

**Proceedings of the participatory workshop
on
Technology Identification and Recommendation for
FoSHoL Project
(Noakhali district)**

6 April 2005



Venue:

Gano Sanghati Kendra, Cooperative Market, Maijdee, Noakhali

Funded by:

European Commission (EC)

House # 7, Road # 84, Gulshan- 02, Dhaka-1212

Sponsored by:

International Rice Research Institute (IRRI)

House # 9, Road # 23, Block- B, Banani, Dhaka-1212

Phone: 88-02-8817639-40, Fax: 88-02-8827210

Organized by:

Agricultural Advisory Society (AAS)

House # 8/7, Block - B, Lalmatia, Dhaka-1207

Phone: 880-2-8113645, Fax: 880-2-8117781

Email: aas@bdcom.com

Glossary

AAS	=	Agricultural Advisory Society
AAB	=	ActionAid Bangladesh
AAEO	=	Additional Agriculture Extension Officer
AEO	=	Agriculture Extension Officer
BARI	=	Bangladesh Agriculture Research Institute
BKB	=	Bangladesh Knowledge Bank
BR	=	Bangladesh Rice
BRAC	=	Bangladesh Rural Advancement Committee
BRDB	=	Bangladesh Rural Development Board
BRRRI	=	Bangladesh Rice Research Institute
CARE	=	Cooperative Assistance for Relief Everywhere
CC	=	Chief Coordinator
CDSP	=	Char Development and Settlement Project
DAE	=	Department of Agriculture Extension
DCO	=	District Cooperative Officer
DD	=	Deputy Director
DFID	=	Department for International Development
DFO	=	District Fisheries Officer
DLS	=	Department of Livestock Services
DoF	=	Department of Fisheries
DTO	=	District Training Officer
EC	=	European Commission
ED	=	Executive Director
FGD	=	Focus Group Discussion
FoSHoL	=	Food Security for Sustainable Household Livelihoods
GOs	=	Government Organizations
HYVs	=	High Yielding Varieties
IRRI	=	International Rice Research Institute
ITDG	=	Intermediate Technology Development Group
LVs	=	Local Varieties
NGOs	=	Non Government Organizations
NRDS	=	Noakhali Rural Development Society
PC	=	Programme Coordinator
PDZs	=	Production Development Zones
PETRRRA	=	Poverty Elimination Through Rice Research Assistance
PM	=	Project Manager
PNGO	=	Partner Non Government Organization
PO	=	Programme Organizer
PO	=	Programme Officer
PPS	=	Plant Protection Specialist
RARS	=	Regional Agriculture Research Station
RDO	=	Rural Development Officer
SAA	=	Senior Agricultural Adviser
SAAO	=	Sub Assistant Agriculture Officer
SLO	=	Senior Livestock Officer
SO	=	Scientific Officer
SPO	=	Senior Programme Officer
SSO	=	Senior Scientific Officer
SUFO	=	Senior Upazila Fisheries Officer
UAO	=	Upazila Agriculture Officer
UFO	=	Upazila Fisheries Officer
ULO	=	Upazila Livestock Officer
URDO	=	Upazila Rural Development Officer
USG	=	Urea Super Granular
VS	=	Veterinary Surgeon

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Introduction

The FoSHoL (Food Security for Sustainable Household Livelihoods) project is a 54-month project; the objective of which is to promote food security and livelihood improvement of the food insecure, small and marginal farmers through the dissemination of sustainable agricultural technologies. To achieve the objectives of FoSHoL project, EC has selected four NGOs (ActionAid Bangladesh, CARE Bangladesh, ITDG Bangladesh and Proshika) as dissemination agencies. The four disseminating NGOs have been selected for their potential to contribute to the overall improvement of food security among the target farmers. They will identify, adapt and disseminate the selected technologies among the target farmers. This will strengthen farming system efficiency and will consequently improve farm-household food security and livelihood. Moreover, EC has selected IRRI to provide the mandated coordination and thus ensure that the four NGOs carryout their interventions in a coherent, consistent, effective and efficient manner, using appropriate technologies selected from their own experiences; PETRRA experiences; also from IRRI and elsewhere. The coordinating agency, IRRI, will work with disseminating NGOs to deliver technologies that will improve farming practices and the utilization of farm resources. Through these interventions, the target farmers will increase the quality and quantity of their farm output and thus enhance their own food security.

Location specific technology identification for the targeted food insecure, small and marginal farmers is one of the major activities of IRRI in FoSHoL project. IRRI has assigned Agricultural Advisory Society (AAS) to explore, identify and document technologies from sources throughout the country; giving particular emphasis in the districts where the FoSHoL project is operating. The selected technologies will be documented in the Bangladesh Knowledge Bank (BKB). The BKB documentation will guide the efforts of the four disseminating NGOs as they undertake to identify the most suitable technologies that are appropriate to the sub-ecosystems of their respective target areas. This derived documentation is intended to be a roadmap for carrying out the process of identifying suitable agricultural technologies and their sources; and storing these in Bangladesh Knowledge Bank and implementing them as appropriate among their constituents within their designated FoSHoL project areas. The BKB resources will help, guide and harmonize the efforts of the four disseminating NGOs as they undertake to identify the most suitable technologies for non-rice, rice, fisheries and livestock production; technologies that are appropriate to the sub-ecosystems of the target areas designated by each of the participating NGOs.

Several workshops have been scheduled in the FoSHoL project areas in collaboration with the four disseminating NGOs. These are being conducted by Agricultural Advisory Society (AAS) under the supervision of the coordinating agency, IRRI. The intention of the workshops is to identify, select and disseminate specific agro based technologies for rice, non-rice, fisheries, livestock and non-farm activities that could be act as a catalyst for disseminating NGOs of FoSHoL project.

In this regard, a workshop was conducted on 6 April 2005 at Gano Sanghati Kendra, Cooperative Market, Noakhali from 9.00 am to 4.00 pm in collaboration with the Noakhali Rural Development Society (NRDS), a PNGO of the disseminating NGO-ActionAid Bangladesh (AAB).

Purpose

The workshop was convened for the purpose of selecting (identifying) the most potential agro based technologies for rice, non-rice, fisheries, livestock and non-farm activities for targeted farmers of FoSHoL project for charland and mainland of Noakhali districts.

