

**GRAUS****Market Actors and Market Channels Development for nutrition sensitive aquaculture in Bandarban****Project Completion Report**

Submitted by  
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Submitted to



**Feed the Future (FtF) Bangladesh Aquaculture and Nutrition Activities (BANA)**

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Project Title	<b>Market Actors and Market Channels Development for nutrition sensitive aquaculture in Bandarban</b>	
Agreement Period	Start Date: 10-06-2021	End Date: 31-08-2023
	Extension Date: 31-08-2023	
Duration	27 Months	
Total Agreement Amount	US Dollar: USD <b>197,841</b>	
Feed the Future Bangladesh Aquaculture Activity Contribution	US Dollar: USD <b>184,374</b>	Percentage: 93 %
Sub-grantee Contribution	US Dollar: USD <b>13,467</b>	Percentage: 7 %
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## Abbreviation

AS	Aquaculture Specialist
BANA	Bangladesh Aquaculture & Nutrition Activity
BAA	Bangladesh Aquaculture Activity
BFRI	Bangladesh Fisheries Research Institute
BMP	Best Management practice
CU	Chittagong University
CoP	Chief of Party
DED	Deputy Executive Director
DAP	Detail activity plan
DFO	District Fisheries Officer
DoF	Department of Fisheries
dec	Decimal
ED	Executive Director
FFD	Farmer's Field Day
FtF	Feed the Future
FCR	Food conversion Ratio
FAO	Finance and Admin Officer
GAP	Good aquaculture practice
GIFT	Genetically Improved farmed tilapia
GIS	Geographical Information System
GoB	Government of Bangladesh
MAMCD	Market Actors and Market Channels Development
MF	Markey Facilitator
PC	Project Coordinator
PoC	Point of Contact
Pic	Pieces
RP	Resource Person
R&D	Research and Development
SRT	Sex reverse Tilapia
SiS	Small Ingenious Species
SMSO	Senior Market system officer
SUFO	Senior Upazila Fisheries Officer
SS	Support staff
TG	Target Group
UFO	Upazila Fishery Office
ZOR	Zone of Resilience

## Table of Content

Topics	Page #
1.0 Executive Summary -----	5
2.0 Introduction -----	6
2.1 Background of the Project-----	6
2.2 Proposed Solution-----	7
2.3 Objectives of the Partnership-----	8
2.4 Geographic Coverage-----	9
2.5 Project KPI and Budget Summary-----	9
3.0 Project Performance -----	11
3.1 Outreach Summary-----	11
3.2 Key Performance Indicators-----	12
3.3 Activity Performance-----	18
4.0 Lessons Learnt-----	50
4.1 Key Lessons Learnt-----	50
4.2 Challenges-----	51
4.3 Key Innovation of the Project-----	51
4.4 Impact and Sustainability of the Intervention/ Business Model-----	51
4.5 Recommendations / Future Directions-----	51
5.0 Project Budget and Financial Management -----	52
6.0 Annexure-----	52
6.1 Annex 1: Impact of the intervention on core business-----	52
6.2 Annex 2: Case Story-1-----	52

## 1.0 Executive Summary

Bandarban is a hilly district and rural villages of this district is hard to reach. Market challenges in Bandarban are include limited capacity of small fish producers; lack of access to quality inputs especially good quality seeds, feeds and other aqua-inputs at reasonable price at the locality in time; lack or poor access to private services especially on fish harvesting and transportation services which are expensive and out of farmers capacity.

Besides that, aquaculture of Bandarban also climatically challenged by increased temperature, decreased water level and shorter culture period of the ponds and creeks. On the other hand due to lack of knowledge on good aquaculture practices and other related inputs supply and product marketing, small scale marginal farmers do not feel comfortable to produce fish in pond and creeks like other sustainable agriculture business in Bandarban.

To address the issues of aquaculture in Bandarban, GRAUS designed and implemented a project named “Market actor and market channels development for nutrition sensitive aquaculture in Bandarban” from June 2021 to August 2023, with the technical support of WorldFish and financial support USAID.

From the beginning to end of the project GRAUS implemented activities for the capacity building of farmers, Nursery development (Caro-mola, SiS, SRT), harvesting group development, community feed center development, smoke fish producer group, organize market linkage event, farmers field day, exposure visit, dissemination of tilapia brood among tilapia hatchery, carp fatten and community creek aquaculture throughout the project period in 04 potential aquaculture area- Bandarban sadar, Rowangchari, Naikhongchari and Thanchi upazila under Bandarban hill district.

As a result of planned activities 601 aquaculture farmers knowledge on Nutrition Sensitive Aquaculture have increased and Good Aquaculture Practice (GAP) is going on in their ponds, 15 carp-mola nursery, 03 Sex reversed tilapia nursery (SRT) and 02 small indigenous species (SiS) nursery had developed, produced and distributed carp, tilapia and SiS fingerlings among farmers. 03 harvesting group established and support farmers, 03 community feed center established and produce feed in pilot basis. Established 4 demonstration on carp fattening and 4 community creek aquaculture for more production and engagement of more people in aquaculture system in Bandarban.

Through different market linkage events, farmer field day and exposure visit farmers and market actors have been known each other's and developing good relationship for the future sustainable development of aquaculture market system. These events have created an opportunity for the fish farmers for access to quality fish seeds, feeds and other aquaculture inputs and services in Bandarban hill district.

Through smooth implementation of the project activities, some interventions are successfully practiced by the beneficiaries (GAP in pond, nursery, harvesting, SRT and SIS) but some activities like community feed center, smoke fish producer development, carp fattening and community creek need more time to make more purposeful.

With the support of FtF Bangladesh Aquaculture Activity, GRAUS implemented aquaculture activities first time in Bandarban. They faced few challenges like COVID-19 and flash flood. If GRAUS get another opportunity to implement the project next time, the farmers and market actors will convert into commercial actors through market system approach for sustainable aquaculture in Bandarban hill district. .

## 2.0 Introduction

### 2.1 Background of the Project

Market challenges in Bandarban district include limited capacity of small fish producers (in terms of knowledge, skills, resources, financial ability); lack of access to quality inputs especially good quality seeds (no hatchery in Bandarban district, only one nursery namely MMK is located at far distance), feeds (a few feed agents or dealers mainly poultry feeds) and other aqua-inputs at reasonable price at the locality in time; high price of inputs due to higher transportation and labor costs; lack or limited access to markets; poor road access to hilly rural areas, in some areas no road up to pond/creek sites; lack or poor access to private services especially on fish harvesting and transportation services which are expensive and lack of access to required capital of financial institutions for improved aquaculture production systems. Aquaculture of Bandarban also climatically challenged by increased temperature, decreased water level and shorter culture period of the ponds and creeks. The challenges of small producers are to: 1) they buy inputs in such small quantities and so infrequently that it is not worthwhile for input supply firms to make an effort to sell to them 2) they produce in such small quantities that it is not worthwhile for buyers to make an effort to buy from them and 3) they do not feel comfortable interacting with larger or more formal businesses as they do not understand their business culture and norms.

About 2,500 ponds and creeks scattered across the district, but most of these ponds & creeks are not fully utilized for growing fish. The annual total aquaculture production from ponds/creeks in district is reported at 1207 MT with a mean productivity of 2.47 MT/ha in which 279 MT in extensive culture systems at a productivity of 1.388 MT/ha, 668 MT in semi-intensive culture systems (3.83 MT/ha), 260 MT in intensive culture systems (5.098 MT/ha) (DoF, 2019). The mean per unit aquaculture production from ponds/creeks in Bandarban is the next to lowest in Bangladesh and very poor (2.47 MT/ha) compared to the mean national aquaculture production (4.96 MT/ha). The above statistics shows that there is a huge potential of increasing aquaculture production in the ponds and creeks in Bandarban

The Bandarban region has water resources in the form of freshwater ponds and creeks while the agro-ecological conditions in this area varies with the seasonal changes. More than 50% ponds in this area are seasonal and water remains 5 to 7 months in a year. Therefore, a number of short-term culture with high yielding native carp varieties with nutrition sensitive high value fishes will ensure successful aquaculture in the above mentioned region. Generally, semi-intensive polyculture with various carp species is practiced in ponds (Miah et al., 1997; Wahab et al., 1994; Reddy et al., 2002). But traditional carp polyculture in the above mentioned area through only native carp fry does not ensure sufficient economic production because of short culture period. The polyculture production systems of carp-mola with stocking of larger sized carp fingerlings plus dike cropping may help to meet the dietary needs and improve the socio-economic status of the people of this region. In intensive farming systems, feed constitutes almost 80% of the total variable costs of producing fishes, so methods to reduce feed inputs can provide significant benefits, particularly if fish are polycultured with carps-mola that rely primarily on natural pond productivity through regular fertilization along with feeds rather than direct consumption of only formulated feeds for their growth (Wahab et al., 2014). The small producers prefer fertilizer and feed based semi-intensive carp-mola polyculture with dike cropping as the capital needed to buy commercial feeds is minimized, while the exploitation of natural foods in pond is optimized. The stocking of larger sized fingerlings of carps will allow faster growth, higher per unit production and profit margins within shorter culture cycle addressing the climatic challenges compared to the traditional practices. Inclusion of nutrient dense mola fish in the polyculture systems in ponds/creeks will provide nutrition for the farming families round the year.

There is a great demand of fingerlings in this area. The local fish farmers mainly depend upon the unknown patilwala (seasonal fry traders comes from outside) who does not maintain any quality of fish fry and fingerling, only selling is the target to them. The fish farmer used to purchase poor quality fish fry and fingerling from the patilwala with high price. Besides, these fingerlings were carried from long distance through traditional way (carried through pot), due to improper transporting, fingerlings become very weak as a result the fingerlings mortality rate is high. As the knowledge of the fish farmer of these areas are poor on fish culture, especially species selection and maintaining stocking density; the patilwala take the opportunity to sell their weak and mono species fingerlings to the farmer. So there is a scope to develop quality fish nursery in each union of Bandarban and Rowangchari upazila. The Nurserer will be trained on Fish Nursery Management, Good Aquaculture Practice and Marketing strategy. The Nurserers will be

linked with old and new fish culture beneficiaries and collect fingerlings demand and supply them quality & different specie's fingerlings in time with reasonable market price.

Marketing channel development with local seasonal fry seller (patilwala) and the local trained fish nurserers could be a good option for smooth functioning of fish culture and selling the nursery fingerlings. The patilwala can collect fingerlings from the trained fish nurserers. Thus a market channel will be developed.

There are no market linkages channel among the fish producers, fish sellers and other aquaculture market actors of Bandarban. As a result, fish producers do not get maximum fish production and the profit margin is too low. Fishes are not harvested timely; even the fishes are not sold for business purpose.

So there is a good opportunity to work with the backward and forward market actors to develop an aquaculture market chain or value chain development and build up strong linkages among them.

Fish feed supply are not available in Bandarban local market. Inspire of their eagerness, most of the farmers are not able to provide fish feed on their pond or creaks. As a result fish production does not reach at desired level. The rich farmers collected fish feed from outside of Bandarban at high price. To ensure the fish feed availability at low cost and near to the hand of farmer fish feed producer group will be develop through technical training and providing mini pelleted machine in resourceful area.

The fishes which are sold in the market Bandarban are mostly rotten and sometimes sold with formalin, which are harmful for human consumption.

Selling fish from pond side and community level could be a option of fish marketing. The customer will get fresh fish and the fish seller gets good price and optimum weight. For these community level marketing system will be develop in some running fish markets.

The other inputs, which are required for fish culture, like- lime, fertilizer, oilcake, rice bran, wheat bran, aqua-medicine etc., are not available in the remote hilly areas of Bandarban, which is also a barrier of optimum fish production.

The fish farmers of Bandarban are facing problem during fish harvesting as there are no fish harvesting group in the local level. They have to collect the Seine net including harvesting group from Bandarban town with higher price. As a result the farmer could not harvest fish in proper time of fish marketing and have to sale fish at low price, more over expends more money for fish harvesting purpose, and As a result they lose the benefit of fish culture.

