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Working paper 2002/6

**Report on  
Partner NGO Refresher Course (3)  
(for Field Assistants recruited in 2001)**

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**WorldFish  
CENTER**

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**Development of Sustainable Aquaculture Project  
World Fish Center  
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## **Preface**

Freshwater Resources Research Program of the WorldFish Center is aimed at improving food security and eradicating poverty by introducing small-scale fresh water aquaculture as an element into the economic activities of resource poor households in rural area (Bangladesh). The target groups are the poor producers and consumers who can benefit from the better use and management of aquatic resources.

After a long experimentation and field trials WorldFish Center and its partners have been able to generate low cost productive aquaculture technologies for the resource poor farmers of Bangladesh. Year 2000 was the beginning of the USAID funded Development of Sustainable Aquaculture Project (DSAP). The major thrust of the project is to implement aquaculture demonstration and to bring unused and/ or underused seasonal and perennial ponds and rice fields into improved production with methods that are feasible, affordable and acceptable to resource poor households in rural areas of Bangladesh. The DSAP approach aims at making cooperating farmers and implementing NGOs sustainable so that after withdrawal of support from the WorldFish Center, aquaculture practices and development are continued in the rural areas.

The DSAP has reoriented many of its strategies in 2002 to ensure effective and quality support to the partner NGOs to attain sustainability at both beneficiaries and partner NGO level. Dhaka based administration of DSAP has been restructured and taken to the field by opening eight regional liaison offices. For the sake of providing quality services, beneficiaries are being served by the staff of these liaison offices. The partner NGOs are receiving technical and financial support.

The outreach activities of the project are being implemented through 27 partner NGOs in 31 districts of Bangladesh. In addition, the DSAP is also providing training and technical feedback to the staff of associate partner NGOs to familiarize DSAP technologies and to disseminate the aquaculture practices in rural areas.

Training is one of the most important project activities to build up the capacity of the NGOs field staff for effective technology transfer and strengthen the aquaculture program of NGOs for future sustainability. A refresher-training course (follow-up-ToT-3) was organized for the field staffs of Partner NGOs recruited in 2001 who had been involved with the aquaculture technology demonstration and farmers training activities under DSAP for more than 2 years. The main objectives of the training course were to reshuffle their technical knowledge concerning aquaculture production systems and orient them with the concept of Integrated Aquaculture-Agriculture (IAA) and its implication for resource-poor farmers. Another most important aim was to orient the field staff with the modern approaches of training and extension methodologies. This report prepared on the conducted refresher training course, gives an overview of the training purpose and objectives, the participants, methodology, training outcome, evaluation and the recommendations made by the trainees.

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## **1. Introduction**

To ensure the effective, efficient and sustainable project support to the NGO Partners and rural poor beneficiaries it was decided that along with the initial foundation training, at least six successive follow-up training courses would be offered to NGO field staff to improve their management and technical capability. Follow-up ToT-1 & 2 will be conducted after receiving foundation training in the 1<sup>st</sup> year. Successive follow-up ToT-3 & 4 courses would be organized in 2<sup>nd</sup> year and follow-up ToT-5 & 6 in the third year of the project support period. In addition, need-based special training courses would also be organized locally, if necessary.

According to the scheduled training plan for the year-2002, the follow-up ToT-3 training course for the partner NGO old field staff recruited in 2001 or 2000 was organized from 2<sup>nd</sup> March to 14<sup>th</sup> March 2002. A total 58 Field Assistants (FA) and 12 Program Coordinators (PC) from 16 partner NGOs participated in the training in three batches regionally organized at Bogra, Jessore and Mymensingh. The detailed time schedule for the 3 batches and the list of participants including some brief information of each trainee are stated in Annex 1 and 2. A common program for 2 days training course covering the two modules was followed for each batch (see Annex-3).

## **2. Objectives of the Training**

The objectives of the follow-up training course were:

- i. To review the perception of the field staff regarding common understanding of technical issues
- ii. To inform them about the changes taken place in project implementation policies

The details of the objectives and content of the modules are enclosed in Annex-4.

## **3. Expectation**

To identify the training expectations and revision, if necessary, of the content of the training course, a scheduled training program with detailed modules was sent to all NGO partners for their comments and suggestions. They were requested to submit their expectations before the training course to make the follow-up ToT-3 more effective and efficient. None of the partner NGOs provided any written feedback before the training. Therefore, before starting the training course, NGO wise expectation was sought through group discussions and brainstorming with group of 4-5 FAs facilitated by PCs of the respective NGOs. A summary of the training expectations as expressed by the different groups is attached in Annex-5.