Facilitators

In technical session, the participating farmers and secondary stakeholders were divided into two groups (mainland and charland) since the scenario of mainland and charland are quite different. For charland group, A.K.M. Abdul Awal, SAAO, DAE, Noakhali Sadar, was selected as group leader of charland and Md. Ali Akbar Bhuyan, SAAO, DAE, Noakhali Sadar was selected as group leader of mainland. Both of the group leaders guided the participants during technology selection and presented their group-outputs among the participants of the workshop. Two facilitation teams conducted the group work. For mainland, Mr. Abdul Awal, Chief Coordinator, NRDS was the team leader of the facilitator's team. A.K.M. Ferdous, Agronomist, AAS; A.K.M. Murshedur Rahman, Entomologist, AAS; Mukta Chakrabarti, Programme Organizer, NRDS and A.N.M. Mizanur Rahman, Programme Officer, NRDS acted as facilitators for mainland group. On the other hand, for charland, Mr. Harun-Ar-Rashid, ED, AAS and Consultant, FoSHoL project, IRRI was the team leader of the facilitator's team. Mr. Deb Kumar Nath, Irrigation Engineer, AAS; Tapan Chakraborti, Programme Coordinator, Agriculture, NRDS; Abdul Wadud, Programme Coordinator, LIVE, NRDS; Anawar Hossain, Programme Organizer, NRDS; M.A. Hossain Manik, Monitoring Officer, NRDS and Firoz Anower Apu, Project Officer, NRDS acted as facilitators for charland group. Dr. Ekramul Ahsan, Senior Programme Officer, EC and Mr. Masud Alam Khan, PM, FoSHoL, AAB acted as the overall facilitators for both groups.

Participants

A total of 82 participants attended in the district workshop, of which 25 were farmers and the rest 57 participants were secondary stakeholders. Among the 25 farmers, 19 (76%) were female and 6 were male. On the other hand, among the 57 participants attended from relevant GOs and NGOs, 3 (5%) were female and the rest 54 were male. The distinguished secondary stakeholders participated from Department of Agricultural Extension (DAE), Department of Livestock Services (DLS), Department of Fisheries (DoF), European Commission (EC), Bangladesh Agriculture Research Institute (BARI), International Rice Research Institute (IRRI), Bangladesh Rural Development Board (BRDB), Bangladesh Agricultural Development Corporation (BADC), Agriculture Training Institute (ATI), Char Development and Settlement Project-II, Department of Forestry, Department of Cooperative and from relevant NGOs including AAB, CARE, BRAC, ASA, NRDS, AAS and so on. List of the workshop participants are provided in Annex-IV.a and IV.b.

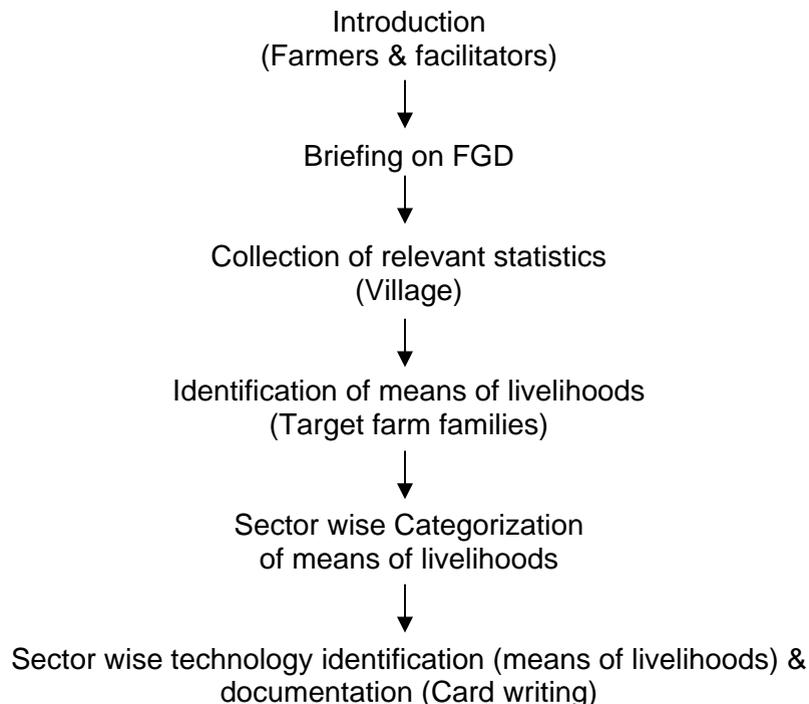
Methodology

The facilitators undertook participatory Focus Group Discussions (FGD) with farmers at village level, discussion with the stakeholders at district level (Noakhali) and district level participatory workshop with participating farmers and secondary stakeholders of Noakhali region. These were conducted during 2 February-6 April 2005. Details of FGDs, discussion meeting with district level relevant stakeholders and participatory district workshop are given below:

FGD at community level

In order to identify the farmers' demand-led technologies, three FGDs were conducted at community level. A total of 59 farmers including 33 female farmers (56%) participated in the FGDs. Out of these three FGDs, one FGD was conducted at Nur Islam's house of Nabagram village in Sadar upazila of Noakhali district on 2 February 2005, where a total of 17 farmers including 15 female farmers (88%) participated. Another one FGD was conducted at Banabaria village in Begumganj upazila of Noakhali district on the same day at afternoon where a total of 27 farmers including 8 female farmers (30%) participated. The third FGD was conducted at Madyam Karimpur village of Noakhali Sadar on 5 April 2005, where a total of 15 participants including 10 female farmers (67%) participated. Mr. Harun-Ar-Rashid, ED, AAS and Consultant, FoSHoL project, IRRI; Mr. A.K.M Ferdous, Agronomist, AAS; Mr. Deb Kumar Nath, Irrigation Engineer, AAS and A.K.M. Murshedur Rahman, Entomologist, AAS conducted the FGDs with the overall support from Mr. Abdul Awal, Chief Coordinator, NRDS; Mr. Tapan Chakraborti, Programme Coordinator, Agriculture, NRDS; Mr. Abdul Wadud, Programme Coordinator, LIVE, NRDS; Ms. Shamima Nasrin Sumi, Programme Organizer, NRDS; A.N.M. Mizanur Rahman, Programme Officer, NRDS and Md. Shafiullah, SAAO, DAE, Begumganj of Noakhali district. These half-day long FGDs were conducted through open discussion and in a participatory manner. During open discussion, existing technologies, problems and farmers demand were crucially identified covering all sectors of rice, non-rice, livestock, fisheries and non-farm activities. In early two FGDs, the following process was followed at each community.

Process



During the third FGD, especially ITDG documented technologies were displayed among the participants with an illustration by the facilitators. In this regards, the facilitators of the FGD session gave special attention to female participants during selection of the ITDG documented technologies at plenary. Participants were asked for giving their opinion against each of the documented technology considering the relevant issues such as raw materials availability, it's commercial value, local market demand and so on.

Output of these FGDs at farmer's level was documented through card writing for the purpose of presentation, selection and prioritization of the technologies in the technical session of the district workshop. The facilitators of the workshop presented the farmer's 'community level' technology selections. After presentation of each technology the floor was open for all participants of the district workshop to discuss the merits of each technology under discussion and then the selected technologies were prioritized according to the process.