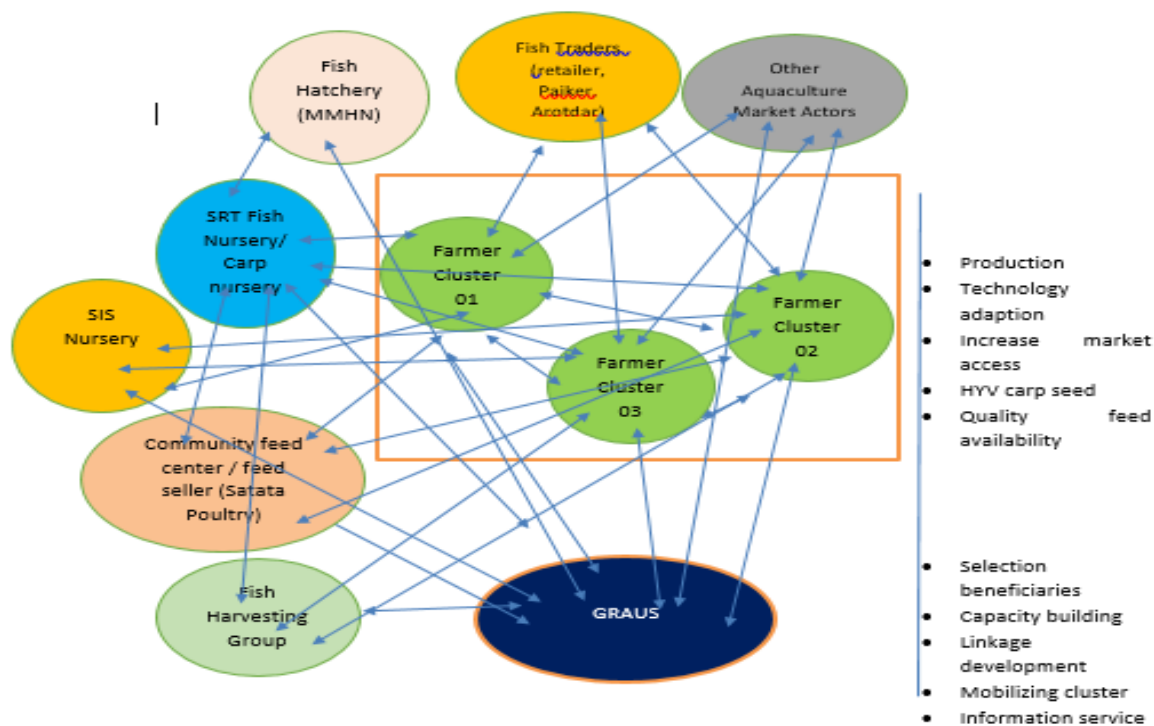
Developing of fish harvesting group in the remote fish culture area can help the fish farmer for fish harvesting at any convenient time and create a smooth market supply.

There are some commercial fish farmers in Bandarban. But they are not culturing fish in scientific way and do not maintain good aquaculture practice. Inspire of opportunity, they are not farming high value fish species. More over there are not well organized and strong marketing channel is not established. As a result their profit margin is low. So there are opportunity to develop a strong marketing channel with the Arottdar and Paikers and production of high value fish species can add another opportunity in Bandarban. Bandarban is a hilly remote area. Like adults, the youth are deprived from internet and dish line TV. As a result they are not so aware on essential learning topics like-Nutrition, hygiene and fish culture technology etc. The youth are change maker. So there are huge opportunity to learn and aware youth on Nutrition, hygiene and fish culture. They will disseminate the message to the family members and community.

## 2.2 Proposed Solution

The project plans to develop the fish farmers in Bandarban as aquaculture entrepreneurs addressing the systemic constraints of different market actors to aquaculture development facilitating and developing the market actors especially fish farmers, hatcheries, fish nurseries, community feed manufacturers/feed dealers, fish harvesting groups, fish/fingerlings transporters. The project also intends to establish the vertical linkages (Supplier-Producers-Buyers) and horizontal linkages (Producers-Producers) among market actors to ensure the supply of necessary goods and services at reasonable prices on time to the

**Proposed model for Promotion of climate smart aquaculture and high valued SIS fish species in Bandarban**



**Figure 1 Business model for Promotion of climate smart aquaculture and high valued SIS fish species in Bandarban**

producers who are living in the rural hilly areas. Moreover, the project will promote collective input purchase and marketing of farmers' produces sharing their resources to reduce transaction costs and to create economics of scale. Finally, the project is expected to work for the successful promotion of nutrition-sensitive integrated carp-mola polyculture with dike cropping in a sustainable manner facilitating/developing the aquaculture market actors and market channels in Bandarban

### 2.3 Objectives of the Partnership

Since 1998 GRAUS (Gram Unnayan Sanghathan) has been working with development partner, donors and Hill track Zila parish and gathered sustainable development knowledge on Hill Tracks development perspectives. As a local NGO, GRAUS has been serving in aquaculture sector and nutrition, livelihood, education, human rights, gender, food security and other cross cutting issues through partnership with CARE, Helen Keller International, WorldFish, UNDP, WFO, Solidarities international in Bandarban, Rowangchari, Ruma, Naikhongchari, Thanchi and Alikadam Upazila. GRAUS have good reputation to work with in development field and partners in Bandarban district and have office setup in all Upazilas under Bandarban district.

GRAUS has implemented a project titled "*Promoting Aquaculture for Nutrition and Income in Bandarban (PANI)*" in Bandarban Sadar and Rowangchari Upazila from October 2019 to December 2020 funded by Bangladesh Aquaculture Activity and built the capacity of the project beneficiaries on homestead aquaculture, nutrition, hygiene issues and identified the systemic constraints that has to be addressed for the sustainability of the aquaculture business.

The project plans to develop the fish farmers in Bandarban as aquaculture entrepreneurs addressing the systemic constraints of different market actors to aquaculture development facilitating and developing the market actors especially carp fish nurseries, mola nurseries, SIS fish nursery, SRT nursery, community feed manufacturers/feed dealers, fish harvesting groups, fish/fingerlings transporters to ensure the supply



of necessary goods and services to the producers for the successful promotion of integrated carp-mola polyculture with dike cropping in sustainable manner.

Also plans to develop the SIS fish farmers in Bandarban as aquaculture entrepreneurs addressing small scale aquaculture and the systemic constraints of different market actors to aquaculture development facilitating and developing the market actors especially fish farmers, hatcheries, fish nurseries, community feed manufacturers/feed dealers, fish harvesting groups, fish/fingerlings transporters. The project also intends to establish the vertical linkages (Supplier-Producers-Buyers) and horizontal linkages (Producers-Producers) among market actors to ensure the supply of necessary goods and services at reasonable prices on time to the producers who are living in the rural hilly areas. Moreover, the project will promote collective input purchase and marketing of farmers' produces sharing their resources to reduce transaction costs and to create economies of scale. Finally, the project is expected to work for the successful promotion of high valued SIS fish with dike cropping in sustainable manner facilitating/developing the aquaculture market actors and market channels in Bandarban.

## 2.4 Geographic Coverage

The geographical area of this project consists of 13 unions under 4 upazilas of Bandarban district is given below.

- Bandarban Sadar Upazila (Bandarban sadar, Sualok, Kuhalong & Rajbila unions)
- Rowangchari Upazila (Rowangchari Sadar, Alekhyang, Noapatong & Taracha unions)
- Naikhongchari Upazila (Naikhongchari Sadar, Baishari and Sonaichari unions)
- Thanchi (Bolipara & Thanchi)

## 2.5 Project KPI and Budget Summary

“Key Performance Indicator (KPI)” in the following:

Activity	Targets	When	MOV
ToT on Integrated Nutrition Sensitive Aquaculture, Business planning and development for staff	6	July'21	Attendance sheet
Training on Integrated nutrition sensitive aquaculture, business planning and development for new aquaculture farmers	250	July'21-Jan'22	Attendance sheet
Refreshers Training for Integrated nutrition sensitive aquaculture, business planning and development for graduated farmers	46	Sep-Oct'21	Attendance sheet
Capacity building on Carp mola fish nursery technologies, business planning and development for new fish nurserers	15	Aug'21	Attendance sheet
Refreshers Training on Carp mola fish nursery technologies, business planning and development for graduated fish nurserers	10	July 2021	Attendance sheet
Market linkage development events with aquaculture market actors	6	Aug'21, Dec'21	Attendance sheet

Activity	Targets	When	MOV
Capacity building on safe handling and transportation techniques of aquatic products and quality transport services for fish transporter groups	1	Oct'21	Attendance sheet
Capacity development training for feed dealers/agents/feed manufacturers on business/market development	1	Nov'21	Attendance sheet
Capacity building training on Fish harvesting, post harvesting technology and fish marketing	1	Jan'22	Attendance sheet
Cost Extension activities KPI (1 <sup>st</sup> extension)			
Community meeting, farmer selection, group formation and database preparation	8	Apr'22	Attendance sheet
Training on Integrated nutrition sensitive aquaculture, business planning and development for new (100) aquaculture farmers	50	May-July'22	Attendance sheet
Refreshers Training for Integrated nutrition sensitive aquaculture, business planning and development for graduated farmers (250 farmers)	25	July'22	Attendance sheet
Market linkage development events with aquaculture market actors	2	Aug'22	Attendance sheet
Refresher training for graduated Carp -mola fish Nurserer on Business development	1	May'22	Attendance sheet
Nursery Selection	3	April'22	Report with Picture
Agreement between GRAUS and selected SRT Nurserer	3	April'22	Agreement document
Cost Extension activities KPI (2 <sup>nd</sup> extension)			
Activity Orientation meeting	1	Dec'22	Attendance
3 days long ToT on small scale aquaculture and high valued SIS for project staff	1	Dec'22	Attendance
Activity Orientation meeting	1	Dec'22	Attendance
3 days long ToT on small scale aquaculture and high valued SIS for project staff	1	Jan-23	Attendance
Project Close out meeting at District level	1	August'23	Attendance
Training on small scale aquaculture and business planning and development for 250	175	March – June 23	Attendance
2 days long Training on High Valued SIS Fish Culture and business development for SiS	1	March'23	Attendance
2 days training on Carp-Mola SIS Fish Nursery	1	March'23	Attendance
Market linkage events with aquaculture market actors	5	August'23	Attendance
Refresher Training for Graduated farmer (200)	200	March'23	Attendance
Training for Harvesting group on post harvesting technology and fish marketing	1	Dec'22	Attendance
Video Documentary Show	1	August'23	Report

Cost Extension activities KPI (1 <sup>st</sup> extension)			
Market linkage events with aquaculture market actors	5	March & Sept 23	Attendance
Farmers Field Day	5	Sept'23	Attendance
Day observation_ Men's Day-Nov, IWD-Mar 8,Nutrition Week-Apr)	9	Dec22	Report
Dissemination of Tilapia Brood among Hatcheries in ZOR	3	March'23	Attendance
Community based creek aquaculture-4 creeks	4	June 23	Attendance
Inputs support for the Aquaculture farmers ((Lemon Sapling)	250	Sept'23	Attendance
Develop fish harvesting group	1	June 23	Attendance
New CFC and upgradation	1	June 23	Report
Develop one stop service center	1	Sept'23	Report

### Budget Summary:

Budget:	Investment Ratio				
Activity Cost	% of WorldFish	% of Grantee	Total	FtF BAA	Grantee
Amount in BDT	93%	7%	18,662,326	17,458,374	1,203,952
Equivalent USD	93%	7%	197,841	184,374	13,467

## 3.0 Project Performance

### 3.1 Outreach Summary

The project plans to develop the fish farmers in Bandarban as aquaculture entrepreneurs addressing the systemic constraints of different market actors to aquaculture development facilitating and developing the market actors especially fish farmers, hatcheries, fish nurseries, community feed manufacturers/feed dealers, fish harvesting groups, fish/fingerlings transporters. The project also intend to establish the vertical linkages (Supplier-Producers-Buyers) and horizontal linkages (Producers-Producers) among market actors to ensure the supply of necessary goods and services at reasonable prices on time to the producers who are living in the rural hilly areas.