## **4. Training Methodology**

The follow-up ToT-3 was conducted in a participatory way allowing all the field staff to play a key role in the sessions. To ensure the participation of all trainees, individual presentation in each of the sessions was encouraged to share their knowledge, queries and suggestions in specific issues. At the beginning of the session their knowledge regarding the specific issue was first observed through individual presentations. Then emphasizing acceptable ideas, the

issues were raised and discussed by the facilitators with free access to provide and share comments (mostly by the PCs). At conclusion, the participants carried out a participatory review step by step of the entire content to perceive a concise idea regarding each subject discussed.

Different types of training supports such as whiteboard, flip chart, overhead and LCD projector, video camera, television and handouts were used to make the training session attractive and effective. A documentary film showing different technical options of IAA was presented during the off-session period. After completion of the scheduled sessions, the participants organized every day some attractive and enjoyable cultural program focusing on the different social aspects of rural Bangladesh. They also presented a few folk songs highlighting the DSAP activities and the beneficial impact of aquaculture.

## **5. Training Results**

The most important outcome of the training program was the sharing of the newly adopted policies on the implementation of aquaculture demonstration. Most of the participants are involved in DSAP since the inception of the project and even some had participated in the previous project (RDSAP). The participants had many questions regarding the recent reorientation of the DSAP policy. They expressed their interest to share the rationale of these modifications. All the NGO staff participated in the frank discussions and exchanged their suggestions for smooth and effective implementation of the aquaculture extension programs of the NGOs. They highly appreciated the change from top-down to bottom-up approach particularly for the sustainability of the aquaculture activity.

Another important output was the understanding of Integrated Aquaculture-Agriculture (IAA). The participants seemed to have discovered real concept and potentials of IAA. The participants defined IAA, identified and specified the natural resources types of the households and their effective integration to maximize the utilization of the different agriculture sub-systems. They identified 6-8 agriculture sub-systems, their respective inputs and outputs, exchange flows of bio-resources within and among the sub-systems. They expressed their confidence that they are capable to support farmers to improve integration of Aquaculture-Agriculture that would increase the utility of the available household bio-resources.

## **6. Training Evaluation**

Pre and post training evaluation of the trainees were conducted to assess the level of their development through training. A set of Multiple Choice Questions (MCQ) on different technical and management issues were answered before and after the training course. The performances of the participants were assessed and the perception of the relevant subject matter was evaluated. An appreciable improvement of knowledge and skills was observed in respect of the issues discussed. In addition, to the MCQ questionnaires used evaluation was also made to assess the overall performance of the organization, context of the course, methodology and facilitators. Interesting and constructive feedback was provided through this evaluation which would perhaps be helpful for the facilitators to conduct successfully future training. The feedback of the participants was carefully analyzed to assess the success of the training and to organize future training program more effectively.

## **7. Training Feedback**

Training feedback received from the participants reflects their satisfaction according to their expectation from the program. They highly appreciated the need based and objective oriented course content, participatory training approach, appropriate training equipment and materials used and the sincerity of all the facilitators to make the training session easy understandable and effective. They also expressed satisfaction regarding food, accommodation and logistic support offered to them during the training period. All the trainees requested to increase the duration of the follow-up training to at least 3 days and include a field visit. They urged to organize the next training course in another region to share experience and improve their knowledge of the regions. They requested to increase the number of senior trainers and more time for presentation and discussion of technical issues.

## **8. Training Recommendations**

A set of recommendations was put formed from the training course regarding project policy, technical, financial and management issues. The recommendations coming from each batch were summarized in annex-6. Almost everyone recommended to revise the training of trainers manual, and make easy understandable pond books/ leaflets and other training materials to conduct better farmers training. They also requested to provide travel allowance to attend the different training courses or workshops.

