and BRRI officials attended. In the village fair on rice technology organised by Shushilan under their uptake SP (SP 09 00) several thousand farmers attended. In the communication fair 2003, 80 farmers attended where half were women. In the field days, a very common activity for all SPs, huge number of farmers attended and exchanged ideas. RDA-SHIP reported that in their seed fair organised in early 2003 about 10,000 farmers (male and female) attended. In the regional communication fair in June 2004 in the north-east led by AAS, about a thousand farmers attended over two days. The north-west focal area forum (FAF), on the premises of RDRS Rangpur office, organised a two-day communication fair coupled with a policy dialogue on the function of the focal area forum. The State minister for agriculture participated in the dialogue and endorsed the principle.

Participatory evaluation: In July 2003, for the system of rice intensification (SRI) SP of BRRI-Uttaran, a methodology for participatory evaluation of technology was developed with the intention to replicate the same for all technology development SPs.

For the above, facilitation support was crucial. PETTRA addressed the issue early for each of the above mentioned activities. Facilitation support was provided. PPS Bangladesh provided this support from the beginning of PETTRA. Given the heavy ongoing demand PETTRA had agreed to a contract with PPS. The support was provided in direct facilitation and in training to improve capacity. Skills in enabling participation are not achieved through individual events but through a continual process. A paper in line with the PETTRA participation strategy was jointly developed by PETTRA and PPS (PETTRA-PPS, 2002).

The principle was:
- Learn together and implement as it fits in the respective context.
In all the capacity building efforts, whether, for example, project cycle management training or gender training, participation was the principal approach both for facilitation and in the practice of implementing the SP.

**Extent of farmer participation:** In the final evaluation reports, all technology development SPs were asked to report on the extent of male and female farmers' participation in 5 major SP activities. These were project planning and design, technology identification, development or validation of technology, testing of technology and assessment of technology. A summary of participation of resource-poor male and female farmers based on available information on 15 technology development SP evaluation reports is given in Table 3:

![Table 3. Participation of resource-poor male and female farmers in major sub-project activities](image)

It is evident from Table 3 that both resource-poor male and female farmers were involved in different stages of SP activities.

The farmer participatory research approach helped the scaling-up of the innovations to commence from day one of the SP. Farmer participatory research helped change the attitude of scientists. Farmers' views and knowledge helped adapt the new technology to make it more relevant and appropriate for their circumstances. For example, farmers showed seed health researchers that they could save labour by roguing only one part, rather than the whole field, and that beating rice stalks 3 times before threshing removed empty grains. Rice-duck farmers showed that ducks could be successfully reared using local resources, without the need for expensive feed (Orr et al, 2007). One scientist stated that, "What I did in the last twelve years was meaningless, for the first time I realise that I am doing research with farmers on their real life problems. I was a well suited scientist and now my attitude is completely changed" (Orr et al, 2007).

Farmers learnt about technology through learning by doing rather than formal training. This provided the basis for community based extension, with participants training their neighbours and farmers from other villages. Participants held field days to share knowledge from other villages (Orr et al, 2007).

**Partnership for scientists and end-users to work together**

A 'partnership' must have a purpose and be mutually beneficial. For technology development a partnership that linked scientists with end users was encouraged. The involvement of the end users from
the beginning of a technology SP brought greater feedback to researchers and also hastened the adoption process.

The seed health SP reflects this. RDA, Proshika, BRAC, GKF provided important links to farmers; Bangladesh Agricultural University (BAU) and BRRI gave links to laboratories and with BRRI in-country coordination; International Rice Research Institute (IRRI) provided plant pathology and social science expertise, BRRI and CABI Bioscience plant pathology expertise; and CABI Bioscience also provided expertise that strengthened village-level participation. An outcome appears to be earlier adoption of technology than is generally found in technology development projects with less end user participation. Another example was the rice-duck SP that brought together the village duck expertise of FIVDB and rice expertise of BRRI. In this SP, both FIVDB and another NGO, BDS provided the organisational links for interacting with men and women at the village-level.

Here, partnership was recognised as a means of access to RPFs and greater access to women. The potential advantage of establishing a partnership between a government researcher and an NGO was not initially recognised. However, the mutual benefit became quite apparent over time. The NGO provided the government researcher access to RPFs. On the other hand, NGOs began to recognise the important scientific expertise that lay within the research institutes.

Another example of partnership that gave added value was the link between the social science research of the policy SP DOLSys’ ‘dynamics of livelihood systems in rural Bangladesh’ (SP 24 01) and the Centre for Policy Dialogue (CPD). The policy dialogues provided a forum for debate on research outcomes and implications for policy. For CPD this also meant the development of a greater capacity to engage in policy debates on agriculture. Another outcome was that technical scientists were given greater exposure to issues of poverty.

The above are examples of partnerships within SPs. The PETTRA PMU formed 2 contracts that supported capacity building in participation (with PPS) and in communication (with Steps Towards Development). All organisations within SPs were considered part of PETTRA as a whole. Partnership beyond SPs also took place amongst regional stakeholders. For example, in the north-west and in the north-east, the focal area forum members experimented with maximising synergies. These partners included BRRI regional stations, regional DAE personnel, BADC and NGOs.

PETTRA commissioned 45 SPs (PETTRA 2003c) with more than 45 partner agencies. It mobilised 721 persons of whom 10% were women. Table 4 lists the organisations working in SPs funded by PETTRA. Many of the partnerships established under PETTRA will extend beyond the life of the SPs. Several organisations (BRAC, Proshika, Syngenta) have established memorandum of understanding (MOU) with BRRI. The BRRI Water Management Division (WMD) will continue the relationship with the NGO HEED and Khulna University (KU) with funding from the Water Challenge Fund. BRRI Genetic Resources and Seed Production Division (GRSD) had 54 partners under its SeedNet initiative. It is expected that this link will continue. The focal area forum partnerships in the north-west have further developed (see the section below on Networking and also ‘Uptake methods research: the PETTRA experience’ in this series).

**Networking**

The PETTRA PMU was proactive in encouraging networking. The uptake
Table 4. Research partners engaged in research funded by PETRRA

<table>
<thead>
<tr>
<th>Type of institution</th>
<th>Partners</th>
</tr>
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<td>Government of Bangladesh (GOB)</td>
<td>BRRI, BARC, BARI, BSMRAU, BAU, BADC,</td>
</tr>
<tr>
<td></td>
<td>BARD, BIDS, DAE, Dhaka University,</td>
</tr>
<tr>
<td></td>
<td>Jahangirnagar University, Khulna University, RDA</td>
</tr>
<tr>
<td>NGOs</td>
<td>AAS, BRAC, Proshika, GKF, RDRS, CARE, HEED, Shushilan,</td>
</tr>
<tr>
<td></td>
<td>APEX, FIVDB, IDE, AID-Comilla,</td>
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<tr>
<td></td>
<td>Mukti Nari-O-Shishu, PROVA, TMSS, JSS, EPRC, BDS, IARD,</td>
</tr>
<tr>
<td></td>
<td>CDP, Uttaran, SAFE, PPS, CPD, DCPUK, BASC, POSD, WAVE, Steps</td>
</tr>
<tr>
<td>International centres</td>
<td>IRRI</td>
</tr>
<tr>
<td>Other international institutions</td>
<td>CABI, NRI, CSIRO, ITAD, Countrywise</td>
</tr>
<tr>
<td>Private companies</td>
<td>ABC, Syngenta, Socioconsult, BREA, Mark Industries,</td>
</tr>
<tr>
<td></td>
<td>DEVCOM, Mitra Associates, In2it</td>
</tr>
</tbody>
</table>

Forum was established in 2000. It was a project network that brought together all uptake methods SPs. A potentially more significant network was the emergence of the north-west FAF. The forum approach was also piloted in the north-east and the south-west. An objective of the networks was to discuss common issues across SPs. Leadership was encouraged from the SP partners. The networks helped foster the following:

- links between actors that may sustain beyond the project period;
- decentralised decision making and with that, a regional focus for research and extension; and
- nurturing of partnerships with a potential of success.