Discussion with district level stakeholders

Discussion with district level stakeholders was conducted to identify sustainable technologies for mainland and charland of Noakhali district. Mr. A.K.M. Ferdous, Agronomist, AAS and Mr. Deb Kumar Nath, Irrigation Engineer, AAS along with Mr. Abdul Wadud, Programme Coordinator, LIVE, NRDS conducted the district level discussion meetings. The "candidate technologies" were identified from the Department of Agriculture Extension (DAE), Department of Livestock Services (DLS), Department of Fisheries (DoF) and Char Development and Settlement Project-II (CDSP-II) during the district level discussion meeting. The views of participants in the district level discussion meetings were duly recorded by the facilitators on cards. These cards represented the primary documentation of the district level discussion meetings.

District workshop

After conducting the FGDs with the targeted farmers at community level and the discussion meeting at secondary stakeholder level; a district level workshop was conducted with the representative of farmers from Begumganj and Sadar upazilas of Noakhali districts and with the distinguished representatives of relevant secondary stakeholders especially from Noakhali district. A participatory approach was followed through out the workshop. The workshop was divided into three sessions i.e., inaugural session, technical session and concluding session. The workshop was proceeded on as per Schedule (Annex-V).

a) Inaugural session:

The purpose of inaugural session of the district level workshop was to give a focus on the objectives of the FoSHoL project as well as to explain the purpose and process of the workshop. Dr. Ekramul Ahsan, Senior Programme Officer, EC was the chief guest and inaugurated the workshop. Mr. Abdul Awal, Chief Coordinator, NRDS gave his introductory speech at the beginning of the inaugural session. Mr. Masud Alam Khan, PM, FoSHoL, AAB delivered welcome address. Md. Harun-Ar-Rashid, ED, AAS and Consultant FoSHoL project, IRRI also spoke on FoSHoL project, and over view and the process of the technical session of the workshop. Md. Humayun Kabir, PPS, DAE, Noakhali; Dr. Md. Abdul Malek, DLO, DLS, Noakhali; Dr. Shekh Md. Abdus Sattar, SAA, CDSP-II, Noakhali and A.K.M. Siddique, SUFO, DoF, Noakhali Sadar were present as special guests. They spoke on different issues relating to technology identification and selection. Mr. Sanawarul Haque Khan, Project Manager, CARE, Noakhali spoke on the

project FoSHoL. Mr. Khalil Ahmad, UAO, DAE, Noakhali Sadar spoke on the status of household livelihoods of the food insecure small and marginal farmers of charland in Noakhali district.

b) Technical session:

The main purpose of the technical session was to select the potential technologies for the targeted farmers of mainland and charland in 2 upazilas of Noakhali district. At the beginning of the technical session, Mr. Harun-Ar-Rashid, ED, AAS gave a briefing on the process of the technical session. After briefing the attendees on the process of the technical session, the following steps were amplified: group formation (charland and mainland), identification of technologies, presentation of identified technologies, selection of potential technologies, prioritization of potential technologies and presentation of prioritized technologies according to the presented process of the technical session of the workshop.

Group formation: In order to identify the area specific technologies particularly for mainland and charland of Noakhali district, two groups were formed. Participating male and female farmers of the workshop were divided into two groups according to their land configuration. On the other hand, participating secondary stakeholders of both GOs and NGOs were divided according to their close association with the farmers of charland or mainland. As a whole each group of mainland and charland contained representative of farmers, GOs and NGOs and had a balanced strength for technology identification, selection, recommendation and prioritization.

Identification of technologies: Small and marginal farmers demand-led technologies were identified through group discussion among the farmers and secondary stakeholders of Noakhali district, which were documented by the facilitators on cards. The technologies were identified on the basis of five major sectors of livelihood, i.e., rice, non-rice, livestock, fisheries and non-farm activities.

Presentation of identified technologies: Farmer's suggested technologies, district level stakeholder's suggested technologies and district workshop participant's suggested technologies were recorded on cards and presented by the facilitators among the participants of the workshop.

Selection of potential technologies: After the presentation of farmer's suggested technologies, district level stakeholder's suggested technologies and district workshop participant's suggested technologies, the floor was opened for discussion to select the potential technologies for the targeted farmers of FoSHoL project in charland and mainland of Noakhali district. In mainland group, identified technologies were divided into five major categories such as rice, non-rice, fisheries, livestock and others, whereas in charland group, the identified technologies were divided into another five categories such as rice, non-rice, fertilizer, fisheries and livestock. The potential technologies were selected by the participants of the workshop through discussion and necessary modification at plenary.

Prioritization of technologies: During the "prioritization of technology" process, in mainland group, the five major sectors (rice, non-rice, livestock, fisheries and others activities) were prioritized according to the farmer's demand. The potential technologies, which were suggested by the district workshop participants, were prioritized by the combined effort of farmers and secondary stakeholders giving more emphasis of farmer's opinion.

Presentation of selected technologies: After the selection of potential technologies, A.K.M. Abdul Awal, SAAO, DAE, Noakhali Sadar, the group leader of charland on behalf of charland group and Md. Ali Akbar Bhuyan, SAAO, DAE, Noakhali Sadar the group leader of mainland on behalf of mainland group presented their output among the participants of the workshop. After the presentation of the potential technologies, participants were asked to make comments on the ‘technology selection’.

c) Concluding session:

In concluding session, Mr. M. Sayed Ali, DD, DAE, Noakhali and Dr. Ekramul Ahsan, Senior Programme Officer, EC delivered their satisfactory closing speech for the successful workshop as well as made positive comments on technology identification. Md. Harun-Ar-Rashid, ED, AAS and consultant, FoSHoL project, IRRI, and Mr. Abdul Awal, Chief Coordinator, NRDS expressed their appreciation to the participating farmers and secondary stakeholders of the district workshop.

Inaugural Session (Output)

At the very beginning of the inaugural session Mr. Abdul Awal, Chief coordinator, NRDS and moderator of the district workshop started his introductory speech thanking the



representatives of donor agency i.e., European Commission (EC), project disseminating organization i.e., AAB and workshop conducting agency i.e., AAS as well as target farmers of FoSHoL project i.e., small and marginal farmers participated in the workshop and the stakeholders of relevant GOs and NGOs. He pointed out that the aim of the workshop is to identify and select the suitable agro-based potential technologies by a participatory discussion, which will be adaptable in the ago-ecology of Noakhali

district. Initially we will identify the existing technologies and then we will decide which technologies will be suitable in this region, he added. He requested the participants of the workshop to identify most suitable agricultural technologies by which poor farmers can be able to improve their livelihood status and which will bring the revolution in the economy of the countryside. He, however, pointed out that as it is a participatory workshop, all of us would share our own point of view without any hesitation at plenary. One is requested to give opportunity to others to share their opinions as well and by this way it would be pleasant, enjoyable and effective, he added hopefully. At the end of his speech he welcomed EC representative, disseminating NGO (AAB) representative, stakeholders of GOs and NGOs, and specially the farmers who participated the workshop from long distance to identify suitable technologies for the improvement of livelihood of small and marginal households of Noakhali district.