## Annex 1: Time and training schedule of different batches

Batch No.	Date	Venue	Regions	NGO	Activities Area	Participants		
						FA	PC	Total
1	2 - 4 March 2002	BRAC, TTC Sherpur, Bogra	Bogra	CIRUP	Bogra	2	1	4
				LDRO	Bogra	3	1	5
			Rajshahi	BAIC	C. Nawabgonj	4	1	5
				CARITAS	Rajshahi	2	2	3
				CRED	Pabna, Narsingdi	4	-	5
<b>Total</b>						<b>15</b>	<b>5</b>	<b>20</b>
2	9 - 11 March 2002	RRC, Training & Resource Center Jessore	Jessore	BS	Jessore, Satkhira	4	1	6
				JC	Jessore, Narail	5	1	6
				RRC	Jessore, Khulna	3	1	6
				CARITAS	Jessore	4	-	2
			Magura	ADI	Magura, Comilla	5	1	6
<b>Total</b>						<b>21</b>	<b>4</b>	<b>25</b>
3	12 - 14 April 2002	BFRI Mymensingh	Gazipur	CARP	Tangail	3	1	4
				PRANTEC	Gazipur	3	1	4
				SETU	Tangail	1	-	1
			Mymensingh	CARITAS	Mymensingh	3	-	3
				FHD	Mymensingh	2	-	2
Bogra	ORD	Mymensingh	5	1	6			
	PADAKHEP	Netrokona	1	-	1			
<b>Total</b>						<b>22</b>	<b>3</b>	<b>25</b>
<b>Grand Total</b>						<b>58</b>	<b>12</b>	<b>70</b>



## Annex 2: Participant list

Batch: 1 Venue: BRAC, TTC, Sherpur, Bogra

Date: 2-4 March 2002

Sl. No.	Name of NGO	Name of Participant	Designation	Academic Qualification	Age	Serv. Exp.	Fisheries Training	Working Area
1	BAIC	Md. Shaheb Ali	PC	M.Sc. Fish.	28	1 yr.	2 +2	C. Nawabganj
2	CIRUP	Md. Shahidul Islam	PC	B.Sc. Fish	28	1	3 +2	Bogra
3	LDRO	Md. Abu Hossain	PC	B.Sc. Fish	40	4	6 +2	Bogra
4	CARITAS	Md. Nurul Islam	PO	M.Sc. Fish	35	3	6 +2	Dhaka
5	CARITAS	Md. Mizanur Rahman	PO	M.Sc. Fish	27	New	2	Dhaka
6	BAIC	Md. Azabul Hoque	FA	H.Sc.	30	2	2	Nawabganj
7	BAIC	Md. Atiqur Rahman	FA	B.Sc.	25	1	2	Nawabganj
8	BAIC	Md. Raqeb Ali	FA	B.A.	25	1	2 +3	Nawabganj
9	BAIC	Md. Abdul Kadir	FA	B.A.	26	1	2 +3	Nawabganj
10	CIRUP	Md. Jahangir Alam	FA	B.Sc.	24	7 m	2 +1	Bogra
11	CIRUP	Md. Mahmudul Islam	FA	B.Sc.	26	1	2	Bogra
12	CRED	Md. Abu Taher	FA	B.Com.	25	2	6	Kishoreganj
13	CRED	Md. Kamruzzaman	FA	B.A.	29	2	4	Narsingdi
14	CRED	Md. Asaduzzaman	FA	B.Com.	29	2	6	Kishoreganj
15	CRED	Md. Mozibur Rahman	FA	M.Com.	26	5	7	Pabna
16	LDRO	Ms. Noor-A-Nazly	FA	B.A.	27	4	3 +3	Bogra
17	LDRO	Md. A.B Siddique	FA	M.A.	25	4	7 +3	Bogra
18	LDRO	Md. Abdul Bari	FA	B. A.	36	4	7 +3	Bogra
19	CARITAS	Mr. Topen Sarker	FA	H.Sc.	37	2	4	Dinajpur
20	CARITAS	Md. Aminul Islam	FA	B.Sc.	28	1	3	Rajshahi