The PETRRA PMU initiated a policy cell with all relevant actors in the field of policy research and advocacy but it did not sustain even within the project life. There were several significant initiatives at the SP-level – one of, potentially, the most significant was the national seed network led by GRSD of BRRI. The SRI SPs developed their own network for discussing progress and results.

For further discussion on networks see 'Uptake methods research: the PETRRA experience' and the 'Focal area forum' in this series.

There are separate briefs that cover the values of effective communication and development of environmental friendly technologies.

**Competitive for identifying champions**

The means to achieve a resource-poor focus was through a *competitive research approach* for which guidelines reflected the principle values espoused by the PETRRA project. This approach did not favour one institution or organisation over another but encouraged all to participate. The competitive model had an indirect impact on institutions in that it rewarded practices that reinforced the above principles of empowering RPFs. It also ensured the best researchers interfaced the demands identified.

The competitive process recognised that the research/development arena is dynamic and changing with time and that traditional approach of designing a project potentially misses important players. Open advertising did uncover some unexpected innovations and unexpected agencies. The process was under continuous critique in terms of improving efficiency and improving focus. This is further discussed under the section on management procedures.

It was evident from experience that within the existing culture of the research commissioning process, the element of
competitiveness needed to be backed by very close hands-on support. As in the agriculture research arena there are not many competitors available. Sometimes applicants with a good idea needed nurturing and sometimes additional organisations had to be introduced for which partnerships were judged crucial. The PETRRA PMU took this initiative and on occasions the TEC provided useful suggestions for partnership. Some examples are:

- In the 'integrated rice-duck farming' SP (SP 19 00), the NGO FIVDB was suggested as a potential partner due to its extensive history of working with ducks. The PETRRA PMU facilitated the finalisation of the proposal that gave due consideration to partner specific contribution;
- For the 'rice diversity and production' SP (SP 22 01), there had been several separate submissions for which a joint submission was considered stronger; and
- For the 'adaptation and adoption of USG Technology SP (SP 21 01), IDE did not compete but the PMU requested the BRRI scientist to approach them to bring an essential business link to the approach.

Competition alone did not ensure that value-based approach was taken on board during implementation. Competitiveness along with capacity building was essential to nurture the values espoused under the project.

**CAPACITY BUILDING FOR VALUE-BASED RESEARCH**

Capacity building emerged as a cross cutting issue. It evolved with the pace of learning within PETRRA as a whole. An action-reflection (praxis) approach was the norm of PETRRA. Capacity building supported the values that were evolving in PETRRA and the basics in project cycle management. The PETRRA PMU did not consider itself as the authority of practice but rather created an environment for cross learning around the values that underpinned the project as a whole. The momentum grew overtime as issues came to the fore. There was both a healthy competition between SPs and an overall oneness in the project.

PETRRA could never claim it did enough in capacity building, as it was continually responding to opportunities, at the same time, operating under a project life that placed pressure on starting up, building momentum and closing down. However, it built an experience that displayed an enthusiasm that captured the interest of policy makers.

**Why capacity for value-based research was critical?**

Traditionally, in a competitive system it is not an issue for the agency that commissions the research. Generally science becomes the critical issue with not much emphasis being placed on impact that is primarily a social issue. As PETRRA was linked to poverty elimination it had to engage itself with an approach that ensured impact and helped to sustain that impact. From looking at the existing practice of research of partners as a benchmark, some observations could be made very early in the project. These were:

- Institutions like BRRI and IRRI do not really use a targeted approach (especially for poverty);
- The agriculture programmes of NGOs are more often than not simply delivery of services and not specifically targeted. Most do not have clear process of participation, gender focus or poverty targeting;
- The definitions for poverty used by partners tended to be a prescriptive
response to the PETRRA general guideline;

- Some NGOs that were successful in being awarded SPs had limited previous experience with rice. On the other hand, the research institutes lacked access to rural communities and the poor. Therefore, the development of partnerships was critical;

- Participation had been underemphasised in agriculture research; its potential to enhance the research and immediate extension among the users had not been appreciated;

- Gender concern was not reflected in the activities and management structure for research. An example here is the seed health SP. In the early stages, research was conducted with men despite the reality that women were the principle handlers of seed; and

- Environmental friendliness was the practice for IRRI and BRRI and other partners. However, best practices in participation and attention to poverty focus and gender appeared secondary or even irrelevant to the overall focus on increase in production.

The benchmark position is not surprising. The general position within the country and internationally is that the proponents of social values in research and development do not necessarily engage with the agencies with a mandate to develop new technologies and make these available to clients. It is a product of professionalism, whether it be social or natural sciences, in which there is little interchange of ideas and learning. The broader mandate of PETRRA enabled agencies to begin to look at these issues together.

**What capacity was developed?**

Training under PETRRA has been conceptualised into four major parts:

- Firstly, building capacity for value-based research;

- Secondly, degree training that contributed directly to the outputs of the research SPs (a guideline was developed by the TEC and approved by the PSC);

- Thirdly, specialist short term training/workshop that contributed directly to the outputs of the SPs was considered as and when such an opportunity arose and matched with the purpose of the respective SP; and

- Fourthly, the training provided to the farmers by the SPs as part of the research and development.

Orientation on the stakeholder analysis guideline for about 40 BRRI scientists, agriculture & poverty seminars and series of workshops and seminars on participation and gender supported understanding of the core values of PETRRA. Research partners, in regular sharing sessions at the central and regional-level and training, had the opportunity to be exposed to new ways of doing research. In turn, research partners provided training to male and female farmers and regularly shared the experience, planned, designed and evaluated the research with them. In every aspect of capacity building, values were in focus. Orientation started with the project management unit members and followed the research team members. Some of the specific capacity building events are mentioned below:

- Building the PMU team for sharing equal understanding of complex issues that PETRRA was dealing with and developing skills in areas needed to facilitate partners (Team building workshop in 2002 and Power to change workshop in 2003 by Helen O’Sullivan);

- Engaging with the partners in an atmosphere of joint learning;
Repeatedly reminding partners through meetings, workshops and seminars that poor people (men and women) are the focus and not the technology (rice);

- Encouraging partners to come up with their definitions on concepts (e.g., poor) through practice and then being prepared to debate their definitions;

- Organising forum discussions - learn from each others' experience (e.g., the technology uptake forum, focal area forum, exchange visits, joint regional monitoring, communications etc.);

- Organising events to learn from each others' activity in the field (e.g., the peer review of uptake projects);

- Organising orientation on issues (e.g., gender by Kamala Bhasin, environment by Dr. Ainun Nishat, poverty and rice from national perspective by Dr. Mahabub Hossain);

- Organising training (e.g., participation, gender, gender and participation, project cycle management, training of trainers on PRA);

- Providing hands-on workshops (e.g., stakeholder analysis, livelihoods framework (LF) approach, seasonal learning sharing and planning (SLSP), participatory proposal development (PPD), participatory planning and designing (PPD), participatory monitoring and evaluation (PM&E), communication fairs, and communications material development);

- Encouraging partners to take initiatives for communication through workshops, communication fairs, seminars, websites and newsletters etc.; and

- Organising national workshops to listen to research findings (uptake and technology development workshops at the end of the project).