Md. Masud Alam Khan, PM, FoSHoL project, AAB said that ActionAid Bangladesh, the international organization has a long series of experience on the implementation of agricultural activities such as crops, poultry, livestock, fisheries etc. But recalling the previous records he mentioned that there was no integrated approach among the different agricultural sectors taking into account of farmer's demand. According to farmer's demand the project



FoSHoL is going to be implemented with an integrated approach for the improvement of livelihood status of the food insecure farmers. He clarified that the project FoSHoL did not appear with its pre-fixed periphery. It gives us the opportunity to share opinion with GOs and NGOs for the purpose of designing the programme in a better way. He also said that he was very much pleased to participate in the workshop. He thanked all the participating farmers and secondary stakeholders of relevant GOs and NGOs for their openhearted participation.

Mr. Harun-Ar-Rashid, ED, AAS and consultant FoSHoL project, IRRI welcomed all of the participants of the workshop and gave a short briefing on FoSHoL project and about the workshop with his presentation. Mentioning the full meaning of FoSHoL project, he said that we would try to identify the agro based specific means of livelihood of the small and marginal farmers of Noakhali district from this district workshop. He mentioned that the project would work with the food insecure small and marginal farmers to improve their livelihood status. In Noakhali district, Begumganj and Sadar upazilas are selected for the FoSHoL project. Mentioning the names of the four disseminating NGOs, he said that they will implement the FoSHoL project in 28 districts all over Bangladesh where IRRI is acting as a coordinating agency and AAS is doing short time consultancy. The project will run for 4-5 years and work for giving food security to food insecure farm families. He clearly presented the four steps of the process of the technical session for identification, selection, prioritization and recommendation of the technologies for Noakhali district. He requested the participants to select the technologies for Noakhali district considering the farmers who are food insecure and who have the scope of improving their livelihood status. He also said that the technologies, which will be identified from the workshop, would be act as a starter menu during the implementation of the FoSHoL project in Noakhali district. He ended his presentation expecting a successful technical session.

Mr. Sanwarul Haque Khan, Project Manager, CARE, Noakhali expressed his cordial thanks to all participants of the workshop and said that the name as well as the aim of the project 'FoSHoL' is excellent. The FoSHoL project is going to be implemented by the four leading NGOs and their partner organization in several food insecure regions including Noakhali for improving the Livelihood status, he added. He expressed his opinion with confidant that the FoSHoL project will be able to achieve its mission. He included that the CARE has taken several initiative to produce vegetables in Noakhali district. He ensured all kind of cooperation for implementing the FoSHoL project.

Mr. Humayun Kabir, Plant Protection Specialist, DAE, Noakhali said that the technologies should be very much location specific for achieving better results. Giving example he said that due to geographical distribution there is a little difference between Begumganj and Sadar upazilas of Noakhali district. It is necessary to take such kind of activities, which can meet the farmers demand. From this workshop we have to identify the area specific suitable technologies by which the livelihood status of poor farmers can be improved.

Mr. A.K.M. Siddique, SUFO, DoF, Noakhali Sadar expressed his happiness as the FoSHoL project is going to be implemented in different districts including Noakhali with a extensive agricultural activities for the improvement of livelihood status of the small farmers. The land under crop cultivation in Noakhali region is quite different from other part of the country, he added. Giving an example he said that during the last devastating flood, excess water of cropland receded within one month from most of the part of the country. But, in Noakhali region, it took about 5-6 months. Water logging is a common

problem in this district. As a result, only one crop is cultivated throughout a year where most of the time lands become fallow after crop harvesting. However, he was very much happy as the project FoSHoL included the fisheries and livestock sectors along with crops. But he pointed out that the success of FoSHoL project would depend on the utilization of natural resources. He mentioned that in every year more than 52% area of Begumganj upazila of Noakhali district experiences waterlogging for 3-5 months, whereas, in Noakhali Sadar, not more than 6% areas experiences waterlogging for 3-5 months. For this region, at the time of water logging, in Begumganj, fish cultivation in the waterlogged croplands can be more profitable. If we can show the technology as profitable, farmers must accept it. Wishing the success of the workshop he expected the immediate implementation of FoSHoL project.

Mr. Khalil Ahmed, UAO, DAE, Noakhali Sadar said that the workshop is aimed to identify the programme by which poor farmers can developed their own food security. In these regards, farmers' opinion must be given priority, because they can identify the actual barrier for their economic development. For example, he said we have a traditional believe that the people of char are very poor. But we do not know the actual situation. About two third lands of the 'char' is owned by landlords. As a result, most of the farmers have no land of their own. He also mentioned that the development of our country depends on the development of agriculture. He expressed his hope that throughout the workshop, the skilled farmers as well as specialists of different agricultural sectors will be able to identify the suitable methods for improving the farmer's livelihood status.

Dr. Shekh Md. Abdus Sattar, Senior Agricultural Adviser, CDSP-II, Noakhali gave his cordial thanks to the vivid faces of the district workshop involved in agriculture and devoted to agriculture. He said we came to know that the workshop is aimed to identify and prioritize the suitable technologies for Noakhali region. Mentioning the importance and the difficulties of technology-selection for the locality, he said, five years ago when I came to Noakhali for first time I tried to identify the existing technologies of this region. He said that he was frustrated as there was none of the GOs and NGOs who were actively involved in developing technologies for the improvement of livelihood status of charland farmers. Although national research system including BRRI and BARI are involved in developing suitable agricultural technologies, they failed to develop suitable ecosystem-based technologies for this location, which can be sustainable for Noakhali region, he claimed. So, it is necessary to develop technologies giving more emphasis on farmer's opinion. He requested the research organizations to initiate the research activities in a large scale to develop the suitable technologies for this region. He also requested the research organization to raise the problems in national forum. The cultivable land is decreasing alarmingly and to overcome the situation, tested and proven technologies are required to transfer to dynamic farmers in suitable areas. In regards to prioritization of technologies, he expressed his opinion that the prioritization of technologies can be possible when lots of technologies are available, but unfortunately very few technologies were developed for this region. In regards to identify suitable technologies for Noakhali region, he suggested to consider some criteria such as salinity, tidal flooding death and weather. He pointed out that the cultivation of wheat would not be suitable in this region, as cropland of this region remain wet till December. He also mentioned that the socio-economic condition is more important than others during selection of technologies. In this regards, he said, as the socio-economic condition of this region is quite different from other region and if we consider the issue seriously, surely the development would get momentum. Farmers as well as the other organizations that are working in this region, the inhabitant of the same socio-economic

environment, can help to identify the suitable technologies for Noakhali district. He



expressed his great hope mentioning that some NGOs are going to implement the project by which they will try to identify and disseminate the suitable technologies in different districts including Noakhali. He said that he himself was also involved in identification and development of technologies under CDSP project what made him understand the clues. At the end of his speech he thanked all the participants of the workshop and ensured all kind of cooperation from his side for better implementation of the FoSHoL project.