**Annex 2: Participant list (Continued)***Batch: 2 Venue: RRC, TARC, Ramnagar, Jessore Date: 9 - 11 April 2002*

Sl. No	Name of NGO	Name of Participant	Designation	Academic Qualification	Age	Serv. Exp.	Fisheries Training	Working Area
1	ADI	Md. Shariful Alam	PC	M.Sc. Mar.	37	9	3 + 4	Magura
2	JC	Mr. Atul Ch. Sarker	PC	B.Sc.Fish.	45	17	8 +	Jessore
3	BS	Prodip Datta	PC	M.Sc.	35	6	8 +	Jessore
4	RRC	Md. Abdul Quddus	PC	B.Sc. Fish.	45	17	6 +	Jessore
5	ADI	Md. Jahangir Alam	FA	B.A.	28	2	4 +	Comilla
6	ADI	Md. Jahangir Alam(2)	FA	B.A.	29	3	6 +	Magura
7	ADI	M. Hemayet Ali Khan	FA	M.A.	27	3	6 +	Comilla
8	ADI	M. Nahid Rafiquzzaman	FA	B.A.	28	3	6 +	Magura
9	ADI	Md. Akramul Islam	FA	B.A.	31	4	7 +	Magura
10	JC	Tapan Kumar Dam	FA	B.Sc.(Hon)	30	2	4 +	Jessore
11	JC	Md. Rafiqul Islam	FA	B.A.	31	5	3 +	Jhenidah
12	JC	Biplob Kumar Roy	FA	B.Sc.	28	3	4 +	Jessore
13	JC	Md. Abdul Quddus	FA	B.A	32	5	2 +	Jessore
14	JC	Ms. Salma Jesmin	FA	B.Sc.	34	5	8 +	Jessore
15	BS	Md. Masudur Rahman	FA	B.Sc.	27	2	6 +	Kushtia
16	BS	Mr. Krishna Pada Shaha	FA	B.A.	30	3	6 +	Jessore
17	BS	Md. Rahazul Islam	FA	Dip.in.Engr	29	3	5 +	Khulna
18	BS	Mr. Mukul Chandra Roy	FA	H.Sc.	32	4	6 +	Narail
19	Caritas	Mr. Topen Sarker	FA	H.Sc.	37	4	7 +	Dinajpur
20	Caritas	Md. Aminul Islam	FA	B.Sc.	28	1	3 +	Rajshahi
21	Caritas	Mr. Subir Mallick	FA	B.Sc.	30	3	6 +	Khulna
22	Caritas	Mr.Abu Maung	FA	B.A.	31	3	6 +	Barisal
23	RRC	Md. Abdus Sabur	FA	B.A.	28	2	4 +	Jessore
24	RRC	Mr. Dasharat Mondol	FA	B.S.S.	31	3	6 +	Jessore
25	RRC	Ms. Farzana Yasmin	FA	B.Sc. Hon.	25	2	4	Jessore

## Annex 2: Participant list (Continued)

Batch: 3 Venue: Bangladesh Fisheries Research Institute, Mymensingh Date: 12-14 April 2002

Sl. No.	Name of NGO	Name of Participant	Designation	Academic Qualification	Age	Serv. Exp.	Fisheries Training	Working Area
1	ORD	Md. Ferdous Ahmed	PC	B.Sc.	40	12	4 +	Mymensingh
2	PRANTEC	Md. Mafizul Haque	PC	M.S. Fish.	31	5	4 +	Gazipur
3	CARP	Md. Emdad Hossain	PC	M.S. Aq.	26	1	4 +	Tangail
4	ORD	AHM Tanvir Hasan	FA	H. Sc. (Sc.)	23	1	4+	Mymensingh
5	ORD	Biplob Kumar Basak	FA	B.Sc. Zool.	30	1	4 +	Netrokona
6	ORD	Ms. Farida Yasmin	FA	H.Sc.CPFP	25	4	9 +	Mymensingh
7	ORD	Musharraf Hussain Khan	FA	B.A.	33	6	6 +	Sherpur
8	ORD	Ahmed Mohibullah Titu	FA	M.Sc. Zool	28	3	4 +	Mymensingh
9	FHD	Md. Nurul Amin	FA	H.Sc. CPFP	30	7	6 +	Mymensingh
10	FHD	Md. Abdus Sobhan	FA	B.A.	30	7	6+	Mymensingh
11	CARP	Mr. Narayan C. Chanda	FA	B.Sc.	29	2	4 +	Tangail
12	CARP	AFM Mahfuzur Rahman	FA	B.Sc.	23	3	1 +	Tangail
13	CARP	Md. Nazimul Islam	FA	B.Sc.	30	2	4 +	Tangail
14	PRANTEC	Md. Emdad Haque	FA	B.A.	36	7	4 +	Gazipur
15	PRANTEC	Md. Rafiqul Islam	FA	B.A.	25	3	4 +	Gazipur
16	PRANTEC	Md. Azharul Islam	FA	B.Sc.	23	1	3 +	Gazipur
17	PADAKHEP	Sailendra C. Biswasharma	FA	B.A.	31	4	4 +	Netrokona
18	SATU	Md. Arifur Rahman	FA	B.Ag. Dip.	22	1	3 +	Tangail
19	CIRUP	Md. Iqbal Hossain	FA	B.Sc.	22	2	4 +	Bogra
20	Caritas	Nibir Kumar Chakrabarty	FA	B.Sc.	39	5	4 +	Chittagong
21	Caritas	Nikhil Ch. Bardhan	FA	B.A.	31	2	4 +	Gazipur
22	Caritas	Suronjan Raksan	FA	B.Sc.	28	4	8 +	Mymensingh
23	SPP	Md. Saiful Islam Bhuiyan	FA	B.Sc.	52	2 +	4 +	Dinajpur
24	SPP	Md. Azhar Ali Raza	FA	H.Sc.	38	2 +	4 +	Dinajpur
25	SPP	Md. Reazul Islam	FA	H.Sc.	22	2	4 +	Dinajpur