Major events chronologically that built capacity were:

- Project cycle management training using log frame (conducted by IMA with two batches in January-February 2000 and one batch each in April 2002 and September 2002). Altogether about 80 participants attended the training;

- Training of trainers on PRA/PLA in September 2001 and 2002 (conducted by PPS);

- One PMU member and one from the Ministry attended the participatory monitoring and evaluation training at IIRR for 3 weeks in 2001;

- PMU organised exchange visits for the top management personnel from BARC, BRRI, BARI, DAE and MOA to Hill Agricultural Research Project (HARP) of DFID in Nepal in 2001 & 2002 and to Commonwealth Scientific and Industrial Research Organisation (CSIRO) Australia in 2004;

- Gender and participation training workshop February 2002 (organised by PPS);

- Grid conducted 'Confirming the way forward together' in 2002 as a team building exercise for the PETRRA PMU;

- In January 2003 a training workshop on basic PRA/Participatory Learning and Action (PLA) on participatory planning and designing was held in Thakurgaon as part of the orientation on participatory research development; 14 participants from SPs and PMU members attended the workshops. (supported by PPS);

- One PMU member and two other partners attended leadership training for Asian women at IRRI in 2003 for two weeks;

- Two PETRRA PMU members attended a 'Power to change' (a team building workshop) held in March 2003 in Australia;
At the end of March 2003, a farmer exchange visit and workshop took place in Sreemangal for 4 days with farmers, researchers, DAE and BRRI Director-Research as part of the north-east focal area activities;

Uptake workshop held in April 5 & 6 and again on October 26, 2003 to discuss progress on documentation of method;

The DOLSys SP organised a national workshop on April 17-18, 2003 with farmers from 65 villages (districts) to get feedback on the studies conducted by them;

Poverty and agriculture workshop held on April 20, 2003 in association with BARC where papers were presented by Dr. Mahabub Hossain and Dr. Alastair W. Orr;

A workshop on evaluation planning held on May 11-14, 2003 with technology SPs;

A workshop on Rice Knowledge Bank (RKB) held on June 16-18, 2003 with David Shires from IRRI to prepare a project for developing Bangladesh Rice Knowledge Bank (BRKB);

A workshop on documentation of principles and practices of PETRRA held on May 22-23, 2003 with David Shires;

PPS and PETRRA jointly organised a piloting workshop on participatory evaluation of technology for BRRI-Uttaran SRI SP during July 13-17, 2003;

Communication fair held on September 10-11, 2003 in Dhaka;

A Seminar on PETRRA and the poor held on September 10, 2003;

20 A seminar on challenges for extension of agriculture research results held on September 11, 2003.

One PMU member and two other partners attended training on project management and planning at IMA UK in 2004;

A series of workshops were organised to conduct a knowledge, attitude and practice (KAP) study of the partners during May-June 2004;

A series of workshops took place with the PI to assist them in preparation of their final evaluation and completion reports of PETRRA in 2004.

TEC meeting held on July 20, 2004 to debrief the TEC members about the achievements of PETRRA in recognition to their contribution.

PETRRA organised a closing celebration in July 2004 for which a dialogue on ‘Technology and innovations for the poor’ was held. All research partners, journalists, National Agricultural Research System (NARS) members, extension specialists from government organisations (GOs) and NGOs and ministry officials attended. Partners displayed their innovations. Partners were presented with plaques and certificates from the state minister. The ceremony was attended by the minister of agriculture, state minister of agriculture and the secretary of agriculture.

Events mentioned above contributed to a change in attitude among the relevant stakeholders.

On-going activities for building capacity: farmer training, degree training and international training:

Over the four-year period a total of 53,277 farmers and field workers attended training. Of these 36% were women;

PETRRA also supported in-country degree programmes (MS and PhD) and thesis research that contributed to the outputs of the SPs. A training guideline
approved by the TEC and subsequently by the project steering committee (PSC) outlined the detailed requirements (PETRRA, 2001). See Attachment 1.

The guiding principle of the degree training was:

- "PETRRA is a research project designed to have a direct positive benefit on the well being of resource-poor farm households. Any degree training or short term specialised training is, therefore, expected to contribute directly to the outputs within the PETRRA research agenda. All training under PETRRA must be focused specially on achieving project outputs and is not for general support to building capacity."

There were 55 Masters and 4 PhD degree fellowships awarded; seed health improvement SP alone provided 18 fellowships. The next champion was RDRS in their technology uptake SP (SP 07 00) in which they awarded 18 fellowships. Table 5 shows degree training under the SPs.

RDRS Bangladesh student internship programme is an example of best practice that evolved under the PETRRA degree training model. RDRS (2003) states:

- "Awareness about strengthening the capacity of the students to address the problems in a practical manner and in real farm-based situations has been significantly raised in recent years, with a student internship programme for their MS and PhD research. …PETRRA has allowed BAU and Bangabandhu Sheikh Mujibur Rahman Agricultural University (BSMRAU) students’ access to farmers, their problems and the farming environment for their MS thesis research. With positive results accruing from the exposure of teachers and students to the farmers’ reality, and following dialogue at policy-level, BAU-BSMRAU and RDRS have agreed to replicate themselves, the students internship action research and have signed an agreement on this for a ten-year period".

The RDRS innovation inspired other partners to utilise the PETRRA opportunities. This is reflected in Table 5 above.

Table 5. In-country degree training under sub-projects

<table>
<thead>
<tr>
<th>Sub-project</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHIP (SP 00 99)</td>
<td>12 MS +3 PhD</td>
<td>3 MS</td>
<td>18</td>
</tr>
<tr>
<td>Uptake: RDRS (SP 07 00)</td>
<td>16 MS</td>
<td>1 MS</td>
<td>17</td>
</tr>
<tr>
<td>Salinity (SP 13 00)</td>
<td>1 MS +1 PhD</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Hybrid Rice (SP 15 00)</td>
<td>1 MS</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Coastal water (SP 20 01)</td>
<td>3 MS</td>
<td>1 MS</td>
<td>4</td>
</tr>
<tr>
<td>DOLSys (SP 24 01)</td>
<td>1 PhD</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>ICM (SP 25 01)</td>
<td>4 MS</td>
<td>2 MS</td>
<td>6</td>
</tr>
<tr>
<td>LITE (SP 27 02)</td>
<td>6 MS</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Rodent (SP 30 02)</td>
<td>3 MS</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Women-led FFS (SP 41 02)</td>
<td>1 MS</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>51</strong></td>
<td><strong>8</strong></td>
<td><strong>59</strong></td>
</tr>
</tbody>
</table>

For international training: PETRRA provided support to the implementation partners for capacity building through their participation in degree programmes and attending short training/seminars/workshops/study tours in specialised areas, which were relevant to the respective subproject. PETRRA approves request of implementing agencies for training if nominations are from among the working scientists of the concerned SPs.