Dr. Ekramul Ahsan, Senior Programme Officer, EC and the Chief guest of the workshop thanked all of the participating farmers and secondary stakeholders for their openhearted participation in the workshop. He appreciated the presentation of Mr. Harun-Ar-Rashid on the concept of FoSHoL project, overview of the workshop and process of the technical session. He mentioned that from his presentation it was clarified to us how we would identify the technologies during technical session through using the process. Mentioning the aim of specialists of different GOs and NGOs have to identify and prioritize the suitable agricultural technologies for Noakhali region to improve the livelihood status of the farmers. In regards to EC, he said that EC has a strategy on global development policy. EC has designed a framework under a special programme for Bangladesh to reduce its poverty and to increase food security of small and marginal farmers. He mentioned that the four NGOs were selected to implement the FoSHoL (Food Security for Sustainable Household Livelihoods) project in 28 districts of Bangladesh where IRRI was selected as a coordinating agency. The disseminating four NGOs will implement this project in different locations of the country with the association of their relevant PNGOs. The FoSHoL project includes crops as well as fisheries and livestock as an integrated approach to improve the livelihood status of food insecure resource poor farmers. He mentioned the importance of the selection of technologies on the basis of Agro Ecological Zone (AEZ) and sub-AEZ. Waterlogging is the major problem of the farmers of Noakhali district, which is already mentioned by the participants of the workshop, he added. He suggested to identify the technologies for the farmers considering the major problems of Noakhali district. He said on the basis of his persuasion that the output of the workshop i.e., the suitable technologies will help to implement the FoSHoL project in Noakhali comparatively in a better way. Expressing his hope to implement the project successfully he inaugurated the workshop with his great pleasure.



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Technical session

Findings:

Noakhali Sadar and Begumganj, two selected upazilas of FoSHoL project, are the representatives of charland and mainland respectively. The means of livelihoods as well as the socio-economic condition of the small and marginal farmers of charland and mainland are found notably different. For this reason the technologies were identified, selected, prioritized and recommended separately for mainland and charland of Noakhali district by the relevant farmers and secondary stakeholders of Noakhali district through FGDs, district level meetings and district workshop. It was found that the small and marginal farmers of mainland and charland of Noakhali district have wide range of livelihood strategies of both on-farm and non-farm means.

1. Technologies of mainland

Seventy-seven technologies were suggested by the mainland group of district workshop participants for the small and marginal farmers of mainland during the group work in the workshop. Among the 77 technologies 21, 17, 15, 17 and 7 technologies were classified as rice, non-rice, fisheries, livestock and others respectively. These potential technologies of mainland are provided in Annex-I, where sector wise identified specific technologies were not prioritized due to lack of time.



2. Technologies of charland

Eighty-eight technologies were suggested by the charland group of district workshop participants for the small and marginal farmers of charland during the group work in the district workshop. Among the 88 technologies 7, 57, 5, 11 and 8 technologies were classified as rice, non-rice, fertilizer, fisheries and livestock based technologies respectively. The technologies of rice, fisheries, fertilizer and livestock were prioritized giving more emphasis of the farmers' opinion. These identified and prioritized potential technologies of charland are provided in Annex-II.



3. Prioritized major means of livelihoods

During group work, the participating farmers and secondary stakeholders of mainland group prioritized the classified five agro-based major means (sector) according to their contribution in of household livelihoods. Rice obtained the first priority followed in order by fisheries, livestock, non-rice including vegetable, and others (Table.1). The ranking was on position basis as per ascending order.

Table 1. Prioritization of agro-based major means of livelihood of the targeted farm families in Noakhali district

Agro-based major means of livelihood	Position (1-5*)
Rice	1
Non-rice including vegetable	4
Fisheries	2
Livestock	3
Others (Labour selling small business etc)	5

*Position: 1= 1st, 2= 2nd, 3= 3rd, 4= 4th, 5= 5th

4. Problems, Comments and Suggestions of the farmers and secondary stakeholders

Problems: On the basis of three FGDs, meeting with district stakeholders (representatives of DAE, DLS, DoF and CDSP-II), and district workshop, it can be notable that the topography as well as the socio-economic condition of Noakhali district is considerably different than that of the other parts of the country. The land of Noakhali district can be divided into two major categories such as saline and non-saline areas. Besides, somewhere tidal flow occurs, somewhere not. On the other hand water logging is another major problem in Noakhali district. The northeastern part of Noakhali district is considered as the water logged area whereas in charland water logging isn't a problem but at that area soil salinity is considered as key limiting factor for agriculture.

Comments: After the presentation of identified technologies for charland and mainland, participating district stakeholders specially Dr. Shekh Md. Abdus Sattar, SAA, CDSP-II, M. Sayed Ali, DD, DAE and A.K.M. Siddique, SUFO commented on the selected technologies. Their comments are given below:

- ✓ The technologies what were identified for charland are general not location specific
- ✓ Some technologies that would be suitable for charland of Noakhali were not identified
- ✓ Some selected technologies will face technical difficulties at the time of implementation
- ✓ Socio-economic condition were not considered at the time of technology selection
- ✓ Target group were not specified for the identified technologies

Suggestion: In order to improve the livelihood status of the small and marginal farmers of the targeted upazilas, participating farmers and stakeholders of Noakhali districts suggested some important issues, which, while not identified as technologies, were, nevertheless, suggested as worthy of consideration. These are given below:

- ✓ Technology should be more specific

- ✓ Technology identification should be more location specific
- ✓ Not only charland or mainland deviations, char should be specified according to their production development zones (PDZs)
- ✓ Target group should be specified for specific technology i.e., male group, female group
- ✓ Participatory farmer's need assessment is very much necessary
- ✓ More emphasis can be given on community based fish culture where water logging takes place (in dogi)
- ✓ Technology identification should be on sub-agro-ecology based
- ✓ Technology identification should be on infrastructure based
- ✓ The basis of technology selection should be justified
- ✓ Location specific tested and proven technology transfer to suitable farmers is necessary
- ✓ Farmer's participatory validation have to be made for the promising technology before their large-scale extension in order to reduce the risk of crop failure due to ecological hazards

5. Accepted ITDG documented technologies

During FGD at community out of 107 ITDG documented technologies, the farmers of both mainland and charland accepted 50 technologies, which are provided in Annex-III. Especially the women showed their keen interest on the documented agro based non-farm activities, which mostly include the food processing and preservation techniques.

Concluding session

At the closing session Mr. M. Sayed Ali, DD, DAE, Noakhali said that it is very happy news for us that the FoSHoL project is going to be implemented in this area to ensure better livelihoods for small and marginal farmers. But we have to be careful at the time of the technology identification. It should be remembered that agricultural activities in Noakhali district is not so easy comparing to other districts of Bangladesh, he pointed out firmly. In this district, there are different types of land topography such as high land, medium land and low land. So, identification of location specific technologies is very much important. For example, he said, in case of wheat cultivation, proper sowing time is an important factor for getting better yield. In Noakhali district, farmers cannot sow the wheat seed at proper time. Because, after the harvest of T.Aman rainwater receding delays and consequently, sowing of wheat becomes late. For this reason dissemination of wheat cultivation in this region is very difficult. He mentioned that in every different char, the existence of different technology might differ on the basis of water holding capacity of soil, soil texture, topography etc. That's why, technology should be very much location specific, he added. On the other hand, climatic factors and socio-economic condition should also be considered at the time of technology selection. For example, there is a high possibility to cultivate soybean in this location because it can give good yield even it is sown in late rabi season, he added.