### **Annex 3: Training course program**

#### **Reporting day**

<b>Time</b>	<b>Program</b>	<b>Facilitators</b>
17:00 – 18:30	Reporting and registration of participants at training venue.	Research Assistants
18:30 – 19:00	Break for evening prayer and tea	
19:00 – 19:05	Welcome address	Field Coordinator Training Coordinator
19:05 – 19:15	Course orientation and general instructions	Hasan A. Chowdhury
19:05 – 19:20	Pre-evaluation of the training	Facilitators Team
19:20 – 20:00	Group work on the course expectation	Different working groups
20:00 – 20:15	Presentation of the recommendations on course expectation made by different working groups	Respective Group Leader
20:15 – 20:30	Distribution of the training materials and overall course plan as per general recommendations and requirement	Research Assistants
20:30	End of the session and dinner	

### Annex 3: Training course program (Continued)

<b>Day-1</b>		<b>Module-1: Project Re-orientation: DSAP Strategy 2002-2005</b>	
<b>Time</b>	<b>Sessions</b>	<b>Content/ subject of the sessions</b>	<b>Facilitator/Resource</b>
08:00 – 10:00	Session-1	An brief reorientation of the DSAP Strategy-2002-2005	Hasan A. Chowdhury
10:15 – 10:30	Tea-break	Short break for tea	
10:30 – 12:00		A brief reorientation of the DSAP strategy-2002-2005 (Contd.)	Hasan A. Chowdhury
12:00 – 13:00	Session-2	Training and extension program of DSAP-2002-2005	Hasan A. Chowdhury
13:00 – 14:00	Break	Lunch and Prayer	
14:00 – 15:30	Session-3	Group work/ brainstorming and presentation	Research Assistant/ Hasan
15:30 – 15:45	Break	Short break for tea	
15:45 – 17:00	Session-4	Monitoring and evaluation mechanism of DSAP-2002-5	Research Assistant/ Jahan

<b>Day: 2</b>		<b>Module-2: Basic Principles of Aquaculture and its Application in IAA</b>	
<b>Time</b>	<b>Sessions</b>	<b>Content/ subject of the sessions</b>	<b>Facilitator</b>
08:00 – 10:15	Session-1	Basic principles of aquaculture	Hasan A. Chowdhury
10:15 – 10:30	Break	Short break for tea	
10:30 – 13:00	Session-2	Integrated Aquaculture-Agriculture (IAA)	Hasan A. Chowdhury
13:00 – 14:00	Break	Lunch and Prayer	
14:00 – 15:30	Session-3	Different technological options of IAA	Research Assistant
15:30 – 15:45	Break	Short break for tea	
15:45 – 17:00	Session-4	Nursery management and quality fish seed production	Research Assistant/ Hasan
		<b>Closing session and cultural program</b>	Facilitator
18:30 – 19:30		Training feedback from individual participant	DSAP Team
19:30 – 20:00		Post-training evaluation	Research Assistant
20:00 – 20:30		Closing remarks from Training Coordinator	Hasan A. Chowdhury
20:30 – 21:30		Cultural Program/ Closing Dinner	
21:00		End of the Training Program	

## **Annex 4: Training course content**

### **Module-1: Project Orientation: DSAP Implementation Strategy-2002-2005**

#### **Objectives**

1. To reorient the Field Staffs about important changes adopted in the DSAP implementation strategy
2. To aware them about new technical, management and socio-economic approaches of the DSAP and the rationality of such adoption to make it clear to our partners for better understanding
3. To improve their management capability with new concept and ideas

#### **Description (summary)**

This module will explain the basic structure of the project, the changes made in the approaches and the expected positive output of such reorientation.