- For NARS and other government agencies nomination from the working scientists for the above purposes was proposed by the PI with the approval of the head of the institute for the NARS on other government institute personnel. The agreed nomination was forwarded to the project manager, PETRRA for concurrence and onward action including the issue of award letter; and

- For NGOs and private sector the head of the organisation and concerned coordinator (assigned by the NGOs/private sector) proposed the name of the candidate from among the SP staff to the project manager,
PETRRA for concurrence and subsequent funding.

PETRRA supported 96 people for international training. Of these, three were for degree programmes, 54 for short term training and 39 for seminar/workshop and study tours.

Evidence of impact of capacity building overall

PETRRA commissioned a KAP study for several indicators of the PETRRA logical framework. The study explored the level of adoption of key elements of PETRRA value-based research system by its partners (OVI: output 3.1). The following comes from that study (Solaiman et al p. 30-33, 2004):

Forty two PIs, representing 21 organisations (GOs and NGOs) and partners responded to the questionnaire. They were asked to indicate to what extent they had adopted key elements of the PETRRA value-based research approach. The number of responses varied from 36 to 40 (Table 6). In total, 307 responses were given for the 8 elements of pro-poor demand-led competitive rice research system.

The study also indicated the PIs’ and partners’ assessment of the level of adoption of the respective elements. The individual scoring for each element (3 for high and 0 for not adopted) was converted into composite scores. Highest scores were given to: environment friendly technology development (92%), direct communication of results to key users (86%), conducting research with RPFs (81%), partnership for comparative advantage (81%) and use of participation to help mutual learning (81%). The lowest score was given to conducting research with men and women (73%) but even for that, 33 of 40 respondents rated the adoption as high to moderate.

Respondents were also asked to rate their level of knowledge, attitude and practice (in percentages) for key elements before and after their participation in PETRRA (see Table 7).

The composite scores and overall weighted scores indicate that changes have happened for the different elements.

Table 6. Adoption of key elements of pro-poor demand-led research management system of PETRRA by its partners

<table>
<thead>
<tr>
<th>Key elements</th>
<th>No. of responses</th>
<th>Level of adoption</th>
<th>Composite score (%)</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct research with RPFs</td>
<td>40</td>
<td>High (3)</td>
<td>Moderate (1)</td>
<td>81</td>
</tr>
<tr>
<td>Conduct research with both men and women</td>
<td>40</td>
<td>15</td>
<td>4</td>
<td>73</td>
</tr>
<tr>
<td>Use participation to help mutual learning, flexibility, openness and evaluation</td>
<td>39</td>
<td>11</td>
<td>1</td>
<td>81</td>
</tr>
<tr>
<td>Use partnership for comparative advantage</td>
<td>36</td>
<td>21</td>
<td>10</td>
<td>81</td>
</tr>
<tr>
<td>Develop technologies that are environment friendly</td>
<td>40</td>
<td>32</td>
<td>7</td>
<td>92</td>
</tr>
<tr>
<td>Direct communication of results to key users</td>
<td>40</td>
<td>27</td>
<td>10</td>
<td>86</td>
</tr>
<tr>
<td>Competition for competitive funding</td>
<td>36</td>
<td>20</td>
<td>10</td>
<td>77</td>
</tr>
<tr>
<td>Capacity building’s critical to achieve the above elements</td>
<td>36</td>
<td>19</td>
<td>13</td>
<td>79</td>
</tr>
</tbody>
</table>
The overall levels of knowledge, attitude and practice has increased from 41%, 42% and 39% to 85%, 84% and 83% respectively.

If we look at individual elements, we see that the highest level of change has happened in the case of conducting research with RPFs (56%, 52% and 56% for knowledge, attitude and practice respectively). Changes are quite significant for the participation element as well (44%, 42% and 47%).

### Impact of capacity building at SP level

PETRRA also commissioned an independent study to assess SP impact on livelihoods. Here we highlight the capacity building that promoted value-based research and contributed to enhanced livelihoods. The study (Orr et al, 2007) made the following observations on the impact of the value-based capacity building initiative of PETRRA:

- "Human capital increased through improved knowledge of MV rice cultivation, and new skills in seed cleaning, duck-rearing, water management, and fertiliser use. Some skills were being transferred to other activities, for example, duck vaccine to poultry, and seed cleaning to maize."
- "Women’s involvement in agriculture increased as they learned new skills. They began to participate in field operations, sometimes for the first time. Women mentioned activities like preparing rice seedbeds, weeding, harvest and carrying crops from the field, and finding feed for ducks."
- "The success of these projects reflected inclusion of all stakeholders. Projects were implemented mostly in partnerships with NGOs or local government. New linkages were created...

### Table 7. Before and after project composite score on level of knowledge, attitude and practice (KAP) of management and key staff of participating agencies to undertake value-based demand-led research

<table>
<thead>
<tr>
<th>Key elements of PETRRA value-based approach</th>
<th>Knowledge (%)</th>
<th>Attitude (%)</th>
<th>Practice (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
<td>After</td>
<td>Change</td>
</tr>
<tr>
<td>Conduct research with RPFs</td>
<td>33</td>
<td>89</td>
<td>56</td>
</tr>
<tr>
<td>Conduct research with both men and women</td>
<td>40</td>
<td>79</td>
<td>39</td>
</tr>
<tr>
<td>Use participation to help mutual learning, flexibility, openness and evaluation</td>
<td>47</td>
<td>91</td>
<td>44</td>
</tr>
<tr>
<td>Use partnership for comparative advantage of each stakeholder for more effective research</td>
<td>42</td>
<td>89</td>
<td>47</td>
</tr>
<tr>
<td>Develop technologies that are environment friendly</td>
<td>54</td>
<td>87</td>
<td>33</td>
</tr>
<tr>
<td>Direct communication of results to key users</td>
<td>37</td>
<td>80</td>
<td>43</td>
</tr>
<tr>
<td>Use competitiveness to engage best players and to show transparency</td>
<td>36</td>
<td>80</td>
<td>44</td>
</tr>
<tr>
<td>Capacity building is critical to achieve the above elements</td>
<td>44</td>
<td>85</td>
<td>41</td>
</tr>
<tr>
<td>Overall weighted score (%)</td>
<td>41</td>
<td>85</td>
<td>44</td>
</tr>
</tbody>
</table>
involving farmers, researchers, and local government representatives.”

Changing attitudes among the scientists:

- "What I did in the last 12 years was meaningless, for the first time I realise that I am doing research with farmers on their real life problems. I was a well-suited scientist and now my attitude is completely changed."

- "Before we were afraid of RDA. It is a well protected area and big officers may not talk with us. Now we are proud to talk to scientists."

Farmers learned about the new technology through ‘learning by doing’ rather than formal training. This provided the basis for community based extension, with participants training their neighbours and farmers from other villages. Participants held field days to share knowledge with others.

- "The training is more practical and real, we can practice it in our real life."

- "Training alone isn’t enough to disseminate new technology. Documentation, close linkages with researchers, and continuous learning is essential to disseminate and communicate any new technology."

- "Training women, not only in seed storage and crop processing, but in the whole range of new rice technology, including seedbed preparation, fertiliser use, and pest management. This allowed them to share their views and express their decisions about rice cultivation with their husbands and gave them confidence to work in the rice fields."