- GRAUS has built capacity of 680 fish farmers (100 new, 250 newly graduated and 330 graduated) on integrated nutrition-sensitive aquaculture and business planning.
- Capacitated 25 (15 new nursery operators and 10 graduated nurseries) on carp-mola fish nursery technologies in Bandarban Sadar, Rowangchari and Naikhongchari upazila and distributed 15 oxygen cylinders among best 15 nursery operators.
- Capacitated 3 SRT Nurserers to produce Monosex Tilapia at hapa.
- Through 6 market linkages development events with 60 aquaculture market actors, including 18 women, from Rowangchari, Bandarban Sadar and Naikhongchari upazila covered.
- 2 community feed machines have been installed and 2 community feed producers and 4 inputs suppliers are trained on feed preparation and business development.
- 3 fish harvesting groups (18 persons) are developed and net has been distributed among them.

### 3.2 Key Performance Indicators

Activity SL#	Planned Activity Name (As per the agreement)	Total		
		Target (Number)	Achievement (Number)	Achievement (%)
5.A	Work plan and budget preparation	1.00	1.00	100%
5.1	Staff Recruitment and Office set up	-	-	-
5.1.1	Staff recruitment	1.00	1.00	100%
5.1.2	Office set up	1.00	1.00	100%
5.2	Project orientation, meeting and workshop	-	-	
5.2.1	Project Orientation	1.00	1.00	100%
5.2.2	Bi-Monthly Progress Review and Planning Meeting (Jointly three upazilas)	6.00	6.00	100%
5.2.3	Project inception meeting at upazila level	1.00	1.00	100%
5.2.4	Participating in workshop/meeting at Dhaka		-	
5.2.5	Close out meeting at District level	1.00	1.00	100%
5.2.6	Farmer/entrepreneur selection, profiling and database	-	-	
5.2.6.1	Community meeting, farmer selection, group formation and database preparation	25.00	25.00	100%
5.2.6.2	Farmers/entrepreneur profiling	1.00	1.00	100%
5.3	Training and Capacity Building for staffs	-	-	
5.3.1	ToT on Integrated Nutrition Sensitive Aquaculture, Business planning and development for staff for 3 days	1.00	1.00	100%
5.4	Capacity development of fish farmers and entrepreneurs	-	-	
5.4.1	Training on Integrated nutrition sensitive aquaculture, business planning and development for new aquaculture farmers	250.00	250.00	100%
5.4.2	Refreshers Training for Integrated nutrition sensitive aquaculture, business planning and development for graduated farmers	46.00	41.00	5.00
5.4.3	Capacity building on Carp mola fish nursery technologies, business planning and development for new fish nurserers	1.00	1.00	100%
5.4.4	Refreshers Training on Carp mola fish nursery technologies, business planning and development for graduated fish nurserers	1.00	1.00	100%
5.4.5	Market linkage development events with aquaculture market actors	6.00	6.00	100%
5.4.6	Capacity building on safe handling and transportation techniques of aquatic products and quality transport services for fish transporter groups	1.00	1.00	100%

Activity SL#	Planned Activity Name  (As per the agreement)	Total		
		Target (Number)	Achievement (Number)	Achievement (%)
5.4.7	Capacity development training for feed dealers/agents/feed manufacturers on business/market development	1.00	1.00	100%
5.4.8	Capacity building training on Fish harvesting, post harvesting technology and fish marketing	1.00	1.00	100%
5.5	Social Behavior Change Communication (SBCC) Program	-	-	
5.5.1	Day observation [ National Nutrition Week, National Fish Weeks]	2.00	2.00	100%
5.5.2	Farmers Field Day (FFD)	3.00	3.00	100%
5.6	IEC Material development	-		
5.6.1	Module, Leaflet, Festoon development	1.00	1.00	100%
5.6.2	Printing of Pond Record Book	300.00	300.00	100%
5.6.3	Pond signboard printing and installation	265.00	265.00	100%
5.6.4	Office signboard printing and installation	2.00	2.00	100%
5.6.5	Promotional activities through print/digital media Video Documentary	1.00	1.00	100%
5.7	Input support to fish farmers and entrepreneurs	-	-	
5.7.1	Fingerlings for Aquaculture Farmers	250.00	250.00	100%
5.7.2	Fish feed for Aquaculture farmers	250.00	250.00	100%
5.7.3	Vegetable seed and OSP Vine for Aquaculture Farmers	250.00	250.00	100%
5.7.4	Input support for fish nurserers Spawn and Feed	15.00	15.00	100%
5.7.5	Fingerlings Transportation Facilities development for Best 15 Nurserer including last year PANI- Nurserer	15.00	15.00	100%
5.7.6	Partial Input support for Fish feed manufacturers	2.00	2.00	100%
5.7.7	Partial Input support for Fish harvesting group	2.00	2.00	100%
	Cost Extension (15 April 2022 to 30 September 2022)	-	-	-
5.8	Bi-Monthly Progress Review and Planning Meeting (Jointly three upazilas)	2.00	2.00	100%
5.9	Community meeting (8), farmer selection, group formation and database preparation	8.00	8.00	100%
5.10	Training on Integrated nutrition sensitive aquaculture, business planning and development for new (100) aquaculture farmers	50.00	50.00	100%
5.11	Refreshers Training for Integrated nutrition sensitive aquaculture, business planning and development for graduated farmers (250 farmers)	25.00	25.00	100%
5.12	Market linkage development events with aquaculture market			100%

Activity SL#	Planned Activity Name  (As per the agreement)	Total		
		Target (Number)	Achievement (Number)	Achievement (%)
	actors	2.00	2.00	
5.13	Refresher training for graduated Carp -mola fish Nurserer on Business development	1.00	1.00	100%
5.14	Farmers Field Day (FFD)	2.00	2.00	100%
5.15	IEC Material development	-	-	
5.15.1	Printing of Pond Record Book	120.00	120.00	100%
5.15.2	Pond signboard printing and installation	100.00	100.00	100%
5.15.3	Festoon	10.00	10.00	100%
5.16	Installation Tilapia Sex reverse Unit at community level	-	-	
5.16.1	Nursery Selection	3.00	3.00	100%
5.16.2	Agreement between GRAUS and selected SRT Nurserer	3.00	3.00	100%
5.16.3	Digital (.01 g) scale and Mega weight scale	6.00	6.00	100%
5.16.4	pH meter, Thermometer	3.00	3.00	100%
5.16.5	Scoop net-3, bowl-4, bucket-2, Spoon-3 and others)	3.00	3.00	100%
5.16.6	3 days Hands on training of SRT Nurserer for monosex fry production-5 Nurserer, 6 Assistant, GRAUS-3, WF-1= 15 persons	1.00	1.00	100%
5.16.7	Pond preparation-liming, fertilizer, predators removing etc.	3.00	3.00	100%
5.16.8	Dyke repairing and black soil removing	3.00	3.00	100%
5.16.9	Dyke and Bird protecting fencing	3.00	3.00	100%
5.16.10	Buying bamboo, rope etc for Hapa setting	3.00	3.00	100%
5.16.11	Purchase lime, bleaching powder, detergent, Potash, Timsen	3.00	3.00	100%
5.16.12	SRT Hapa preparation (5 ft x 10 ft X 3.25 ft)	24.00	24.00	100%
5.16.13	Nursery Hapa Preparation (10ft x 20 ft X 3.25 ft)	25.00	25.00	100%
5.16.14	1st Hapa Setting	-	-	100%
5.16.15	Aqua-medicine buying (10 g), Argent, Vit-c-1.5 kg	3.00	3.00	100%
5.16.16	Hatchery Chemical purchasing -35 L	3.00	3.00	100%
5.16.17	Purchase GIFT swim up fry	600,000.00	600,000.00	100%

Activity SL#	Planned Activity Name  (As per the agreement)	Total		
		Target (Number)	Achievement (Number)	Achievement (%)
5.16.18	Tilapia fry transportation from selected hatchery (3 times)	3.00	3.00	100%
5.16.19	Transportation for materials carrying	3.00	3.00	100%
5.16.20	Tilapia fry stocking	3.00	3.00	100%
5.16.21	Feed purchase-SRT	150.00	150.00	100%
5.16.22	Feed purchase-Nursery	250.00	250.00	100%
5.16.23	Feeding management	-	-	
5.16.24	Cleaning Hapa (once in a week)	-	-	
5.16.25	Nursery management	-	-	
5.16.26	Purchase Oxygen cylinder refill cost & transportation	3.00	3.00	100%
5.16.27	Purchase Polythene bag, surface bag, grader	60.00	60.00	100%
5.16.28	Signboard for Nursery	3.00	3.00	100%
5.16.29	Leaflet preparation for Tilapia fry farming	1,000.00	1,000.00	100%
5.16.30	Record Keeping	3.00	3.00	100%
5.16.31	Water gun & electric wire others	1.00	1.00	100%
5.16.32	Fry conditioning facilities	-	-	
5.16.32.1	Overhead tank (Gazi tank)	1.00	1.00	100%
5.16.32.2	Fiber tank with water supply facilities	1.00	1.00	100%
5.16.32.3	Electric motor with pump	1.00	1.00	100%
5.16.32.4	Air Blower/Pump	1.00	1.00	100%
5.16.32.5	Orchid Net for SRT	1.00	1.00	100%
5.16.33	Selling of Tilapia fry	-	-	-
5.16.34	Lease value	3.00	3.00	100%
5.16.35	Electricity cost	3.00	3.00	100%
5.17	Input support to fish farmers and entrepreneurs	-	-	
5.17.1	Fingerlings for Aquaculture Farmers (minimum 200 pieces)	100.00	100.00	100%

Activity SL#	Planned Activity Name  (As per the agreement)	Total		
		Target (Number)	Achievement (Number)	Achievement (%)
5.17.2	Mola (250GM)	100.00	100.00	100%
5.17.3	Fish feed for Aquaculture farmers (25 kg)	100.00	100.00	100%
5.17.4	Vegetable seed and OSP Vine for Aquaculture Farmers	100.00	100.00	100%
5.17.5	Feed Crashing Machine	2.00	2.00	100%
5.18	Day observation_ IYD-Aug 12, NFW-July,	2.00	2.00	100%
5.19	Attending training on environment and climate organized by WorldFish	1.00	1.00	100%
	Cost Extension (1 October 2022 to 31 August 2023)	-	-	
5.01	Bi-Monthly Progress Review and Planning Meeting	5.00	5.00	100%
5.02	Activity Orientation meeting	1.00	1.00	100%
5.03	3 days long ToT on small scale aquaculture and high valued SIS for project staff	1.00	1.00	100%
5.04	Project Close out meeting at District level	1.00	1.00	100%
5.05	Community meeting, farmer selection, group formation and database preparation	12.00	12.00	100%
6.01	Training on small scale aquaculture and business planning and development for 250 mixed aquaculture farmers	175.00	161.00	14
6.02	2 days long Training on High Valued SIS Fish Culture and business development for SiS (20) advanced aquaculture farmers	1.00	1.00	100%
6.03	2 days training on Carp-Mola SIS Fish Nursery	1.00	1.00	100%
6.04	Training for Harvesting group on post harvesting technology and fish marketing	1.00	1.00	100%
6.05	Market linkage events with aquaculture market actors	5.00	5.00	100%
7.01	Farmers Field Day	5.00	5.00	100%
7.02	Day observation_ Men's Day-Nov, IWD-Mar 8,Nutrition Week-Apr)	9.00	9.00	100%
7.03	Video Documentary Show	6.00	6.00	100%
8.01	Signboard printing and installation	1.00	1.00	100%
8.02	Pond record book printing and distribution	1.00	1.00	100%
8.03	Printing Tilapia booklet	1.00	1.00	100%
8.04	Printing Festoon (7 festoon/set, total 5 sets, 35 festoons)	1.00	1.00	100%
8.05	Printing of training module	1.00	1.00	100%