#### **Expected output**

After the training on this module, the field staff will be able to understand the updated project implementation strategy-2002-2005. It will help them to work with a clear understanding of project objectives, execution policy and their responsibilities to perform their job effectively.

#### **Suggested sequences**

*Sequence-1:* A brief reorientation of the DSAP strategy-2002-2005

*Sequence-2:* Training and extension approach of DSAP

*Sequence-3:* Socio-economical aspects of DSAP

*Sequence-4:* Monitoring and evaluation mechanism of DSAP

#### **Content (of the sequences)**

*Sequence-1:* A brief reorientation of the DSAP strategy-2002-2005 Content

- What was in the DSAP-2001 and what are the major changes brought out in the new DSAP-2002 strategy
- Brief guidelines about new strategy- administrative (recruitment/administrative control/salary-allowances)
- Farmers selection, Pond/plot selection criteria, spread over effect and future opportunity
- Technical approach of DSAP- Bottom-up improvement in production and income instead of Top-down
- Service charge and other income generation activities
- Work-plan and budget preparation of DSAP for 2002 and for 2002-2005
- Different extension methodology and their adoption in DSAP extension activities

## **Sequence-2: Training and extension approach of DSAP**

- Different training methodology and choice of appropriate ones to promote participatory bottom-up approach in extension
- Training plan for the year-2002-2005
- Review of the teaching methodology and session planning for a aquaculture group (IAA)
- Participatory demonstration of a training session for an aquaculture group with different technical options

## **Module-2: Basic Principles of Aquaculture and its Application in IAA**

### **Objectives**

1. To provide the knowledge about basic principles of aquaculture
2. To know different factors influencing aquaculture production and their optimal utilization for sustainable aquaculture practices
3. To know the management practices for different types of IAA either in ponds or in rice fields

### **Description (summary)**

This module discusses the basic principles of aquaculture, how different factors affecting the primary production of the aquatic ecosystem and their control management for cost-effective aquaculture. This module will also explain detail about pre-stocking, stocking and post-stocking management practices for different types of IAA in ponds or rice-fields.

### **Expected output**

This module will reshuffle the knowledge of field staffs on technical issues. This training would oriented them more precisely about Integrated Aquaculture-Agriculture (IAA) and they able to help the farmer to identify their household resources and guide them for effective integration.

### **Suggested sequence**

This module will consists of following sessions to fulfill the objectives of the module:

Sequence-1: Basic principles of aquaculture

Sequence-2: Integrated Aquaculture-Agriculture (IAA)

Sequence-3: Different technological options of IAA

Sequence-4: Nursery management and quality fish seed production

The details content of the each session are discussed in the next chapter.

## **Content (of the sequence)**

### **Sequence-1: Basic principles of aquaculture**

What is aquaculture ? what are the basic principles of aquaculture ? How they are important for aquaculture

Factors to be considered for aquaculture production:

Primary productivity of the water bodies, social, cultural and economical issues

Soil water quality management for sustainable aquaculture production

Physical, chemical and biological characteristics of soil-water and their interaction effect on primary production

### **Sequence-2: Integrated Aquaculture-Agriculture (IAA)**

What is IAA ? Basic concept of IAA, importance of IAA in small scale aquaculture different type of IAA

Identification of Bio-resources and their transect in IAA

Drawing of Bio-resources flows in different IAA systems

Application of Bio-resources flows in small scale IAA

### **Sequence-3: Different technological options of IAA**

General recommendations for Pre-stocking management of different polyculture system

Stocking and post-stocking management of various polyculture system

Different local resource based technological options for pond aquaculture (polyculture of carps, Golda, GIFT, Pungus)

Different local resource based technological options for Rice-fish farming (polyculture of carps, Golda,)

### ***Sequence-4: Nursery management and quality fish seed production***

Importance of nursery management for sustainable aquaculture and enterprise development

Different types of nursery techniques for fish seed production (single, double and triple stage nursery)

Steps of nursery management (pre-stocking, stocking and post-stocking management) for carp, Golda)

Handling, transport and marketing of fry/fingerlings



## **Annex 5: Summary of expectation as identified by the participant**

Outputs of 12 working groups with 58 FAs and 12 PCs under 3 training batches in 3 regions are presented hereafter