- "If insects attack rice, women can identify the problem and inform their husbands to look for solutions."

- "Previously, women used to receive training only in activities for which they were traditionally responsible like seed storage or crop processing. This reinforced existing gender roles and excluded women from many of their husband’s decisions about agriculture. Training women has empowered them to share in decision making and supervise hired labour. This has increased women’s self-esteem and respect received from men."

**Internal assessment for future strategy**

The PMU members have provided the following insights that may be of interest in the future. A general statement is:

"If training is linked with ongoing support then changes in practice takes place (PRA training, gender, project cycle management etc.)."

- If capacity building for strengthening the principles of poverty focus, gender equity, partnership, participation and networks is provided in parallel with the implementation of research (funded competitively) then valuable research results that lead to impact on livelihoods are produced;

- If support is provided in the early stages (RP development stage) to the development of appropriate partnership, (in facilitation) then there is better targeting, better dissemination of findings and more likelihood to generate technologies that receive endorsement.

For further discussion on lessons learned see 'Lessons learned' in this series.

**Development of an effective pro-poor competitive rice research management process**

PETTRA starts with people, not technology. The success of the project has been measured not only in terms of technology development but by its direct impact on the livelihoods of resource-poor farm households. To achieve this objective, PETTRA facilitated the development of a research system that was more responsive to the needs of RPFs. This was done through financing on a competitive basis the generation of technologies appropriate for poor farmers, that included research.
partnerships between IRRI and BRRI, universities, NGOs, the private sectors and other local organisations.

This section addresses the management processes and is integral to the earlier sections on 'The value-based approach'.

PETRRA management processes have been designed, implemented and improved through operational feedback. It is the documentation of the management processes that constitutes an important output of the PETRRA project. This can be used by other organisations which already managing research-funding mechanisms. PETRRA Project management documentation has been produced in the form of stakeholder analysis, strategy papers, process documentation, guidelines, reporting formats, terms of reference (TOR), minutes and workshop reports, policy briefs, output to purpose reviews, final completion and evaluation reports etc.

The PETRRA project management unit (PMU)

The PETRRA project was managed by IRRI in close collaboration with BRRI. The authority for the project was under IRRI and its designated project manager. The project manager reported to the administrative section of IRRI, namely the International Programme Management Office (IPMO) and the IRRI Deputy director general-partnerships. The IRRI Deputy director general-research, was a member of the project steering committee. The research agenda was set and executed within Bangladesh based on a series of stakeholder meetings at village, upazila and district-level and special workshops. A small unit of professionals (finance, M&E, facilitation, research management and communications) and short term consultants comprised the PMU. There were two committees that supported the PETRRA project, namely the PSC and TEC.

The project steering committee (PSC)

PSC, chaired by the Secretary of the Ministry of Agriculture with the director general of BRRI as the Member Secretary, gave policy direction and guided the project as a whole. The TOR is given in Appendix 2. The PSC made an important contribution to the smooth running of PETRRA by giving authority to the PETRRA project and ensuring full cooperation of respective government institutions. PETRRA, unlike many development projects, did not have a specific capacity building component such as a training budget. The PSC endorsed a guideline for training that was directly linked to the SPs and thereby contributed to the outputs of the respective SPs. The responding to demand aspect of PETRRA was therefore reinforced through the training guideline (see Appendix 1). There were a total of seven PSC meetings held.

The technical committee (TEC)

TEC was chaired by the director general of BRRI and the project manager, PETRRA was the member secretary. The TEC advised the selection process. There were 15 members on the TEC committee, who represented the government and non-government agencies, scientists and extension officials, biological and social scientists including a gender specialist. During the project duration, a total of 17 TEC meetings were held at BRRI, Gazipur. The TOR is given in Appendix 2. The TEC committee was responsible for reviewing CNs and RPs (see below).

Selection and development of research proposals (RPs)

PETRRA PMU issued a call for CNs based on the research problems identified by the stakeholder analysis. The
The stakeholder analysis process, which is documented separately, was conducted in late 1999 and early 2000. It covered 13 districts across Bangladesh, reflecting five different agro-ecological zones, and six different rice growing environments at the village, upazila and districts-levels. Stakeholders included villagers (both men and women), research scientists, and extension workers. The objectives of the stakeholder analysis were:

- To locate the resource-poor within the institutional context of the region;
- To locate the rice system within the livelihoods of resource-poor farm households;
- To identify rice issues and to scope these issues;
- To prioritise issues through meetings at the district-level, village-level and at thana-level; and
- To achieve consensus on priority issues.

In addition there were special workshops for additional opportunity analysis for policy research and integrated pest management.

The call for CNs supported field research in the regions of the country namely: Rangpur, Rajshahi, Khulna, Barisal, Faridpur, Noakhali, Comilla, Sylhet and Kushtia. Research was not commissioned for the Dhaka, Mymensingh or Tangail areas. The intention was to support research in more remote areas and to remove the dominant Dhaka bias that often exists in development activities. Guidelines for writing CNs and RPs were prepared to support applicants. The following procedures were followed in commissioning research from call for CNs to the signing of research agreements (RAs). The subsequent actions followed by the PMU in managing research activities after signing RAs are covered in this series under the paper 'Monitoring and evaluation'.

**Call for CNs:** After identification of research themes and issues, the call for CNs was the first step in commissioning research. There were five calls for submission of CNs. The first two calls during 2000 were communicated to the relevant clients through postal mail, faxes and personal communication and were not advertised in the newspapers. For the third and subsequent calls, advertisements were placed in two daily newspapers with a very brief outline of the research theme, purpose of the call and requirements for submission. The PMU provided guidelines for submitting CNs to the interested parties. The details regarding the individual calls are given below:

**Call No. 1:** This call was for the coastal region (south-west) and technology uptake (seed). The issues were: a) collection and description of locally improved rice variety germplasm (along with an understanding of their present importance to farm households); b) strengthening farmers knowledge of improved agricultural practices for rice-production; c) access to trusted agencies for inputs; d) effective and sustainable water management (either rainwater or groundwater or both) in saline affected areas so that agriculture production and income are increased; e) assessment of the impact of artificial development of water control and shrimp farming cultivation in the south-west on both environment and social well-being of resource-poor households; and f) understanding the income diversity mix of various socio-economic groups in the south-west Region. For the technology uptake the issue was: a sustainable approach to varietal verification trials that enables rapid assessment and feedback for newly released varieties and contributes to the more rapid adoption of these varieties.

**Call No. 2:** It was a single theme; namely...
the sustainable nutrient management for intensive cropping in favourable and unfavourable ecosystems.

**Call No 3:** Themes for this call were: a) development of technology for resource-poor farm households; b) policy and processes; and c) innovations in uptake.

Issues under the theme, development of technology for resource-poor farm households were: a) diversifying livelihoods: developing robust diversified systems for resource-poor farm households; and b) integrated pest management for diversified rice-based cropping systems.

Issues under the theme policy and processes were: a) rice technology and poverty: processes at the household level (for this call identifying processes in the dynamics of poverty at the household level); b) NGO/public/private sector business partnerships for poverty elimination (for this call- the potential of 'pro-poor' institutional partnerships for poverty elimination); and c) institutional models for demand-driven research at the local level (for this call – building institutional capacity for demand-driven research at the local level).