Activity SL#	Planned Activity Name  (As per the agreement)	Total		
		Target (Number)	Achievement (Number)	Achievement (%)
9.01	Large Carp fingerlings for Farmers for 230 farmers	1.00	1.00	100%
9.02	Fish feed for aquaculture farmers (25 kg/farmer) for 250 farmers	1.00	1.00	-
9.03	Vegetable seeds and OSP vine	1.00	1.00	100%
9.04	SIS fingerlings for 20 farmers	1.00	1.00	100%
9.05	SIS Spawn for 2 SIS nurserer (2 kg/ person)	1.00	1.00	100%
9.06	Fish feed for nurserer (20 kg/Nurserer) for 12 nurserer	1.00	1.00	100%
9.07	Spawn support Carp Nurserar-10 Nurserer (0.5 kg /Nurserer)	1.00	1.00	100%
9.08	Transportation cost for SIS fry	1.00	1.00	100%
9.09	For inputs transportation	1.00	1.00	100%
10	Participate in different training organized by World Fish	1.00	1.00	100%
11	Refresher Training for Graduated farmer (200)	200.00	200.00	100%
12	Dissemination of Tilapia Brood among Hatcheries in ZOR	30,000.00	45,000.00	(15,000.00)
13	Follow-up support for Women harvesting group	-	-	-
13.01	Weighting Machine	1.00	1.00	100%
13.02	Carats Box	6.00	6.00	100%
13.03	Half Drum	2.00	2.00	100%
13.04	Net Repairing and Maintenance	1.00	1.00	100%
14	Introduction of smoke fish in hilly area	1.00	1.00	100%
15	Celebration of National Fisheries week 2023 in 3 upazila	1.00	1.00	100%
16	Larger size fish culture demo pond	4.00	4.00	100%
17	Community based creek aquaculture-4 creeks	4.00	4.00	100%
18	Exposure visit for the fish nurserer at Hatchery	1.00	1.00	100%
19	Support for the fish nursery	1.00	1.00	100%
20	Inputs support for the Aquaculture farmers	250.00	250.00	100%
21	Develop fish harvesting group			100%

Activity SL#	Planned Activity Name (As per the agreement)	Total		
		Target (Number)	Achievement (Number)	Achievement (%)
		1.00	1.00	
22	New CFC and upgradation	1.00	1.00	100%
23	Develop one stop service center	1.00	1.00	100%
	General Items	-	-	-
24	Monthly progress report	27.00	27.00	100%
25	Quarterly progress report	9.00	10.00	(1.00)
26	Project end line reporting	2.00	2.00	100%
27	Monitoring, Supervision and internal coordination	27.00	10.00	17.00
28	HHs visit, record keeping and counseling	27.00	10.00	17.00
29	Success story	25.00	6.00	19.00
30	Staffs Salary and Benefit	27.00	27.00	-
31	Equipment, Supplies and Operation Cost	27.00	9.00	18.00
32	Travel	27.00	9.00	18.00
33	OH	27.00	9.00	18.00

### 3.3. Activity performance

#### 3.3.1 (From June 2021 to September 2022)

##### SI # 4.1 Project Orientation:

After completion staff recruitment of MAMCD project GRAUS Management organized project orientation meeting for net staffs on June 20-21, 2021 at GRAUS office conference room. All part of GRAUS management, section head and senior program manager, ZoR coordination and Aquaculture specialist of WorldFish facilitated the meeting.

The objectives of the meeting are as follows

- To introduced all staffs with all concern
- To orient the project goal, objective , activities and deliverables
- To share the different policies of GRAUS and WorldFish
- Finance and admin issues

The participants list cited below

Venue	Date	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
GRAUS Office	20-21/06/21	10	2	12	1	11	12

#### 4.2. Bi-Monthly Progress Review and Planning Meeting (Jointly three upazilas):

Bi-monthly meeting is the platform of sharing progress, planning future program & decision generating platform where donor, IP management as well as all project staffs present and share their progress. Challenges, lesson learnt and plan in front of all. So that all staffs and management knew over all scenario of the program and assist project staffs according to their program need.

The objective of the meeting is to present the progress of field activities, budget, coverage of target group, time line, deviation, mitigation tools, major challenges as well as lesson learned According DiP timeline this quarter 08 bi-monthly meeting had been organized over the project period,. All MAMCD project field staffs, World Fish and GRAUS management participated the meeting. Detail participant's information given following table



Venue	Date	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
GRAUS Office	08-08-21	8	1	09	1	8	9
	29-09-21	9	3	12	1	11	12
	15-12-21	8	1	09	1	8	9
	24-02-22	7	2	09	1	8	9
	06-06-22	6	3	09	2	7	9
	22-8-22	6	3	09	2	7	9
	18-9-22	6	3	09	2	7	9

#### 4.3 Project inception meeting at upazila level:

As a part of project briefing to Upazila administration, local government, headman/karbari, line department, local elite and different aquaculture actors of Naikhongchari, MAMCD project organized day long Project Inception meeting on September 16,2021 at Upazila Parishad Hall room of Naikhongchari. Total 20 participants attended the meeting. Upazila Nirbahi officer presided the meeting, UP chairman of Naikhongchari sadar, Baishari, Head man, DoF, DAE, Jubo Unayan, ZoR coordinator, Aquaculture specialist of WorldFish, Chairperson-GRAUS, AMSC, SMSO, MF of MAMCD project participated the Project Inception Meeting at Naikhongchari.



The objectives of Project Inception Meeting are as follows:

1. Introduce GRAUS- MAMCD project to concern Upazila administration.

2. Introduced to line department with local MAMCD staffs
3. Briefing on WorldFish goal, Objective and activities in Bangladesh
4. Sharing detailed GRAUS-MAMCD project activities with concern department of Naikhongchari

The Participants list of the meeting cited below:

Venue	Date	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Upazila Parishad Hall room, Naikhongchari	16-9-2021	18	2	20	01	19	20

#### 4.4 Participating in workshop/meeting at Dhaka

To sharing the update of project activities, time line, budget, challenges, lesson learn along with next quarter plan Senior management team, ZoR team and PoF of WorldFish participated the IP meeting GRAUS. Two meeting have been hold in this reporting quarter. CoP, Senior manager, MEL team, Grants, ZoR coordinator and Aquaculture specialist of WorldFish and ED, Chairperson, Deputy director, AMSC, SMSO of GRAUS present in the meeting.

Venue	Date	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Virtual Meeting	7-7 21	03	0	03	0	3	3
Virtual Meeting	20-9-21	2	1	03	1	2	3

#### 4.5 Close out meeting at District level

To share the scenario of aquaculture in Bandarban hill district like aquaculture market challenges, aquaculture resources, scope of opportunities and project activities, learning to the stakeholders, service provider and government service provider and management part of GRAUS and WorldFish a day long project close out meeting have been organized by GRAUS on 26<sup>th</sup> September, 2022 at Horticulture center Bandarban.



Senior program manager WorldFish, executive director of GRAUS, D.D horticulture, Extension Officer (DoF) Assistant Youth development Officer participated the meeting. Carp Mola nurserer, SRT nurserer, Feed manufactures, harvesting group member and farmers attended the meeting. All the activities, progress, achievement, challenges, learnings and opportunities discussed in power point presentation. Honorable guest and participants shared their opinion and future recommendation after progress presentation. The meeting started at 10.00 am and closed 2.00 followed by lunch.

#### 4.6 Farmer/entrepreneur selection, profiling and database

To identify the potential aquaculture area, identification & selection of appropriate target group Market Facilitators of GRAUS-MAMCD project organized 20 Community meetings at Bandarban sadar, Rajbila union, Kuhalong union under Bandarban Sadar upazila and Rowangchari sadar, Taracha, Alekahng & Noapatang union of Rowangchari sadar Upazila, and Naikhongchari sadar and Baishari of Naikhongchari Upazila. Through these meetings MF discussed the objectives and activities of the project and with help of community people MFs identifying the all Fish Farmers (pond/creak), Fish Nurserer and other aquaculture market actors of the respective para or villages. They also entry the name of all types of fish farmers in to the beneficiary pre-selection form. Total 481 persons (male-343, female-138) including local elites, farmers, UP members; Karbari participated in these community meetings.

Venue	Union	Participants (#) according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Bandarban	Sualok, Sadar, Kuhalong, Rajbila	61	20	81	14	67	81
Rowangchari	Alekhong, Rowangchari, Taracea,	46	55	101	39	62	101
Naikhongchari	Naikhongchari Sadar, Baishari, Sonaichari	236	63	299	88	201	299
Total		343	138	481	164	317	481

#### 4.7 Farmer Group formation & profiling

From the preliminary list of 25 community meeting and individual house hold and pond visit best of farmer interest, this quarter 25 (Sadar-6, Rowangchari-10 & Naikhongchari-9) farmer group have been formed with 250 farmers (M-135, F-115). Percentage of female was around 44%. The ration of pond and Creak was 74:26. The age group was Y-44: A 206.

Sl	Name of Upazila	No of Group	Participants (#) Sex		Age		No of Pond /Creak	
			Male	Female	15-29 = y	30+=A	Pond	Creak
1	Sadar Bandarban	6	33	31	12	52	50	14
2	Rowangchari	10	2	62	13	51	27	37
3	Naikhongchari	9	100	22	19	103	109	13
<b>Total</b>		<b>24</b>	<b>135</b>	<b>115</b>	<b>44</b>	<b>206</b>	<b>186</b>	<b>64</b>

#### 4.8 ToT for staffs:

To build up the capacity and common understanding of field staffs on Integrated nutrition sensitive aquaculture, business planning and development, three days long “**ToT on Integrated Nutrition Sensitive Aquaculture, business planning and Development**” have been organized for newly recruited staffs of MAMACD project on 03-05 August, 2021 at GRAUS office conference room, Bandarban. The newly recruited MAMCD project staffs (Aquaculture Market System Coordinator, Senior Market System Office, Market Facilitators) attended and participated the in ToT training. Mr. Mong thoui ching, honorable chairperson, GRAUS inaugurated the training session. S.M Nurun Nabi ZOR Coordinator participated the introduction session through google team meeting and introduced to all participants. S.M. Zafrullah Shamsul, Aquaculture Specialist, Md. Nazrul Islam, Aquaculture Market System Coordinator facilitated the sessions of ToT. Zia Uddin (Senior Upazila Fishery officer) and Omar Faroque (Upazila Agriculture Officer) facilitate technical session on fish culture and pond dike cropping and home stead grading. Mr. Chinmoy Murung focal person of GRAUS concluded the ToT training.