Dr. Ekramul Ahsan, Senior Programme Officer, EC agreed with the concerns suggested by DD, DAE, Noakhali and expressed his opinion that we have to select technologies based on some essential parameters, such as, location specific, infrastructure based and target group specific. Considering all the parameters we have to select the suitable technologies applicable for specific sub-agroecology. Though food insecure resource poor farmers are the target farmers of FoSHoL project, it should be more specific for technology adoption whereas farmers group can be divided into male or female farmers, he added. He firmly said that when ActionAid and its partner organization NRDS will go for the implementation of these technologies, we must justify the basis of technology selection. However, he was very much pleased as the technologies were narrowed down from the workshop and lately it will be easy to precise. At the end of his speech, he thanked AAS and NRDS for organizing such kind of workshop. He also thanked the participants of the GOs and NGOs and specially the farmers who participated the workshop from a distance.

Md. Harun-Ar-Rashid, ED, AAS and consultant FoSHoL project, IRRI thanked all of the participating farmers and secondary stakeholders on behalf of AAS and IRRI. He appreciated the group leaders and the facilitators of both charland and mainland groups for providing high quality facilitation in identification, selection and prioritization of the technologies. He also thanked staffs of NRDS and AAS for providing the logistic support for the successful workshop.

Mr. Abdul Awal, CC, NRDS gave his cordial thanks to all of the participants for spending their time and efforts in the workshop. He also thanked the funding agency EC, coordinating agency IRRI, disseminating NGO-AAB and workshop implementing agency AAS on behalf of NRDS and concluded the session with a satisfactory breathing and a noble aspiration.

Annex-I. Workshop participants identified suitable technologies for mainland of Noakhali district

SI #	Sector	Identified technologies
1.	Rice	BR 22 & 23 transplanting after flood water receding during late T. Aman
		Modern method of rice culture
		Introduction of high yielding rice varieties for Aus season
		Introduction of high yielding rice varieties for Boro season
		Introduction of disease resistance rice varieties
		Balanced fertilizer management in rice cultivation
		Introduction of single-younger seedling transplanting techniques
		Post transplanting irrigation management in rice production
		Introduction of tall seedling producing rice variety for low land
		Use of UGS in rice production
		Rice seed production techniques
		Seed storage techniques
		Paddy drying improved techniques
		Suitable local rice variety conservation
		Identification of beneficial and harmful insects of rice
		Drum seeder use in rice cultivation
		Water drainage management in rice cultivation
		Introduction of weedicide in rice cultivation
		Soil test based fertilizer management in rice cultivation
		Introduction of crab control technique
Introduction of pedal thresher		
2.	Non-rice	Integrated crop management
		Introduction of Maize cultivation
		Use of organic fertilizer in crop production
		Vegetable cultivation on Ail (ridge)
		Compost production techniques
		Irrigation management in vegetable production
		Road sides vegetable and pulse crops cultivation
		Fruit trees plantation within homestead and road sides
		Papaya cultivation on highland in homestead
		Raised bed technique for vegetable cultivation in water-logged area
		Seed storage techniques
		Integrated pest and disease management for vegetable cultivation
		Disease and pest management in vegetable cultivation
		Rats control in Pumpkin cultivation
		Balanced fertilizer management in vegetable cultivation
		Metu Alu (Yam) cultivation
		Introduction of high yielding vegetable varieties
3.	Fisheries	Mixed Fishes culture management
		Modern fish culture management in water logging land
		Water drainage in fish culture
		Improved quality fish fingerling production and supply
		Integrated fish culture
		Community based fish culture
		Pond management for fish culture

(Annex-I contd.)

SI #	Sector	Identified technologies
		Fish fingerling production techniques
		Fish diseases management
		Improved feed management in fish culture
		Mono sex Tilapia culture
		Rice-fish culture
		Natural and supplementary fish feed preparation techniques
		Introduction of Prawn (Galda shrimp) culture
		Sorpunti culture in pond
4.	Livestock	Beef fattening
		Poultry disease management
		Calf (female) rearing through Artificial Insemination (AI)
		Goat rearing (1-2 Nr/family)
		Group based silage production
		Improved cow development through artificial insemination
		Grass production in fallow and waterlogged land
		Foot and Mouth disease control of cattle
		Large-scale vaccination programme to control duck disease
		Khaki cambol duck rearing
		Duck and chicken farm management
		Feed management for duck and chicken
		Introduction of Fawmi breed of chicken
		Local improved chicken breed rearing as boiler
		Milking cow rearing management
		Trained agent development for vaccination for the poultry at community
		Establishment of agriculture advisory centre
5.	Others	Introduction of Apiculture
		Case (Bamboo made) preparation for poultry and fish
		Vegetable selling
		Milk business
		Labour selling
		Fish feed production
		Puffed rice preparation and marketing

Annex-II. Workshop participants identified and prioritized (except non-rice) suitable technologies for Charland of Noakhali district

SI #	Sector	Identified technology	Rank
1.	Rice	Kajalshail and Rajashail rice (LVs) cultivation	1
		Haria rice (LV) cultivation	2
		Improved techniques for rice seed production	3
		Balance fertilizer management in rice cultivation	4
		Salt tolerant rice varieties (BRRI dhan 27, 40 & 41) cultivation	5
		Extension of BR-23 rice variety	6
		BR-1 (Chandina) cultivation	7
2.	Non-rice	Extension of field cucumber (Khira) cultivation	-
		Extension of improved cultivation techniques for onion and garlic	-
		Extension of Groundnut cultivation	-
		Extension of Sesame cultivation	-
		Spinach cultivation	-
		Batishak production and marketing	-
		Sweet Groud cultivation	-
		Sweet Potato cultivation and preservation techniques	-
		Fruit trees cultivation in homestead	-
		Pulse seed storage techniques	-
		Integrated crop management	-
		Vegetable cultivation on Ail (ridge)	-
		Pest and disease management in vegetable cultivation	-
		Introduction of HYVs of Mustard	-
		Introduction of high yielding wheat varieties	-
		Introduction of high yielding variety of chilli	-
		Irrigation management in vegetable cultivation	-
		Road sides pulses and vegetable cultivation	-
		Papaya cultivation within homestead	-
		Introduction of soybean cultivation and multipurpose uses	-
		Profitable maize cultivation techniques	-
		Maize use techniques	-
		Millets and Kaon cultivation	-
		Irrigated wheat cultivation in lowland	-
		Onion cultivation	-
		Coriander cultivation	-
		Soybean cultivation	-
		Garlic cultivation	-
		Cowpea cultivation	-
		Mung bean cultivation (Green gram)	-
		Sweet potato cultivation	-
		Groundnut cultivation	-
Radish cultivation	-		
Amaranth (Danta) cultivation	-		
Homestead gardening	-		

(Annex-II contd.)