### **Management (Project strategy/administrative/financial issues)**

1. What are the content of new approach of DSAP-2002-2005 (aims/objectives/methodology)
2. What changes have been brought out in DSAP-2002
3. What are the rationality of such changes in policy
4. What will be the criteria and procedure of beneficiary selection, geographical location, command working area of a FA/PC
5. What will be the monitoring mechanism, relationship with FA/PC/RA/ICLARM and NGO Who will be responsible for administrative control, salary/allowances/ other benefits and job security of the field staff
6. What will be accounts keeping procedure, group formation, CPMC/UMPC/ DPMC ?
7. What will be the recommended procedure of revolving fund and collection of service charge from farmer
8. Workload of old FAs (100+50) and new FA (only 50), is it possible to share each other ?
9. What about the training plan and budget for new and old farmers and fellow farmers?
10. How the social problems like multi ownership or NGOs group aquaculture in same water bodies may adopt with DSAP?
11. If number of nursery operators if not available in specific area then what will be the decision
12. The flat rate budget is insufficient for nursery and marketing problem of F/F, what may be the solution?
13. What IGA program DSAP can initiate for NGOs to share the cost
14. What is the future plan of DSAP regarding farmer's economic sustainability through aquaculture enterprise development?
15. Is there any possibility to link financial support to DSAP farmers from GoB or from any other donor/NGO/GO
16. What is the plan for field level (on-farm) research under DSAP?
17. What will be the involvement of FA/ PC in ICLARM research?
18. What about the pond books for new and old farmers
19. When farmer level technology packages leaflets and training equipment will be available?
20. Want to know participatory training approach. How farmers training could be made attractive

## **Annex 5: Summary of expectation as identified by the participant (Continued)**

### **Technical Issues**

1. Details about IAA and its application. How IAA could match with previous technology
2. Growth of Catla and Big Head fish is not satisfactory in Azolla based rice-fish option, what are the reasons behind it and how this problem could be solved
3. Being a good natural resource, how Azolla could be made year-round available to farmer
4. Stocking of grass feeder into rice-fish sometime creates problem when there is a shortage of grass/Azolla/weed. What suggestion may put to farmer in this situation?
5. Fish diseases and their prevention for both carps and Golda
6. Nursery management and transportation of Golda PL
7. How to solve the problem created for excessive acidity, alkalinity or soil organic matter
8. How to remove excessive turbidity in the dry season
9. In case of draught period required water volume maintain in rice field is costly, what can be done?
10. If ditch size is small, than what will be the technological change in rice-fish farming?

## **Annex 6: Feedback from the Project Coordinators**

A direct feedback received from participant Project Coordinators of different NGO partner just after completion of the training at 3 regions. The summarized feed back of PCs are as follows:

### **A. Batch-1: Bogra (NGO: CIRUP/LDRO/BAIC/CRED/CARITAS)**

1. Training program was fruitful and in time as per schedule
2. Training module and content was as per need based
3. Received clear idea about all the sessions through participatory discussion and presentation
4. Training facilities and training aids was satisfactory
5. Training period may be extended at least one day more to make it more effective

### **B. Batch-2: Jessore (NGO: RRC/JC/BS/ADI/CARITAS)**

1. It is necessary to prepare a revised training manual for DSAP aquaculture farmer group
2. For effective farmers training program essential training equipment should provide in time
3. Simple and easy pond books for usual information documentation by farmer themselves should develop instead of existing research based large complicated pond book.
4. Training duration should be increased to minimum 4 days
5. Grant money (demo cost) should be allowed to use as revolving seed capital for 3 years. After 3 years when project support will withdrawn, then it may be returned to farmer.
6. Nursery farmers should be selected on the basis of need and geographical feasibility.

### **C. Batch-3 : Mymensingh (NGO: FHD/ORD/CARP/PRANTEC/SATU/PADAKHEP/SPP)**

1. TA/ DA should provide to FA/ PC to attend the training program/coordination meeting
2. Training equipment should be supplied to the NGOs field staff as per need and in time
3. Grant money support to demo farmer should be consider as per decimal instead of flat rate, otherwise it may create problem for service charge collection
4. A clear conception about DSAP strategy and technical issues has been generated through this training which will be very helpful for FA/ PC to execute the project work
5. Lessons learned from IAA will be helpful for effective utilization of household resources.