The objectives of ToT training for staffs are as follows:

1. Introduce all MF on technical module for framers training

2. Discuss the 10 session, time allocation, method of facilitation, practical session, material use
3. Practice the 10 session during the training
4. Introduce to DoF & DAE officer in Bandarban
5. Question & answer on technical issues
6. Common understanding to all Market Facilitators

#### Participant's information

Sl	Venue	Date	Participants (#) Sex		Age	
			Male	Female	15-29 = y	30+=A
1	GRAUS Office meeting room	03-05 August '21	05	02	06	01
Total			<b>05</b>	<b>02</b>	<b>06</b>	<b>01</b>

#### 4.9 Training on Integrated nutrition sensitive aquaculture, business planning and development for new aquaculture farmers

To build up capacity of new (350) aquaculture farmer GRAUS-MAMCD project organized 290 farmer training session on Aquaculture session -01 (Pre-stocking management )-Aquaculture-2 (Stocking management), Aquaculture session 03 (Post stocking Management), Session-4 (Pond side vegetable cultivation) Session -5 (Nutrition1 & basic Hygiene ) Session- 6 (Nutrition2 & basic Hygien), session 07 Aquaculture business planning Session -8 (Gender) has been conducted by 04 market facilitators in Bandarban sadar, Rowangchari and Naikhongchari Upazila. Total 350 farmers (M-196, F-154) attended all the sessions. All the MF use flipchart, real material and conducted practical event during the session. It was participatory and experience sharing learning session .At the end of the session a leaflet (Technical) was distributed to the farmers. Total Participants attended the training sessions as bellow



Upazila	Sssion -1	Sssion -2	Sssion -3	Sssion -4	Sssion -5	Sssion -6	Sssion -7	Sssion -8	Sssion -9	Sssion -10
Bandarb	64	63	64	64	62	62	62	62	64	58
Rowangchar	60	60	60	60	64	64	64	64	64	64
Naikhangch ari	122	122	119	122	122	122	122	122	122	122
Total	246	245	243	246	248	248	248	248	250	244

#### 4.10 Refreshers Training for Integrated nutrition sensitive aquaculture, business planning and development for graduated farmers

GRAUS- MAMCD project organized 25 refresher training session on integrated nutrition sensitive aquaculture, business planning and development for graduated fish farmers. Total 250 farmers (M-) 46 groups under Sadar Bandarban and Rowangchari Upazila of Bandarban received two days training in this reporting quarter. Market facilitators organized and facilitated the session. Detail participants' information given below

	M	F	Total	A	Y	Total
Bandarban	33	31	64	12	52	64
Rowangchar	2	62	64	13	51	64
Naikhangchari	100	22	122	19	103	122
Total	135	115	250	44	206	250

#### 4.11 Capacity building on Carp mola fish nursery technologies, business planning and development for new fish nurserers

According demand and resource suitability 15 new Nurserer have been selected for nursery development and ensure quality fingerling support for aquaculture farmers in Bandarban sadar, Rowangchari and Naikhongchari Upazila. This reporting quarter 02 batches of nurserer Capacity building training have been completed in Bandarban sadar and Naikhongchari Upazila Batch -01 for 10 nurserers of Bandarban sadar (04) and Rowangchari (06) have been organized on October 26-28/2021 at Horticulture Center, Balaghata, Bandarban.

Batch-02 for 05 new nurserers of Naikhongchari and Baisari union under Naikhongchari Upazila have been organized at Naikhongchari Office room on November 1-3, 2021. The detail information of Nurserers given below

Venue	Date	Participants (#) to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Horticulture Center, Bandarban	26-28/10/21	10	0	10	1	9	10
GRAUS Office, Naikhangchair	01-3/11/21	5	0	5	0	5	5

#### 4.12 Refreshers Training on Carp mola fish nursery technologies, business planning and development for graduated fish nurserers

To refresh technical issues as well as building capacity on business planning market development a day long refresher training organized for existing PANI project nurserers on August 23, 2021 at Horticulture center, Balaghata Bandarban. The nurserers from Bandarban sadar and Rowangchari participated the training. Mr. Mong Thoui Ching, honorable chairperson, GRAUS inaugurated the training session. Mr. Nazrul Islam Aquaculture Market System Coordinator facilitated the pre-stocking management of Nursery and Zia Uddin (Senior Upazila Fishery officer) facilitated the stocking and post stocking management of Nursery and other critical issues related good nursery management. S.M. Zafrullah Shamsul, Aquaculture Specialist of WorldFish facilitated the business planning and development part



The objectives of refresher training for Nurserers are as follows:

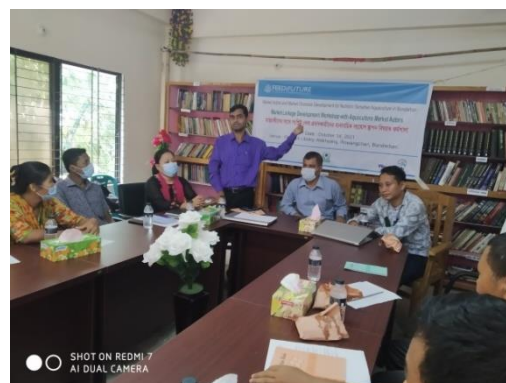
1. Introduce to all and sharing progress of Nursery business development
2. Refresh the technical information's and sharing experiences of nurserers
3. Introduced to DoF representative and identify the scope of support from DoF
4. Capacity building on business planning and development
5. Know the common tips on business planning and development for next year business

Venue	Date	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Horticulture Centre, Balaghata, Bandarban	23.8.21	06	01	07	01	06	7
<b>Total</b>		<b>06</b>	<b>01</b>	<b>07</b>	<b>01</b>	<b>06</b>	<b>07</b>

#### 4.13 Market linkage development events with aquaculture market actors-

Availability of quality aquaculture inputs, marketing of fish and appropriate technical support is the major problem in aquaculture of Bandarban hill district. To identify the present actors, know about each other business status, problems/ possible solution to support the farmers and finally make an effective network among aquaculture market actors and farmers leaders in Bandarban sadar, Rowangchari and Naikhangchari Upazila GRAUS-MAMCD project conducted 03 batches of “Market linkage workshop with aquaculture market actor” at Bandarban sadar, Rowangchari and Naikhangchari

Farmer groups leader, Nurserer, Fish feed dealer, fertilizer dealer, fish harvesters, fish retailer, Ice factory & DoF representatives was participated the workshop. The detail information of workshop given below



Venue	Date	Participants (#) according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Cotton Research Center, Balaghata, Bandarban	30-09-2021	23	2	25	3	22	25
Naikhongchari Guest house conference room	11-10-2021	22	3	25	2	23	25
Gilaful Library hall room, Rowangchari	14-10-21	12	15	27	5	22	25
Bandarban Sadar, Venue: CCDB conference room, Kalaghata, Bandarban	15-3-2022	20	4	24	4	20	24
Rowangchari, Venue: Gilaful Library, Alekhang, Rohangchari	20-3-2022	14	12	26	4	22	26
Naikhangchari, Venue-Zila Parishad rest house, Naikhangchari	23-3-2022	25	2	27	3	24	27

#### 4.14 Capacity building on safe handling and transportation techniques of aquatic products and quality transport services for fish transporter groups

Live fish handling, transportation and marketing is very new in Bandarban. MAMCD project worked for 25 fish nurserers to development of capacity on nursery management techniques and 250 fish farmers on technical capacity building of market linkage and market channels for nutrition sensitive aquaculture in Bandarban. It seems that nurserers faced problem to handling and transportation of fingerling in long distance of hill remote areas. On the other hand farmers and fish trader also face problem on marketing fresh fish. to address the issue MAMCD project organized a day long training on “ Safe handling and transportation techniques of aquatic product and quality service for fish transporter group on December 14, 2021 at GRAUS office conference room, Bandarban. Six (06) fingerling transporters and four (04) commercial farmer attended the training session





Venue	Date	Participants (#) according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
GRAUS Office	14-12-2021	10	0	10	1	9	10
<b>Total</b>		<b>10</b>		<b>10</b>	<b>1</b>	<b>9</b>	<b>10</b>

#### 4.15 Capacity development training for feed dealers/agents/feed manufacturers on business/market development

Availability of ready fish feed/ feed dealer is a big crisis in Bandarban hill district. Interested/ advanced fish farmer did not get feed from upazila bazar. If there is one/two shop in district head quarter, the transport price was high, which was beyond farmer buying capacity. To consider the issue MAMCD project planned to develop 02 small scale feed manufacturers from Bandarban. To address the issue

GRAUS has been selected 02 community fish feed manufacturers, 04 fish dealers from Bandarban Sadar, and organized capacity building training on business/market development for selected participants in the GRAUS office conference room on January 23, 2022. Along with GRAUS technical team, WorldFish technical expert, ZoR coordinator has facilitated the training session. The detailed information on training is given below

Venue	Date	Participants (#) according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
GRAUS Office	23-1-2022	6	0	6	1	5	6

#### 4.16. Capacity building training on Fish harvesting, post harvesting technology and fish marketing

Availability of Fish harvesting group/ harvesting net is a major problem in Bandarban district. Maximum small scale pond owner did not get opportunity to bulk harvest fish from their pond due to lack of harvesting net and manpower. GRAUS has selected 02 harvesting groups one from Kibukpara, Rajvila union (M-6) under Bandarban Sadar, and another from Wagoipara, Alekhang Union (M-1, F-05) under Rowangchari Upazila. On March 10 GRAUS organized a day-long training on “Fish harvesting post-harvesting technology and fish marketing” for harvesting groups members in the GRAUS office conference room. The detailed information of training is given below



Venue	Date	Participants (#) according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
GRAUS Office Conference room	10-3-2022	7	5	12	1	11	12

#### 4.17 Day observation [National Nutrition Week, National Fish Weeks, IYD] National Fish Week'21 & 22 Celebration

To mass awareness of fisheries activities, conservation of fish act and development of future fisheries intervention National Fish Week 2021 & 2022 has been observed in Bandarban hill district from Aug-28-Sep 03. GRAUS-MAMCD project with support of WorldFish participated different events jointly with DoF at Upazila and district level. MAMCD project staffs participated the inauguration ceremony, Fingerling distribution, Discussion session with farmer and entrepreneurs and farmer training sessions jointly with DoF in Bandarban sadar, Rowangchari & Naikhongchari Upazila at Bandarban. Besides that, MAMCD project distributed colorful banner & festoon in different important places like fish market, bus stand, office and aquaculture input selling shops for mass awareness of the Fish Week Aug-28-Sep 03, 2021.



#### International Youth Day (11 August 2022)

On August 11, 2022 GRAUS observed the International Youth Day 2022 with active participation in Rally, discussion meeting and community level awareness meeting with Upazila Administration, Youth department and other NGOs at Rowangchari Upazila

#### Day Observation (National Nutrition week, 22)

As a part of project activities this reporting quarter GRAUS had observed the Nutrition week 2022 on April 23-29 with joint participation of Govt. Line department in Bandarban district and community level at Rowangchari and Naikhangchari Upazila. GRAUS provided banner with key message of Nutrition week 2022



#### 4.19 Farmers Field Day (FFD)

GRAUS has been organized 05 Farmers Field Day (FFD) in Chak headman para of Naikhangchari Sadar union and sonaichari of Naikhangchari Upazila. Kaintarmukh para, Rowangchari sadar union and Thongzoma para, Rajbila, Bandarban Successful farmers, headmen, karbari, DoF representatives, framer leaders, and interested farmers participated in FFD event. The detailed information of FFD is given below.

Venue	Date	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Chak Headman para, Naikhangchari Sadar	31-3-2022	40	60	100	22	78	100
Kaintarmukh para,R,chari sadar union	26/04/2022	58	45	103	57	46	103
Thongzoma para, Rajbila, Bandarban	07/4/2022	42	57	99	37	62	99
Madam Para, Sonaichari	06/09/22	38	37	75	26	49	75
Head Man Para, Sonaichari	07/09/22	42	33	75	28	47	75
		220	232	452	170	282	452

#### 4.19 IEC Material development



#### 4.20 Promotional activities through a Video documentary

Video documentary of WorldFish on fish culture, Nutrition, and environment have been displayed in 03 farmers' communities of Bandarban Sadar, Rowangchari, and Naikhongchari Upazila. The detailed information on the Video documentary show is given below

Venue	Date	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Chak Headman Para, Naikhongchari	23-3-2022	15	35	50	20	30	50
Paglachara para, Rowangchari	27-3-2022	30	25	55	15	40	55
Limuziri Para, Bandarban sadar	28-3-2022	10	25	35	15	20	35

#### 4.21 Input support to fish farmers and entrepreneurs

##### Fingerlings for Aquaculture Farmers

As a part of input support to beneficiaries GRAUS provided 200 (Catla-60, Ruhu-60 & Mrigel 80) carp fingerling each to 250 (Pond and creak) farmers. Two vendor from Rowangchari and Lama distributed fingerling among 250 farmer of 03 Upazila under Bandarban district. The fingerling distributed in early morning. UP chairman member Local administration, Headman and Karbari was present during distribution of fingerling to the farmers.