The issue under theme innovations in uptake was: pilot testing of improved methods for effective uptake of technologies for rice systems.

**Call No. 4:** The theme came from a workshop on SRI and the intention was to provide opportunity for more field research on an issue that was being actively discussed by research institutions, the DAE and several NGOs. The call concerned the SRI technology development.

**Call No 5:** This call was the outcome of the review of progress of PETTRA on uptake methods research. The issues were: a) promoting uptake of innovations in post-harvest handling of rice and rice seeds by resource-poor farm households; b) promoting uptake of innovations in management systems for rice production system productivity enhancement by RPFs (emphasis on women to women extension); and c) promoting uptake of innovations from private input distributors for RPFs rice production systems.

In total PETTRA PMU received 397 CNs from the five calls, of which 62 CNs were in response to the first call, 32 CNs in response to the second call, 124 CNs in response to the third call, 24 CNs in response to the fourth call and 155 CNs in response to the fifth call.

**Review of CNs:** The CNs were reviewed by selected professionals as identified by the PETTRA PMU or recommended by the TEC members. For the fourth and fifth call, an initial scrutiny was done by PETTRA management to reject CNs that did not meet the key selection criteria (relevance to theme of the call). These calls were for SRI and uptake methods. Question of plagiarism (copies of duplicate CNs submitted by different persons under different organisations) and repetition of work (covered under an existing SP of PETTRA) were noted and the CNs rejected. Initial screening by the PMU on the final call on uptake methods, for which there were 155, was particularly useful as many submissions did not address the issue of research on uptake methods. There were 141 that did not meet the basic requirements. A statement on this screening was prepared for the TEC.

Reviewers' comments were summarised and placed to the TEC for discussion. CNs were either accepted for preparation of a RP or rejected. Lead researchers of the successful CNs were informed about the next step for submission of the RP
along with the comments of the external reviewers and TEC members. Regret letters were sent to unsuccessful applicants. TEC members and external reviewers were paid a fee for CN and RP review. Greater clarity was added to the assessment sheet for the last two calls. For example bonus points were given for women in leadership (see Appendix 3).

The rapid screening and high regret level for the CNs was important to the overall management of PETRRA. It enabled more effort to be focused on the RP development and to ensure a reflection of the values of PETRRA in the design etc.

**RP development and review:** Lead researchers of the successful CN submissions were formally informed by PMU for submitting RPs following appropriate guidelines provided (both hard and soft copies) along with financial guidelines by PMU. A deadline for submitting RP was also provided which varied depending on the following TEC meeting schedule. A review meeting with lead researchers of successful CN submissions for the fourth and fifth calls was arranged for guiding preparation of RPs. This was inclusive of training on logframe preparation, an observed weakness in the earlier cycle of RP submissions. This represented a further development in the research commissioning process in PETRRA. A copy of the PETRRA financial guidelines was provided to the lead researcher of the successful CNs for preparing RPs. Upper limits of proposed subproject costs were also mentioned in the follow-up letters for RP preparation. PETRRA also provided support to the successful CN submissions for field level discussion meetings with beneficiaries for preparing RPs.

PETRRA project manager in consultation with the TEC chairman arranged the scheduling of the TEC meeting at which CNs and RPs were reviewed. Based on the comments of the professional reviewers and opinions of the TEC members, TEC advised the PETRRA management on accepting/rejecting/resubmitting of the CNs and RPs. It should be noted that the TEC is an advisory committee and not an executive committee. Having said that there was not one instance of the PETRRA PMU going against the consensus recommendation of the TEC. PETRRA management informed the concerned lead researchers of the CNs/RPs accordingly for subsequent actions.

**Research agreement (RA):** RA were signed among the implementing agencies and PETRRA management prior to initiating implementation of the subprojects. Financial guidelines of PETRRA were followed for management of finances. For honoraria or consultancy fees etc. the rules of the agency itself were followed. For example for agricultural research institutes there was a one month honorarium. Rules for universities and academies for rural development were different. For NGOs, a flat 10% overhead was set for indirect costs. For the first SPs, the research was commenced on the basis of goodwill as the RA proforma was not in place. This permitted SPs not to miss an approaching crop season. This did not adversely affect the research but was indicative of the fact that PETRRA commenced with no procedures.

PETRRA management did, however, inform the implementing agency of such decisions in writing to confirm its commitment of funding from a specified date. It was like a letter of intent. This avoided delay in subproject implementation.

**SP implementation and fund release:** The PMU arranged an advance equivalent for implementation cost for the first quarter as stipulated in the sub-project budget immediately after signing the RA and the provision of details of Bank Accounts.
NGOs had limited or no links to research institutions. In management, the practice of using a logical framework was minimal. Attention to an argued approach to poverty focus or the inclusion of women was weak. Experience in partnerships was strong for institutions like IRRI but generally as the lead organisation. Although there was lip service to participation, its practice was rather stilted. There was no practice of policy dialogue and limited commitment to the development of communication materials for farmers or policy makers as an essential output of a research SP. Submission of competitive CNs was also not a practice.

PETRRA was a responsive project. The very culture of responding to farmers’ needs necessitated emergence of certain values that were consolidated over time and for which PETRRA became known. PETRRA did not come in with an agenda to lift each partner to a certain level in terms of capability to focus on RPFs and include women. The building of capacity was never complete. There were some

**Conclusion**

The PETRRA project began within the practices and norms of the institutions and organisations that managed and participated in the project. There was an international centre, IRRI, along with its sister host institution, BRRI. Both were committed to good science in terms of technology development and socio-economic research. There were in-country research institutions and academies, each with their own values and cultures. The subsequent release of funds was conditional on the submission of acceptable quarterly progress report as per PETRRA format. Research Coordinators (RCs)/PIs may request reallocation of fund between line items of approved budget for accommodating the actual requirements during subproject implementation. PETRRA management allowed changes if deemed reasonable. Detailed information on research commissioning from CNs to RA signing is given in Table 8.