SI #	Sector	Identified technology	Rank
		Batishak cultivation	-
		Yard long bean cultivation	-
		Sweet gourd cultivation	-
		Bottle gourd cultivation	-
		Country bean cultivation	-
		Cucumber cultivation	-
		Okra cultivation	-
		Ash gourd cultivation	-
		Indian Spinach cultivation	-
		Gima kalmi (Kang Kong) cultivation	-
		Brinjal cultivation	-
		Lalshak cultivation	-
		Chilli (LV) cultivation	-
		Betel nut cultivation	-
		Coconut cultivation	-
		Fruit gardening within homestead	-
		Papaya cultivation	-
		Guava cultivation	-
		Pummelo (Jumbura) cultivation	-
		Lemon cultivation	-
		Watermelon cultivation	-
		Field cucumber (Khira) cultivation	-
3.	Fertilizer	Use of organic fertilizer	1
		Compost production techniques	2
		Balanced fertilizer management in vegetable cultivation	3
		USG use in crops cultivation	4
		Dhancha and pulse cultivation as green manuring crop	5
4.	Fisheries	Improved fish culture management	1
		Quality fingerling supply and production	2
		Introduction of Prawn (Galda shrimp) cultivation	3
		Integrated fish cultivation (Fish+Vegetable+Duck+Chicken+Livestock)	4
		Rice fish culture	5
		Tilapia culture in pond	6
		Sorpunti culture in pond	7
		Fingerling production techniques	8
		Bighead-silver mixed culture in seasonal pond	9
		Carp polyculture in pond	10
		Prawn (Galda shrimp) culture with carp polyculture	11
5.	Livestock	Milking cow rearing	1
		Chicken and Duck rearing	2
		Black Bengal Goat rearing	3
		Introduction of vaccination for livestock	4
		Cattle fattening	5
		Livestock feed preparation techniques	6
		Maize cultivation as cattle feed	7
		Sheep rearing (4-5 heads/family)	8

Annex-III. ITDG documented technologies accepted by the farmers of Noakhali district

Sl. Nr.	ITDG documented technologies
1.	Tomato sauce preparation
2.	Tamarind chatni preparation
3.	Garlic pickle preparation
4.	Chanachur and papor preparation
5.	Mixed jujube-tamarind pickle preparation
6.	Candle preparation
7.	Green mango sour pickle preparation
8.	Banana chips business
9.	Poultry feed preparation & business
10.	Olive sour-sweet-hot pickle preparation
11.	Amsatta preparation
12.	Green mango chatni preparation
13.	Milk business
14.	Puffed rice (muri) preparation
15.	White gourd morabba preparation
16.	Organic fertilizer preparation
17.	Fish drying
18.	Poultry rearing
19.	Banana chips preparation
20.	Improved furnace (chula) preparation
21.	Goat rearing
22.	Beef fattening
23.	Coconut fibre made household materials preparation
24.	Soap preparation
25.	Small (mudi) shop
26.	Duck egg incubation business using Chinese method
27.	Milking cow rearing
28.	Apiculture
29.	Nursery
30.	Sewing
31.	Packaging business
32.	Tea stall
33.	Gunny bag preparation and its business
34.	Power tiller business for land preparation
35.	Mat preparation
36.	Organic fertilizer preparation from waste
37.	Seed business
38.	Medicinal plant nursery
39.	Block printing
40.	Grinded spices business
41.	Bamboo handicrafts preparation and its business
42.	Compost preparation and its business
43.	Pigeon rearing and business
44.	Singara and bundia preparation and business
45.	Mango morabba preparation
46.	Green chilli pickle preparation
47.	Dry jujube pickle preparation
48.	Agarbati preparation and business
49.	Olive chatni preparation
50.	Coconut ball preparation

**Annex-IV.a. List of participants of the district workshop in Noakhali
(Farmers)**

Sl. No.	Name	Village	Upazila	District
1.	Md. Nur Islam	Bana Baria	Begumganj	Noakhali
2.	Md. Belal Hossain	Bana Baria	Begumganj	Noakhali
3.	Md. Rafique Ullah	Chhata Hossainpur	Begumganj	Noakhali
4.	Md. Abdul Motlab	Chhata Hossainpur	Begumganj	Noakhali
5.	Md. Rejaul Haque	Chhata Hossainpur	Begumganj	Noakhali
6.	Mst. Shamsunnahar	Chhata Hossainpur	Begumganj	Noakhali
7.	Mst. Khodeza Aktar	Chhata Hossainpur	Begumganj	Noakhali
8.	Mst. Meri Aktar	Chhata Hossainpur	Begumganj	Noakhali
9.	Mst. Khadiza Begum	Chhata Hossainpur	Begumganj	Noakhali
10.	Mst. Kohinur Begum	Bana Baria	Begumganj	Noakhali
11.	Mst. Lili Begum	Bana Baria	Begumganj	Noakhali
12.	Mst. Sibla Khatun	Nabagram	Sadar	Noakhali
13.	Mst. Rowsanara	Nabagram	Sadar	Noakhali
14.	Mst. Rokeya Begum	Nabagram	Sadar	Noakhali
15.	Mst. Amena Khatun	Nabagram	Sadar	Noakhali
16.	Md. Nur Islam	Nabagram	Sadar	Noakhali
17.	Mst. Halima khatun	Nabagram	Sadar	Noakhali
18.	Mst. Fatema Khatun	Nabagram	Sadar	Noakhali
19.	Mst. Monoyara Khatun	Nabagram	Sadar	Noakhali
20.	Mst. Nurjahan	Nabagram	Sadar	Noakhali
21.	Mst. Fatema	Nabagram	Sadar	Noakhali
22.	Mst. Hajera	Nabagram	Sadar	Noakhali
23.	Mst. Hosneya Begum	Nabagram	Sadar	Noakhali
24.	Mst. Sharjahan Begum	Nabagram	Sadar	Noakhali
25.	Mst. Rokeya Begum	Ashadia	Sadar	Noakhali