Name of Fish fingerling	Quantity/ farmer	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Carp Fingerling for aquaculture farmer	200 pcs (Ruhu, Katla & Mrigel)	135	115	250	44	206	250

Mola seed	200 gm	135	115	250	44	206	250
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#### 4.22 Fish feed for Aquaculture farmers

As a part of fish feed input support to target beneficiaries GRAUS provided 01 bag 25 kg grower sinking feed (Aftab Sufal) to each target farmers. Total 250 aquaculture farmers received 250 bags in weight 6250 kg (250\* 25kg) fish feed from GRAUS. Satata poultry a feed agent of Lama Upazila distributed the feed in Bandaban sadar, Rowangchari and Naikhongchari Upazila The feed was distributed to farmers near to their farm house. Feed distribution done very early in the morning and farmer group leader, local government representative and headman was present during distribution time



Name of Fish Feed	Quantity/ farmer	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Aftab Grower sinking feed	25 kg	135	115	250	44	206	250

#### 4.23 Vegetable seed and OSP Vine for Aquaculture Farmers

Considering farmer demand and budget amount GRAUS provided 03 varieties (Indian Spinach-20gm, Bitter gourd-10gm,Long bean-10) of summer vegetable seeds (Upshi) and 03 variety of winter seed to all 250 aquaculture farmers to cultivate pond dike vegetables and met the nutrition of farmers' families. The detailed information is given below



Name of Inputs	Quantity/ farmer	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Vegetable seed	Indian Spinach-20gm, Bitter gourd-10gm,Long bean-10	135	115	250	44	206	250

#### 4.24 Input support for fish nurserers Spawn and Feed

As a part of input support to beneficiaries GRAUS provided 1900 Dhani fry (Catla-500, Ruhu-500 & Mrigel 900) carp dhani fry each of 15 Nurserers. One vendor from Roawnachari distributed dhani of 04 Nurserers at Bandarban sadar and 6 Nurserers at Rowangchari sadar by oxygen poly bag and another vendor from Lama distributed nursery Dhani fry to 05 Nurserer at Naikhongchari sadar and Baishari Union of Naikhongchari Upazila. The nursery dhani fry was distributed in early morning. UP chairman member Local administration, Headman and Karbari was present during distribution of fingerling to the farmers.

Name of Fish fingerling	Quantity/ farmer	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Carp dhani Fingerling for	1900 pcs (Mixed Carp-	15	0	15	1	14	15

Nursery farmer	Dhani)						
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#### 4.25 Fingerlings Transportation Facilities development for Best 15 Nurserer including last year PANI- Nurserer

For developing smooth nursery business, and transportation of fish fingerling in long-distance of Bandarban hill district, GRAUS provided fingerling transportation facilities (Oxygen Cylinder) for the best 15 nurseries of Bandarban Sadar (05), Rowangchari (06) and Naikhongchari (04).

Name of Inputs	Quantity	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Oxygen Cylinder, Distribution January 2022	15	15	0	15	2	13	15

#### 4.26 Partial Input support for Fish feed manufacturers

GRAUS has been selected 02 community fish feed Manufacturers one from Rajbila union Bandarban sadar and another from Rowangchari Sadar Union, Rowangchari, and provided 02 small forage pellet feed machines as partial input support to manufacturers to prepare feed at the community level.



Name of Inputs	Quantity	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Forage pellet feed Machine, Distribution Date-31 <sup>st</sup> January 2022	02	02	0	02	0	2	2

#### 4.27 Partial Input support for Fish harvesting group

GRAUS has been selected 02 interested fish harvesting groups one from Bandarban Sadar and another from Rowangchari and provided 02 Seine nets (Mola berjal) to each group to smooth fish harvest in remote areas of the fish farmers.



Name of Inputs	Quantity/ Harvesting group	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Seine Net (Ber Jal) for Kibuk para, Rajbila Male group	01 (60*08) Yard	6	0	6	0	6	6
Seine Net (Ber Jal)	01 (60*08)	1	5	6	1	5	6

for Wagay para Alekyang union Female group	Yard						
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#### 4.28 Installation Tilapia Sex reverse Unit at community level

5.16.6 3 days Hands on training of SRT Nurserer for monosex fry production

To develop the capacity of Tilapia nurserers & farmer's (SRT) on pond management mainly pre-stocking activities, stocking activities and post stocking activities following best management practices GRAUS have been organized day long training for 38 tilapia farmers near 03 SRT nursery in Kibuk para (Kuhalong), Thangya para (Balaghata) and Noapatong on 29/6/202, 03/07/2022 and 4/7/2022. Zafrullah Samsul (Aquaculture specialist), Mr. Showkat Ali (Tilapia breeding specialist) and S,M Nurun Nabi (ZoR coordinator) facilitated the technical sessions.



Mr. Nazrul Islam (AMSC) and Trina Marma (SMSO) organized the venue, participants and other logistics. Honorable CoP of WorldFish participated one training event held in Thangya para dated on 04/7/2022.

#### Training Venue and participant's information

Sl	Date	Venue	No of Participants	M	F	A	Y
1	29/6/2022	Kibukpara, Kuhalong	16	11	5	14	2
2	03/07/2022	Kheyang para, Noapatong	12	12	0	11	1
3	04/07/2022	Thoygha para, Kuhalong	10	8	2	9	1

### 3.3.2 from October 2022 to August 2023

#### SI # 5.1 Bi-Monthly Progress Review and Planning Meeting:

Bi-monthly meeting is the platform of sharing progress, planning future program & decision generating platform where donor, IP management as well as all project staffs present and share their progress. Challenges, lesson learnt and share plan of activities for next two months. So that all staffs and management understand over all progress and plan program and according provide support to field staffs

The objective of the meeting is to present the progress of field activities, budget, coverage of target group, timeline, deviation, mitigation measures, major challenges as well as lessons learned, and the plan of activities for the next 02 months. At the end of individual present management team gives feedback and necessary recommendation for future interventions. Detailed participant's information is cited in below



Venue	Date	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
GRAUS Office	24-11-2022	7	3	10	3	7	10
GRAUS Office	19-01-2023	7	3	10	3	7	10
GRAUS Office	16-03-2023	6	3	9	2	7	09
GRAUS Office	08-06-2023	6	3	09	3	6	09
GRAUS Office	24-07-2023	7	3	10	4	6	7

#### 5.2 Activity Orientation meeting:

Staff orientation meeting is the platform where project management will sharing the project activities, timeline, milestone, deliverables, budget, roles and responsibilities of individuals in formal event, so that all project individuals come to know the detailed project activities which will help to accomplish the project goal in time. To perform this objective GRAUS have been organized a day long staff Orientation meeting at GRAUS office conference room on October 27, 2022.Total 10 project staffs participated in the meeting. The Executive director- Chaing Seing MOUNG presided the meeting, The senior program manager Md.Emdad Hossain (WF) was introduced and described about the detailed of BANA project. The ZOR of WF SM Nurun Nabi described the objectives of this orientation program. Aquaculture specialist Mr. Zafrullah Samsul (PoC) presented on Beneficiary Selection Criteria, Detail Implementation plan, Beneficiary level training Role of different staffs, weekly reports, monthly reports, Success story, Body Preo Tanchangya, discussed about MEL formats and data entry process etc.



Detailed participant's information is cited in below

Venue	Date	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
GRAUS Office	27-10-2022	7	3	10	3	7	10
Total							

### 5.3-03 days long ToT on small scale aquaculture and high valued SIS for project staff

Capacity building of different types of Aquaculture farmers and market actors are the main focus of Aquaculture SIS project, to perform the field level farmer training on different aquaculture session, nutrition and cross cutting sessions, primarily need to build capacity of field staffs to organize farmer training and facilitation of session effectively, to achieve the objectives GRAUS have been organized a 03 days long ToT for project staffs from November 15-17, 2022 at GRAUS office conference room. ZoR Coordinator, MEL office and aquaculture specialist of WorldFish and Senior Upazila Fisheries Officer (DoF) and Agriculture officer (DAE) facilitated the technical sessions of the event. Deputy Executive director of GRAUS presided the training session



Detailed participant's information is cited in below

Venue	Date	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
GRAUS Office	15-17 October - 2022	7	3	10	3	7	10

### 5.4 Project Close out Meeting at District Level:

This reporting quarter GRAUS have been organized project Close out meeting at Horticulture center, Balaghata, Bandarban on 22th August 2023. Mr. Emdad Hossain (Senior Program Manager), Zafrullah Samsul (Aquaculture Specialist) WorldFish, Executive Director GRAUS and all project staff, 08 beneficiaries was participated in the close out meeting

The closeout meeting of project was to reflect the achievements and success of the project, what changes have been made through this project, lessons learned, major challenge faced and future recommendation from the project.

All participants introduced among themselves at the beginning. The project coordinator briefly presented a presentation on the achievements and success of the project. After that Technical coordinator presented a presentation on the lessons learned, major





challenge faced and future recommendation from the project.

After the health break participants shared their filings and opinions. Then invited guests gave speeches. WorldFish team (Program, grants and Meal) congratulated for the successful completion of the project and noted the future recommendations. Executive director GRAUS participated close the giving thanks to all staffs working with the project also give thanks to WorldFish and USAID for giving valuable support to smooth phase out of the project

### 5.5- Community meeting, farmer selection, group formation and database preparation

Beneficiaries selection, group formation and database preparation is the basic activities of Aquaculture SIS project. The beneficiary selection is a process of activities, where the Market facilitators initially identified the aquaculture resourceful area in targeted location through physical visit, contact with focal person and analysis data from DoF and local leaders, then communicated with local level focal person and invited all level of farmers to conduct the community meeting. In the schedule community meeting MF shared the project activities, identification of fisheries resources and finally list down the potential fish farmers in the community.



This reporting quarter 12 no of community meeting have been organized in Bandarban sadar, Rowangchari and Thanchi Upazila with the community people mainly fish farmers, local leaders

and mass people of targeted community. Market facilitators along with Upazila coordinators jointly facilitated the community meeting. The meeting duration was 2.5 - 03 hours in a suitable venue near by the residence of community people. Fish farmers, local leaders and UP representatives attended the community meeting.

#### The detailed information community meeting cited below

Sl	Date	Para	Union	SeX		Total	Age		Remarks
				M	F		Y	A	
1	31/10/22	Sultanpur	Sualok	15	5	20	1	19	Bandarban
2	30/10/22	Kadhukhola & Bagakul	Sualok	6	14	20	6	14	Bandarban
3	1/11/22	Mazerpara	Sualok	10	10	20	3	17	Bandarban
4	29/10/22	Kraikhang para	Jamchhari	9	16	25	8	17	Bandarban
5	30/10/22	Odulbunia	Rajbila	6	14	20	2	18	Bandarban
6	31/10/22	Khanshama	Jamchhari	13	12	25	12	13	Bandarban
7	25/10/22	Battoli Para	Alekhong	4	23	27	5	22	Rowangchari
8	25/10/22	Paglachara/Jamchandra	Rowanchari Sdar	2	18	20	6	14	Rowangchari
9	30-10-22	Changya Danesh	Taraca	2	22	24	1	23	Rowangchari
10	31-10-22	Betchara Bazr	Taracha	6	19	25	6	19	Rowangchari
11	2/11/22	Kanaizo para/Nachalong,	Noapatong	7	14	21	3	18	Rowangchari
12	26/10/22	Baganpara	Boli-para	7	13	20	2	18	Thanchi
		Total		87	180	267	55	212	

### 6.1 Farmer Level Training on Climate Smart Aquaculture, business planning and development

GRAUS selected 250 aquaculture farmers (M-57 F-193) and developed 23 groups in 03 Upazila of Bandarban sadar (09), Rowangchari (09) and Thanchi (05). To develop knowledge and skill of fish farmers GRAUS organized training on climate smart aquaculture and business planning for selected 250 aquaculture farmers at community level. The training equipped with 6 sessions such as dyke cropping (vegetable), nutrition-1 (Basic concept on Nutrition), nutrition-2 (Nutrition for family members and Hand washing), gender (Participation of male- female & youth in fish culture, food & nutrition practice and HHs works), aquaculture-01 (Pre-stocking management) and aquaculture-02 (Stocking management). Duration of each session was 2-2.5 hours. During Gender training 2 persons (participants and opposite gender-spouse) from each HHs participated. Live session materials used during conducting session and practical. Training quality monitored by the Upazila coordinators, Project Coordinator and WorldFish representative. Pond record book also filed up after the session



#### The Summary of Farmer Training session cited below

Sl	Name of Training Session	# Group	# beneficiaries attended	Sex		Age	
				M	F	Y	A
1	Pond dike cropping	23	250	57	193	179	71
2	Nutrition-1 (Basic Concept on Nutrition)	23	250	57	193	179	71
3	Nutrition-2 (Nutrition for Family Members and Hand wash )	23	250	57	193	179	71
4	Gender in aquaculture	23	250	57	193	179	71
5	Aquaculture-1(Pre stocking Management )	23	250	57	193	179	71
6	Aquaculture-2 (Stocking Management)	23	250	57	193	179	71
7	Post Stocking management and Business planning	23	250	57	193	179	71

### 6.2-2 days long Training on High Valued SiS Fish Culture and business development for 20 SiS farmers

GRAUS have been organized 02 days long (March 18-19) training on “High Valued SiS fish culture management and business development for 20 SiS farmers under Bandarban Sadar (14) and Rowangchari upazila (06) at GRAUS office conference room, Bandarban.