<table>
<thead>
<tr>
<th>Activity/Description</th>
<th>First call</th>
<th>Second call</th>
<th>Third call Group 1</th>
<th>Third call Group 2</th>
<th>Fourth call</th>
<th>Fifth Call</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertisement/distributed</td>
<td>13/1/’00</td>
<td>17/7/’00</td>
<td>27/5/’01</td>
<td>27/5/’01</td>
<td>16/2/’02</td>
<td>12/0/’02</td>
</tr>
<tr>
<td>Latest submission date</td>
<td>24/2/’00</td>
<td>24/8/’00</td>
<td>16/7/’01</td>
<td>16/7/’01</td>
<td>17/3/’02</td>
<td>25/7/’02</td>
</tr>
<tr>
<td>No. of CNs received</td>
<td>62</td>
<td>32</td>
<td>124</td>
<td>24</td>
<td>155</td>
<td></td>
</tr>
<tr>
<td>First screening completed</td>
<td>-</td>
<td>-</td>
<td>31/5/’01</td>
<td>31/5/’01</td>
<td>12/5/’02</td>
<td>27/’02</td>
</tr>
<tr>
<td>No. of CNs qualified for review</td>
<td>62</td>
<td>31</td>
<td>Reviewed 35 from 124</td>
<td>26 out of 89 (124-35)</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Evaluation completed and discussed in TEC</td>
<td>6/2/’00</td>
<td>15/10/’00</td>
<td>16/8/’01</td>
<td>12/12/’01</td>
<td>19/6/’02</td>
<td>14/8/’02</td>
</tr>
<tr>
<td>CNs recommended for RP preparation</td>
<td>19</td>
<td>9</td>
<td>9</td>
<td>5</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>RP submission date</td>
<td>5/4/’00</td>
<td>31/1/’01</td>
<td>12/11/’01</td>
<td>12/11/’01</td>
<td>14/9/’02</td>
<td>14/9/’02</td>
</tr>
<tr>
<td>No. of RPs received</td>
<td>19</td>
<td>9</td>
<td>7</td>
<td>4</td>
<td>6 in 3 groups</td>
<td>7 (1 decli.)</td>
</tr>
<tr>
<td>RP evaluation completed and discussed in TEC</td>
<td>20/4/’00</td>
<td>1/3/’01</td>
<td>31/3/’02</td>
<td>19/6/’02</td>
<td>25/9/’02</td>
<td>25/9/’02</td>
</tr>
<tr>
<td>RPs recommended for sub-project</td>
<td>16 (with 4 in 1)</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>First agreement signed</td>
<td>1/4/’00</td>
<td>1/7/’01</td>
<td>1/4/’02</td>
<td>1/4/’02</td>
<td>9/1/’03</td>
<td>13/1/’03</td>
</tr>
<tr>
<td>Last agreement signed</td>
<td>1/10/’01</td>
<td>1/4/’02</td>
<td>1/9/’02</td>
<td>1/9/’02</td>
<td>20/3/’03</td>
<td>20/3/’03</td>
</tr>
</tbody>
</table>
champions that stepped up and keenly helped the values become practice. It is by observing the capacity building that was given and the activities that were conducted at the SP level and project level, that gives insight into the basic needs to create a functional value-based competitive grants system.

**REFERENCE**


PETRRA. 2002d. Proposal to support PETRRA in capacity building of rice research system, PETRRA-PPS, Dhaka, Bangladesh.


PETRRA. 2002f. Seasonal learning sharing and planning report, technology uptake sub-project, 2002, BARD, Comilla, .


PETRRA. 2002h. Training report - TOT on PRA by PPS, Dhaka, Bangladesh.

PETRRA. 2002i. Workshop report, Training Division, BRRI, 2002 Gazipur, Bangladesh.

PETRRA. 2003a. Basic statistics for training, farmer numbers and research team members for PETRRA sub-projects, November 2003, Dhaka, Bangladesh.

PETRRA. 2003c. Portfolio of research at a glance, November 2003, Dhaka, Bangladesh.

PETRRA. 2003d. Report on basic PLA/PRA training on participatory planning and design, January 2003, Dhaka, Bangladesh.

APPENDIX 1: GUIDELINES FOR TRAINING PROVIDED UNDER PETRRA PROJECT

Poverty Elimination Through Rice Research Assistance (PETRRA) is a research project designed to have a direct positive benefit on the well being of resource-poor farm households. Any degree training or short-term specialised training is, therefore, expected to contribute directly to the outputs within the PETRRA research agenda.

All training under PETRRA must be focused specifically on achieving project outputs and is not for general support to building capacity. The latter has been provided for under the World Bank-funded research management projects and other donor initiatives.

Under the project there are three categories of training available. These are:

- Capacity for demand-led research through research skills development;
- Degree related training such as funding of post-graduate degree training or parts of (e.g., thesis expenses); and
- Specialist skills training for specific tasks under PETRRA.

A. Capacity building for demand-led research through research skills development

This training under PETRRA focuses very much on the output 2 of the PETRRA logframe which is:

'Capacity of rice research system to undertake demand-led research sustainably enhanced.'

PETRRA is addressing this through developing the skills of all partners (key institutional members and members of research teams) who are directly involved in SPs in the following areas:

- Project cycle management;
- Participatory reflection and action skill development for facilitation and effective partnership;
- Participatory monitoring and evaluation for effective voice of resource-poor farm households;
- Livelihoods framework approach; and
- Gender and environmental awareness.

PETRRA supports the development of in-country capacity for the above. Wherever International Expertise is used it is linked to an in-country organisation for sustainability. In this way resources developed through PETRRA are available for all participating organisations.

B. Degree related training such as funding of post-graduate degree training or parts of (e.g., thesis expenses)

Guidelines for this are as follows:

1. Research agenda and research commissioning:
   1.1 Research themes are identified through village and thana level stakeholder
meetings or special thematic workshops to identify priority research issues. Based on these a call for CNs for research funding is circulated;

1.2 The CNs are reviewed by a TEC that advises the PETTRA project; and

1.3 A person who submits a successful CN is then asked to develop a full RP. This is again submitted to the TEC for review and approval. A successful RP must have the endorsement of its supporting institution and a Research Agreement is then signed with that institution.

2. Degree level training such as the funding of post-graduate degree training or parts of (e.g., thesis expenses) can only be identified within successful RPs:

2.1 All degree training must be linked to SPs through the competitive funding mechanism. Therefore any training would only be funded as part of an approved SP and its budget and justification would be reviewed in this context. By this approach, degree training will be appropriately linked with PETTRA’s outputs;

2.2 A research activity within the RP may constitute post-graduate degree level thesis work. It is in the context of thesis work (along with course work if required but not retroactively) linked to a research output under an RP, that the term degree training applies. The budget for the thesis research component is shown within the approved RP budget. RPs are judged on a number of criteria including, value for money, so more costly training will need strong justification if it is not to prejudice the overall RP submission;

2.3 The outputs of thesis research conducted with PETTRA support shall be defined as specific outputs on the log frame for the specific RP;

2.4 In order to support Bangladesh’s teaching and research capacity and to obtain maximum value from available resources, all degree training and thesis work should be carried out in Bangladesh;

2.5 Only if the required degree training is not available in Bangladesh, will foreign degree training (or part of) be permissible on a case by case basis with DFID’s approval;

2.6 A student or a person who expects to complete degree level training under an approved RP cannot submit a CN/RP;

2.7 Only after a RP has been approved can a potential degree candidate apply; and

2.8 All selection of degree students for research support is based on merit.

3. Selection of candidates for in-country Master’s degrees under an approved RP:

3.1. The lead agency for the RP will have responsibility for selection of candidates. It will form a committee that will comprise at least two persons from the lead agency itself and as an option a member from the respective university department;

3.2. The students will be viewed as research assistants within the context of the SP;

3.3. The lead agency will communicate selection procedures to the chairperson (director general [DG] BRRI) of the TEC with a copy to the PETTRA project manager. The TEC Training Committee will endorse the procedures.
3.4. The lead agency will:
   - communicate final selection of students;
   - provide a progress report on students and copies of completed theses; and
   - show clearly how these outcomes contribute to the SP outputs.

4. Selection of candidates for in-country PhD under an approved RP:

4.1. For in-country PhD selection a permanent *TEC Training Committee* will be formed. It will comprise:
   - Director-Research, BRRI;
   - Member Director-Crops, BARC;
   - Deputy Secretary-Research, MOA; and
   - PETRRA project manager.