**Annex-IV.b List of participants of the district workshop in Noakhali
(Secondary Stakeholders)**

Sl. Nr.	Name	Designation	Organization	Address
1	A.K.M. Abdul Awal	SAAO	DAE	Noakhali Sadar
2	A.K.M. Ferdous	Agronomist	AAS	Dhaka
3	A.K.M. Murshedur Rahman	Entomologist	AAS	Dhaka
4	A.K.M. Siddique	SUFO	DoF	Noakhali Sadar
5	Abdul Awal	Chief Coordinator	NRDS	Maijdee, Noakhali
6	Abdul Wadud	PC (LIVE)	NRDS	Noakhali
7	Ahsan Habib Shamim	VS	DLS	Hatiya, Noakhali
8	Anower Hossain	Programme Officer	NRDS	Noakhali
9	Deb Kumar Nath	Irrigation Engineer	AAS	Dhaka
10	Dr. Ekramul Ahsan	Representative	EC	Dhaka
11	Dr. Maloy Kumar Sur	VS	DLS	Serbag, Noakhali
12	Dr. Md. Abdul Malek	DLO	DLS	Noakhali
13	Dr. Md. Tabaruk Hossain	Area Manager (SLDP-2)	NRDS	Datterhat, Noakhali Sadar
14	Dr. Munir Ahmed	Area Manager	Dus	Noakhali
15	Dr. Shekh Md. Abdus Sattar	SAA	CDSP-II	Noakhali
16	Firoz Anower	Programme Officer	NRDS	Noakhali
16	Hafez Ahmed	AO	NRDS	Maijdee
18	Hossain Ahammad	SAAO	DAE	Noakhali Sadar
19	Kazi Faruk Ahmad	AEO	DAE	Begumganj, Noakhali
20	M.A Hossain Manik	Monitor	NRDS	Noakhali
21	Masud Alam Khan	PM, FoSHoL	AAB	Gulshan, Dhaka
22	Md. Abdul Kalam Azad	SO	DLS	Noakhali
23	Md. Abdul Khayer	AAO	BADC	Noakhali
24	Md. Abdullah-Al-Faruq	RA, WRC-FAO Project	BARI	Noakhali
25	Md. Abdus Sattar	DD	BRDB	Noakhali
26	Md. Abdus Sobhan	AEO	DAE	Noakhali Sadar
27	Md. Abu Saleh	AAEO	DAE	Noakhali Sadar
28	Md. Abu Taher Bhuyan	SAAO	DAE	Noakhali Sadar
29	Md. Ali Akbar Bhuyan	SAAO	DAE	Noakhali Sadar
30	Md. Golam Haider Bhuyan	DM	ASA	Sudharam, Noakhali

(Annex-IV.b contd.)

Sl. Nr.	Name	Designation	Organization	Address
31	Md. Harun-Ar-Rashid	ED	AAS	Dhaka
32	Md. Harunur Rashid	Regional Sector Specialist	BRAC	BRAC-BDP, Noakhali
33	Md. Helaluddin Ahmed	Forest Ranger	Department of Forestry	Maijdee, Noakhali
34	Md. Humayun Kabir	PPS	DAE	Maijdee, Noakhali
35	Md. Khalil Azad	UAO	DAE	Maijdee, Noakhali
36	Md. Mayeenuddin	Lecturer	Joyag Collage	Sonaimuri, Noakhali
37	Md. Mofijur Rahman	PDO	CARE	Uzzalpur, Noakhali
38	Md. Mosarref Hossain	RM	BRAC	Police line, Noakhali
39	Md. Mosharraf Hossain	SO	BARI	Noakhali
40	Md. Riyaz Hossain	Accountant (SLDP-2)	NRDS	Noakhali Sadar
41	Md. Safiullah	SAAO	DAE	Begumganj
42	Md. Saiful Alam	URDO	BRDB	Noakhali Sadar
43	Md. Sanoyarul Haque Khan	PM	CARE	Uzzalpur, Noakhali
44	Md. Zahangir Hossain	SO	BARI	Noakhali
45	Md. Zahir Ahmed	Trainer	ATI	Begumganj, Noakhali
46	Mira Rani Das	Trainer	ATI	Begumganj, Noakhali
47	Mizanur Rahman	Programme officer	NRDS	Maijdee, Noakhali
48	Mizanur Rahman	VS	DLS	Noakhali
49	Moharab Hossain	Trainer	DCO	Noakhali Sadar
50	Moroara Akther	PO	NRDS	Noakhali
51	Mosaref Hossain	PO	Upama	Char Jabbar, Noakhali
52	Mukta Chakraborti	Programme Organizer	NRDS	Noakhali
53	Nasiruddin Anower	ED	ULKA	Noakhali
54	Shahidul Islam Mukul	PA (Programme Associate)	NRDS	Maijdee, Noakhali
55	Shamima Nasrin Sumi	PO	NRDS	Thanarhat, Noakhali
56	Tapan Chakraborti	PC (Ag.)	NRDS	Maijdee, Noakhali
57	M. Sayed Ali	DD	DAE	Noakhali

Annex-V

Participatory workshop

Technology Identification and Recommendation for FoSHoL project

Tentative Schedule

Date: 6 April 2005

Place: Gano Sanghati Kendra, Noakhali

Funded by: EC

Time: 9.00 am- 4.00 pm

Implemented by: NRDS, AAB & AAS

Coordinated by: IRRI

Time	Subject	Method	Presenter/Facilitators/Moderator
9.00-9.30 am	Registration	-	Mukta, Manik
9.30-9.35 am	Honorable guest reception		Abdul Wadud
	Inaugural Session:		
9.35-9.40 am	✓ Introductory speech	-	Abdul Awal, Chief Coordinator, NRDS
9.40-9. 50 am	✓ Welcome address	-	Masud Alam Khan, PM, FoSHoL, AAB
9.50-10.00 am	✓ Short briefing from AAS on FoSHoL project & workshop	-	Md. Harun-Ar-Rashid, ED, AAS and Consultant, FoSHoL, IRRI
10.00-10.30 am	✓ Short briefing as special guests		Md. Humayun Kabir, PPS, DAE, Noakhali; A.K.M. Siddique, SUFO, DoF, Noakhali; Dr. Shekh Md. Abdus Sattar, SAA, CDSP-II, Noakhali; Dr. Md. Abdul Malek, DLO, DLS, Noakhali
10.30-10.45 am	✓ Inaugural Speech as chief guest and opening of the workshop	-	Dr. Ekramul Ahsan, Representative, EC
10.45-11.00 am	Tea break	-	-
11.00am-1.00 pm	Technical session:		
	✓ Process of technology identification	Presentation & Group formation	Harun-Ar-Rashid
	✓ Technology Identification and selection (Group: Charland)	Card writing and Plenary	Harun, Tapan, Anowar, Sumi, Deb Kumar, Manik
	✓ Technology Identification and selection (Group: Mainland)	DO	Abdul Awal, Masud Alam, Wadud, Ferdous, Mukta, Murshedur, Mijan
1.00-2.00 pm	Break for prayer and lunch	-	-
2.00-3.00 pm	✓ Prioritization of the selected technologies (Group-1& 2)	Plenary & Presentation	Group leaders: -A.K.M. Abdul Awal, SAAO, DAE, Noakhali Sadar -Md. Ali Akbar Bhuyan, SAAO, DAE, Noakhali Sadar
3.00-4.00 pm	Concluding session: ✓ Representative of DAE ✓ Representative of EC ✓ Representative of AAS ✓ Representative of NRDS	-	Abdul Awal, Chief Coordinator, NRDS, Noakhali