Md. Zafrullah Samsul (Aquaculture specialist) WorldFish, and Md. Nazrul Islam (Project Coordinator) GRAUS facilitated the training session. Total 20 (M-14, F-06) participants attended the training.) 06 participants from three unions of Rowangchari (Alekhang-4. Taracha-01 and Paglachara-1) and 14 participants from 02 union of Bandarban (Rajvila-04 & Sualok-10) attended the meeting.

#### The objective of the training was:

- To Build up the capacity of SiS farmer on SiS pond selection, preparation, green water management, stocking density management, predator control, liming, feeding and partial harvesting etc (Pre stocking, Stocking and post stocking management under GAP)



- Share the critical issue of Pabda culture
- Discussed the criteria of Pabda pond selection
- Show Video on successful Pabda culture in Bangladesh
- Develop linkages among all SiS farmer

#### Detailed participant's information given below

Venue	Date	Sex		Age		Total
		Male	Female	15-29 = y	30+=A	
GRAUS Office, Bandarban	18-19 March, 2023	14	06	7	13	20

#### 6.3-2 days training on Carp-Mola SIS Fish Nursery

GRAUS have been organized 02 days long (Feb 15-16) hands on technical training session for 10 Carp-mola nurserers and 02 SiS nurseries under Bandarban Sadar and Rowangchari upazila at GRAUS conference room, Bandarban.

Mr. Mamunur Rahman (Senior Upazila Fishery Officer) DoF, Md. Zafrullah Samsul (Aquaculture specialist) WorldFish, and Md. Nazrul Islam (Project Coordinator) GRAUS facilitated the training session.



#### The objective of the training was

- To build up the capacity on nursery management (Pre stocking, Stocking and post stocking)
- Share experienced on good and bad nursery practices
- Develop relation among all stakeholders in nursery operations
- Develop linkages with DoF and other market actors

Detailed participant's information is cited in below

Venue	Date	Sex		Age		Total
		Male	Female	15-29 = y	30+=A	
GRAUS Office, Bandarban	15-16 Feb, 2023	10	2	3	9	12

#### 6.4 Training for harvesting group on post harvesting technology and fish marketing

Harvesting group is one of the key market actors of SIS project. In the phase of MAMCD project, GRAUS developed 02 harvesting group Bandarban sadar and Rowangchari upazila, Beside that BNKS develop one harvesting group in Bolipara union of Thanchi upazila, To assess the activities and further development, GRAUS organized a day long training for 03 harvesting group on **Post harvesting technology and fish marketing** on December 11, 2022 at GRAUS



office conference room and December 13, 2022 at Bolipara under Thanchi Upazila. Total 12 participants (Male-8, Female-4) from 03 harvesting group participated the training events. PC, UC, Aquaculture specialist WF conduct the different session in these program.

Detailed participant's information is cited in below

Venue	Date	Participants (#) according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
GRAUS Office	11-12-2022	4	4	08	0	8	8
Boli para, Thanchi	13-12-2022	4	0	04	0	4	4
Total		8	4	12	0	12	12

### 6.5-Market linkage events with aquaculture market actors

To make availability of quality aquaculture inputs for aquaculture farmer through the developed aquaculture market actors

This reporting Phase GRAUS have been organized 05 events of Market Linkage workshop at Bandarban district, one at Bandarban and another at Rowangchari upazila and Thanchi Upazila.

The workshop started at 9.30 am and closed at 2.00 pm followed by lunch. Representatives from farmer groups, Nurserer, Feed agents fertilizer dealer, fish harvesters, fish retailer of Bandarban and project staffs from GRAUS Bandarban, and PoC of WorldFish participated the

The objectives of workshop are as follows:

5. Introduce to aquaculture market actors to each other
6. Sharing the problem and support from market actors for farmers
7. Make a win win business relation with all market actors
8. Future plan to assists each other
9. develop communication and linkage with different aquaculture marker actors



Detailed participant's information given below

Venue	Date	Sex		Age		Total
		Male	Female	15-29 = y	30+=A	
Horticulture Center, Balaghata Bandarban	10-07-2023	17	3	5	15	20
Gilaful Library complex Wagoipara, Rowangchari	11-07-2023	05	16	7	14	21
Gilaful Library complex, Wagoipara, Rowangchari	19-01-2023	8	12	4	16	20
Horticulture Center Bandarban	23-01-2023	15	5	7	13	20
Bolipara Kendra. Thanchi	12-02-2023	14	6	3	17	20

### 7.1 Day Observation (Farmer's Field day -FFD)

To share the result of best fish farmers among the farmers in the aquaculture community and displayed the aquaculture, vegetable, and nutrition inputs to the different aquaculture farmer and mass people, So that they know the good aquaculture practices and encouraged to involve future aquaculture activities. Besides that awarded 03 best aquaculture farmers in the community which will influence to make a good aquaculture leader in the community

#### The overall Objective of FFD

- Create awareness of mass people on aquaculture and nutrition activity
- Boost up successful farmers by giving award and scale up them future farmer leader in the community
- Create opportunity to share experience of successful farmer in front of other farmer
- Build linkage with aquaculture market actors and farmers for future business development



This reporting quarter GRAUS have been organized 05 FFD at Bandarban and Rowangchari Upazila.

Venue	Date	Sex		Age		Total
		Male	Female	15-29 = y	30+=A	
Dolbonia Para, Kuhalong Union, Bandarban Sadar, Bandarban	16-08-2023	22	31	34	49	43
Botoli Para, Alekhang Union, Rowangchari, Bandarban	16-08-2023	17	33	30	20	50
Majher Para, Suwalak Union, Bandarban Sadar, Bandarban	17-08-2023	25	28	27	16	53
Wagoi Para, Alekhang Union, Rowangchari, Bandarban	17-08-2023	12	41	25	18	43
Saopara, Kuhalong Union, Bandarban Sadar	24-08-2023	21	32	18	25	43
<b>Total</b>		<b>97</b>	<b>165</b>	<b>134</b>	<b>128</b>	<b>262</b>

### 7.2 (a) -Day observation Men's Day- 2022

International Men's Day is celebrated annually on November 19 to recognize and celebrate the cultural, political, and socioeconomic achievements of men. The theme of International Men's Day 2022 is "Helping Men and Boys "To observed the day GRAUS- have been organized 03 community level awareness meeting at Kaichtoly and Sao para community under Sualok & kuhalong Union of Bandarban sadar Bandarban and Bottoli para under Rowangchari upazila on 21<sup>st</sup> and 22<sup>nd</sup> November 2022. The International Men's Day create an opportunity for people to know the contribution of men and boys in the family and society. . The objective of observation International Men's Day is to develop awareness among people about the roles and responsibility of Man and Boys in the family & society. Total 122 participants (M-58 F-64) was present on the meeting. MF organized the meeting, PC, UC facilitated the session Detailed participant's information is cited in below



Venue	Date	Participants (#) according to sex			Participants (#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Sao para, Sualok, Badarban	21-11-2022	23	17	40	3	37	40
Kaichtoly, Kuhalong, BBN	22-11-2022	8	32	40	21	19	40
Bottoli para, Rowangchari	23-11-2022	27	15	42	22	20	42
<b>Total</b>		<b>58</b>	<b>64</b>	<b>122</b>	<b>46</b>	<b>76</b>	<b>122</b>

## 7.2 (b) Day observation-International Women's day (IWD):

International Women's Day (IWD) is a global day celebrating the social, economic, cultural and political achievements of women. The day also marks a call to action for accelerating gender parity. Significant activity is witnessed worldwide as groups come together to celebrate women's achievements or rally for women's equality.



To understanding the impact of the digital gender gap on widening economic and social inequalities and protecting the rights of women and girls in digital spaces a day long "International Women's Day (IWD)" program have been observed in Bandarban Sadar and Rowangchari upazila on 12 March, 2023. Trina Marma (UC) and Market Facilitators facilitated the these events and total 120 mass people (Male-13, Female-107) participated in that programs. Major discussion points were- The fight for gender equality, the role of women in the workforce, Women's health and well-being, Women in leadership, Intersectionality and inclusivity, celebrating women's achievements, online and ICT-facilitated gender-based violence.

### Detailed participant's information given below

Venue	Date	Sex		Age		Total
		Male	Female	15-29 = y	30+=A	
Cha o Para, Kuhalong, Bandarban Sadar	14-03-2023	6	34	9	31	40
Kaintermukpara, Rowangchari	14-03-2023	1	39	7	33	40
Lapaigoypara, Rowangchari	14-03-2023	6	34	3	37	40
<b>Total</b>		<b>13</b>	<b>107</b>	<b>19</b>	<b>101</b>	<b>120</b>

### 7.2 (c)- Day Observation (Nutrition week)

GRAUS had organized day long Nutrition week training in three different place in Bandarban on June 12 & 13, 2023 at Rowangchari high school, Rowangchari, Bandarban girls' school and Chao para Bandarban sadar. Different nutrition related message of child health, adolescents, pregnant women, and old given in this occasion. Beside the nutrition related awareness, basic aquaculture training (Pre stocking, stocking and post stocking) had been provided along with the nutrition week session.

The technical session on nutrition facilitated by Market facilitator Bandarban. The technical session on aquaculture facilitated by Upazila Coordinator. Total 140 community people (M-9 F-131) participated in the nutrition week day observation session. The session started at 13.00 am and concluded at 15.30 pm.

#### The key message shared in the training session as follows

- Diversified nutritious food depend on age and requirement
- Breast feeding and feeding 1st breast milk for new born child
- Importance of 06 month breast feeding for child
- Supplementary food after six month for children
- Calcium tablet for old men and women
- Importance of Vitamin A to Z
- Pre stocking management of aquaculture
- Stocking management
- Post stocking management of fish culture



### 7.3-Video Documentary show:

GRAUS Organized 06 event of Video documentary show in Bandarban and Rowangchari Upazila. Pc. UCs and all Market facilitators attended in the Video show documentary events. GRAUS provided multimedia and other logistics and WorldFish PoC provided the WorldFish Video documentary. The Show organized at evening after sunset and continues 1 and 1.5 hour as per situation of the community

**The detail of Video documentary is given below:**

Sl	Name of Events	Date	Place	# beneficiary attended	Sex		Age	
					M	F	Y	A
1	Video show	07-05-23	Crikhongpara, Zamchari, Bandarban	25	18	7	8	17
2	Video show	08-05-23	Magerpara, Sualoc, Bandarban	33	12	21	9	24
3	Video show	16-06-23	LimuziriPara, Kuhalong, Bandarban	34	23	11	7	27
4	Video show	09-05-23	Botolipara, Alekhang, Rowangchari	40	28	12	5	35
5	Video show	13-06-23	Kocchotolipara, Rowangchari	35	20	15	9	26
6	Video show	14-06-23	Jamachandrapara, Rowangchari	36	16	20	7	29



## 8.0-Development of IEC Material

### 8.1 Signboard Printing & Installation

To promote the message of aquaculture and introduce the farmer in mass people GRAUS have been printing and Installation of 262 pond and Nursery signboard to 250 pond aquaculture farmers and 12 Nurseries. The size of signboard 3\*2.5 ft border made in wooden frame

Detailed information of Signboard installation is given below



Name of ICT Material	Total Number	Participants (#)according to sex		Participants(#) according to age		
		Male	Female	15-29 = y	30+=A	Total
Pond Signboard	250	57	193	179	71	250
Nursery pond Signboard	12	10	02	3	9	12
<b>Total</b>	<b>262</b>	<b>67</b>	<b>195</b>	<b>182</b>	<b>80</b>	<b>162</b>

### 8.2-Printing pond record book and distribution to farmers

In this reporting quarter Printing 300 pond record book for distribution to 230 small-scale aquaculture farmers, 20 SIS farmers, Nurserers and other targeted beneficiaries for keeping pond record by the beneficiaries.