4.2. The TEC may adjust the composition of the permanent committee if needed.

4.3. For specific SPs the lead agency will be invited to participate in the selection process.

4.4. The *TEC Training Committee* will ensure:
   - Thesis research contributes directly to outputs on the logframe in SP;
   - The selection of best candidates; and
   - Transparency in the selection procedures.

4.5. Reasonable financial support as appropriate will be provided (including course fees, monthly subsistence allowance, travel costs, thesis allowance and other related expenses). The budget for this is included within the approved RP against a specific output of the SP.

5. Selection for overseas Master's or PhD under approved RPs:

5.1. The *TEC Training Committee* needs to be convinced that the thesis research or skills developed through course-work are essential for the PETRRA SP to achieve its output.

5.2. The *TEC Training Committee* will recognise that the thesis research or the course work cannot be completed through Bangladesh universities.

5.3. For this the following must be presented to the *TEC Training Committee*:
   - The lead agency clearly defines the expected output required;
   - The *TEC Training Committee*, through consultation with respective in-country universities, will report that the Bangladesh university facilities cannot provide the same;
   - A relevant expert (either in-country or internationally) endorses each of the above statements.

5.4. Having confirmed the above, the following process will be followed for selection of the best candidate on a competitive basis and most appropriate overseas university:
   - The university will be identified by the *TEC Training Committee* through consultation and not by the student;
• Criteria and eligibility of the students will be fixed by the committee;
• An advertisement will be placed in both Bengali and English newspapers for applications through an open competition (detailed eligibility requirements for students will be provided for potential applicants);
• The successful student will be responsible for securing admission in the identified university; otherwise selection may be cancelled; and
• An award letter will be given to the selected student for deputation.

5.5. Reasonable financial support as appropriate will be provided (including course fees, monthly subsistence allowance, travel costs, thesis allowance and other related expenses). The budget for this is included within the approved RP against a specific output of the SP.

5.6. Final selection must be endorsed by DFID Dhaka office as well as PSC.

C. Specialist skills training overseas for specific tasks under PETRRA

The following will apply:
• The SP coordinator/PI must show that the specialised short-term training will contribute to the output of the SP;
• It must be shown that the type of training being considered is unavailable in Bangladesh;
• The short-term training will be for SP personnel who will be expected to contribute to the SP outputs on return from training;
• The PETRRA project manager will inform the head of the respective institutions of the opportunity of the training. This is to ensure that institutional process is followed;
• The head of the respective institution will consult with the SP coordinator/PI and the PETRRA project manager in the selection of the candidate; and
• The PETRRA project manager will keep the TEC informed of all short-term training and the observed outputs.

D. Other issues:
• Head of government institutions will communicate directly with DG-BRRI and chairman TEC for the training purpose. DG-BRRI will make all correspondence with project manager in this regard. In case of selection competition between GOB and non-GOB candidates will be avoided.

APPENDIX 2: TERMS OF REFERENCE (TOR) FOR PSC AND TEC

TOR OF THE PROJECT STEERING COMMITTEE (PSC):
The PSC will:

a) Provide policy guidance concerning relative priority of research themes and issues for the project to emphasise;

b) Provide guidance on the proportional resource allocation to major research themes;

c) Provide strategic guidance and support to the project for its successful implementation;

d) Approve research programmes presented by the project manager;

e) Review progress and recommend actions for change, if needed;

f) Provide guidance on project impact assessment plans and procedures;

g) Provide guidance on communication of project outputs to the government, donors, and other stakeholders;

h) Meet at least twice during the first year of the project life and at least once a year thereafter. PSC members will give their best effort to attend every meeting and will not send any substitute person to any meeting that they must miss for unavoidable reason; and

i) Address any other issue that is critical for project's operation or performance that TEC or any other entity within the project is unable to help.

TOR OF THE TECHNICAL EVALUATION COMMITTEE (TEC):
The TEC will:

a) Review and evaluate the project CNs and RPs based on established criteria;

b) Develop criteria on a consensus basis, to be used for evaluating project CNs and project proposals;

c) Provide technical scrutiny of research programmes and make appropriate recommendations to the project manager;

d) Advise the project manager on how to enlist interest of sound researchers and institutions in PETRRA's activities;

e) Advise the project manager of new members for TEC, who could make critical contribution to the project as a member;

f) Identify and recommend names of resource persons who could significantly contribute to the project as consultants for various needed tasks;

g) Advise and support the project manager on any other technical matters that may require the committee's guidance and assistance; and

h) Meet at least four times in a year. TEC members will not send any substitute person on occasions when they are unable to attend for unavoidable reasons.
Guiding definition of an innovative extension method:

An ‘innovative extension method’ is defined as a new, more effective and cost-effective way of interacting with larger numbers of resource-poor farm households for the dissemination of an identified proven technology.

This is a PETRRA working definition to guide the review process.

### APPENDIX 3: ASSESSMENT OF PETRRA CN BY TEC MEMBER/REVIEWER

<table>
<thead>
<tr>
<th>Questions (please score each question and then show total for section)</th>
<th>Score out of specified points</th>
<th>Comments and suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Review of the extension method:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has the extension method been clearly described?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is it cost effective?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the approach replicable for other organisations?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is it pro-poor?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will the approach be sustained within the organisation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the comparison with an existing method adequately described?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(30 points; 5 for each question)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. Review of the soundness of the technology:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the technology chosen adequately described?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For resource-poor farm households (RPFs) increases productivity of rice-based cropping system of RPFs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has the positive environment contribution been adequately described?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(15 points; 5 for each question)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3. Assessment of poverty focus and participation:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the CN show a clear approach for identifying RPFs?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has there been discussion with RPFs concerning the technology and the extension method?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the CN demonstrate the means of participation of RPFs?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the CN demonstrate the means of participation of other relevant stakeholders?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(20 points; 5 for each question)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Gender review:
Does the CN reflect consideration of both men and women?
For the post harvest issue:
- Is the process exclusively with women by women?
- Are women leading the SP? (bonus 10)
(10 points for question and for post-harvest possible bonus of up to 20 for showing women for women in design and overall woman leadership)

5. Resources:
Has the organisation submitting have adequate qualified human resources and institutional linkages for the work?
Does the proponent have relevant experience?
Does the proponent have an adequate track record for the proposed research?
Does the approach use the strengths of different institutions through adequate partnerships?
For non-seed input and supply and utilisation issue:
- Is there partnership in the research with the private sector? (bonus 10)
(20 points; 5 for each question; with bonus 10 for non-seed input and supply issue if partnership with private sector)

6. Time frame and appropriateness:
Does the CN propose an appropriate time scale and realistic implementation plan for delivery of the action research subproject?
Is budget realistic, and in proportion to the likely impact i.e., does it give value for money?
(5 points; in total)

Any other comments (continue on a separate sheet if necessary):
**Reviewer’s recommendation**

<table>
<thead>
<tr>
<th></th>
<th>Acceptable (with minor adjustments) for preparation of RP</th>
<th>Total score:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Needs substantial reworking based on comments above</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Should be rejected (give reasons in comments box)</td>
<td>Maximum = 100 (plus potential bonus points)</td>
</tr>
</tbody>
</table>

Signed : __________________________

Date : __________________________

TEC member : YES  NO

Reviewer : __________________________

Organisation : __________________________

---

**Suggested citation:**
PETRRA was a DFID-funded project, managed by the International Rice Research Institute (IRRI) in close collaboration with the Bangladesh Rice Research Institute (BRRI).