**8.3-Printing Tilapia booklet**-This reporting quarter Printing 300 copies of Tilapia booklet have been printed for distribution to small aquaculture farmer during the aquaculture technical training session

**8.4 - Festoon printing**-In this quarter Printing 05 set (07 Pcs.) of technical festoon printed for use of MFs during the technical session to target beneficiaries

**8.5- Printing training module:** This reporting quarter printing 10 farmer training module for MFs use during farmer training session



## 9.1- Large size Carp Fingerling for 230 Aquaculture farmer

As a part of input support to beneficiaries, GRAUS provided 73 (Catla-18, Ruhu-25 & Mrigel 30) large size (4-5 inch) carp fingerling to each aquaculture farmers. Total 230 aquaculture farmer in Bandarban (88) Rowangchari (102) and Thanchi (40) received 16790 pcs large size carp fingerling from GRAUS. GRAUS developed Nurserer, Barun Das distributed the fingerling to farmers in respected areas of Bandarban, Rowangchari and Thanchi.



The fingerling distributed in early morning. UP chairman member Local administration, Headman and Karbari was present during distribution of fingerling to the farmers.



SL	Upazila	Union	Total Farmer	No of Distributing Fingerling	Remarks
1	Bandarban	Sualok, Rajbila, Kuhalong	88	6424	
2	Rowangchari	Rowangchari Sadar, Noapatong, Taracha, Alekhang	102	7446	
3	Thanchi	Bolipara & Thanchi Sadar	40	2920	
	Total		230	16790	

### 9.2 Fish feed for aquaculture farmers (25 kg/farmer) for 250 farmers

As a part of fish feed input support to target beneficiaries GRAUS provided 01 bag 25 kg grower sinking feed to each target farmers. Total 250 aquaculture farmers received 250 bags in weight 6250 kg (250\* 25kg) fish feed, from GRAUS. ACI feed seller agent supplied the feed, Bandarban Sadar and staff of GRAUS were distributed all farmer group at three upazila (Bandarban sadar, Rowangchari, Thanchi). Feed distribution is done very early in the morning on 29/03/2023 and farmer, GRAUS MAMCD project staff was present during distribution time. GRAUS MF maintained the master roll during distribution of feed to target beneficiaries

Detail information of feed distribution

SL	Upazila	Union	Male	Female	Total	Total Fish Feed Distributed (kg)
01	Bandarban Sadar	Sualok, Ravila	36	66	102	2550 kg
02	Rowangchari	Taracha, Alekhang, Noapatong	14	94	108	2700kg
03	Thanchi	Bolipara, Thanchi sadar	7	33	40	1000kg
Total	3 Upazila		57	193	250	6250 kg

### 9.3 Vegetable seeds and OSP vine

Pond dike cropping is one of the major elements of nutrition sensitive aquaculture in Bandarban hill district. To promote pond dike cropping in the dike of the pond GRAUS have been distributed 04 suitable varieties of vegetable seeds to 250 aquaculture farmer.



Each aquaculture farmer received (Bottle gourd-12 gm, Pumpkin-10 gm, Red amaranth-50 gm, Orka-10 gm). With vegetable seeds GRAUS also distributed orange fleshed sweet potato vine (OSP) to 250 aquaculture farmers Each farmer received 06 pcs of Vine to cultivate near pond dike

#### Detailed participant's information given below

Name of Inputs	Month of Distribution	Sex		Age		Total
		Male	Female	15-29 = y	30+=A	
Vegetable Seeds (04 Variety )	January'23	57	193	179	71	250
OSP Vine (06 Pcs)	January'23	57	193	179	71	250

#### 9.4- SiS Fingerlings for 20 farmers:

As a part of input support to beneficiaries, GRAUS provided 10,000 (ten thousand) SiS Pabda fingerling to 20 SiS aquaculture farmer in Bandarban and Rowangchari Upazila. Each SiS aquaculture farmers received 500 pcs of Pabda fingerling from GRAUS. The SiS fingerling collected from Godhuli hatchery and Nursery, Cylonia, Feni. The fingerling distributed in early morning. UP chairman member Local administration, Headman and Karbari was present during distribution of fingerling to the farmers

SL	Upazila	Name of Union	Total no of Farmer	No of Distributing Fingerling	Remarks
1	Bandarban	Sualoc, Rajbila, Kuhalong	14	7000	
2	Rowangchari	Rowangchari Sadar, Noapatong, Taracha, Alekhang	06	3000	
	Total		20	10000	

#### 9.5 SIS Spawn for 02 high valued SIS nurserer

As a part of high value SiS nursery input support to SiS fish Nurserers, GRAUS provided 3 kg Pabda spawn to each SiS nurserers .02 high value SIS nurserers received in weight 6 kg (2\* 3kg) , from GRAUS. Godhuli hatchery from Feni supplied the Pabda Spawn to Bandarban Sadar and staff of GRAUS were distributed in 2 nursery farmer at Bandarban sadar. Spawn distribution is done very early in the morning on 29/03/2023 and farmer, GRAUS MAMCD project staff was present during distribution time. GRAUS PC UC maintained the master roll during distribution of feed to target beneficiaries



Detail information of SiS Nurserers are given below

SL	Upazila	Union	Para	Mobile no	SiS fish Spawn received (kg)
01	Uching mong Marma	Rajvila	Kibukpara	01834745386	3 kg (3000 line )
02	Mong Kya Prue Marma	Kuhalong	Thoingya para	01552385219	3 kg (3000 line )
Total					06 kg

### 9.6 Fish feed for nurserer (20 kg Nurserer) for 12 nurserer

As a part of Nursery feed input support to target nurserers GRAUS provided 12 bag 25 kg Nursery sinking feed to each Carp-mola and SiS nurserers. Total 12 aquaculture nursery farmers received 12 bags in weight 300 kg (12\* 25kg) Nursery feed, from GRAUS. ACI feed seller agent supplied the feed at Bandarban Sadar and staff of GRAUS were distributed to nursery farmer at two upazila (Bandarban sadar, Rowangchari). Feed distribution is done very early in the morning on 29/03/2023 and farmer, GRAUS MAMCD project staff was present during distribution time. GRAUS MF maintained the master roll during distribution of feed to target beneficiaries



**Detailed information of Nurseries are given below**

SL	Upazila	Union	Male	Female	Total	Total Fish Feed Distributed (kg)
01	Bandarban Sadar	Kuhalon, Rajvila, Sualok	4	0	4	100 kg
02	Rowangchari	Noapatong, Alekhyang, R.chari Sadar	6	2	8	200 kg
Total			10	2	12	300 kg

### 9.7- Spawn Support for Carp Nurserer:

As a part of development new cap nursery in Bandarban sadar and Rowangchari under Bandarban district, GRAUS distributed 05 kg of G-3 Ruhu carp spawn to 10 Carp nurserer on 19th June 2023 from Bandarban sadar & Rowangchari office .With support of PoC



WorldFish 10 nurserers were selected from different area of Bandarban Sadar and Rowangchari upazila

**Detail information of Carp Nursery given below:**

SL	Name	Union, Para	Mobile no	Distribution Item
1	Arun Kanti Tanchangya	Rowangchari ,Chakhulal Para	01531209592	0.5 Kg Carp Spawn
2	Sefali Tanchangya	Rowangchari Paglachara	01585281162	II
3	Anondolal Tanchangya	Rowangchari Paglachara	01585281260	II
4	Antor Tanchayga	Paglachara	01533470232	II
5	Indasara	Kaintarmukh	01585281279	II
6	Suboli Tanchangya	Wagoipara, Rowangchari	01557344840	II
7	Yoi shing aong	Maddham Para, Row	01858987970	II
8	Md.Mofij	Suwalak, Sikderpara	01638547848	II
9	Kyaw Ching U kheyang	Kuhalong,Dolboniapara	01859679164	II
10	Borun Das	Kheyangmongpara, Row	01590009543	II

**10.0 Participate in different training organized by World Fish**

As part of staff capacity building this reporting quarter WorldFish Grant & MEL team organized a day long Grants orientation for senior project staff (PC-1,UC-2), Finance Officer (01) Finance manager-01 on November 23, 2022 at Horticulture center of Bandarban. The Gender & Nutrition specialist organized 02 days residential training on Gender learning for senior project staffs on 28-29 November, 2022 at hotel prime park under cox's bazar. All invited participants actively participated the training and orientation organized by WorldFish

Event & Venue	Date	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Grants Orientation Horticulture center	23-11-22	03	02	05	02	03	05
Gender Learning, Prime Park hotel, Cox's bazar	28-29/11/22	02	03	05	02	03	05

**10. Participate in different training organized by World Fish**

WorldFish MEL team, Gender and nutrition specialist organize residential training on Real time monitoring and Gender inclusion training in this reporting quarter

**The detail information of Training is given below:**

Event & Venue	Date	Participants (#)according to sex			Participants(#) according to age		
		Male	Female	Total	15-29 = y	30+=A	Total
Real Time Training monitoring (Tab), Night Haven, Bandarban	Feb-08, 2023	06	02	08	04	04	08
Inclusion of Gender in ZoR, Beach Way, Cox's bazar	March 27-28, 2023	06	02	08	04	04	08

### 11. Refreshers Training for Graduated farmer (200)

GRAUS trained 146 graduated farmers on integrated nutrition sensitive aquaculture, business planning (refresher training) in 3 upazila. The training was 3-4 hours at community level. The session topics covered aquaculture, dyke cropping and nutrition as well as business planning.

The objectives were as follows:

- To refreshing graduate fish farmers on improved aquaculture business
- To identify the problems and solutions
- To improve business development techniques
- To develop knowledge and skill of fish farmers



Event name	Upazila	Sex			Age		
		Male	Female	Total	15-29 = y	30+=A	Total
Refresher Training for Graduated Farmers (200 Farmers)	Bandarban Sadar	17	68	85	21	64	85
	Rowangchari	11	91	102	12	90	102
	Thanchi	1	12	13	1	12	13
<b>Total</b>		<b>29</b>	<b>171</b>	<b>200</b>	<b>34</b>	<b>166</b>	<b>200</b>

### 12. Dissemination of Tilapia Brood among Hatcheries in ZOR

To promote climate smart aquaculture in Bandarban hill district GRAUS provided quality tilapia brood with hapa and nursery feed among 03 mono-sex tilapia hatcheries under Bandarban and Cox's Bazar district. GRAUS signed a MOU with three hatcheries to provide monosex fry and swim-up fry support to small scale SRT nurserer & farmers after completion of the project



Detailed information of 03 selected Hatchery cited as follows

Sl No	Name of Tilapia Hatchery	No of Brood (pcs)	Nursery feed (Kg)	No of Hapa distributed
1	Coral Reef Tilapia Hatchery, Lama Mo-01715086168	15000	500	05
2	Allahwola Tilapia Hatchery, Cox'S Bazar Mo-01873873649	15000	500	05
3	Niribili Tilapia Hatchery , Cox's bazar Mo-01795899681	15000	500	05
	<b>Total</b>	<b>45000</b>	<b>1500</b>	<b>15</b>

### 13.0-Follow-up support for Women harvesting group

Under MAMCD project GRAUS have been developed a women harvesting group of 6 members (F-5, M-01) in Wagoi para, Rowangchari Union. Bandarban. After developing women harvesting group, GRAUS conducted skill development training and regular follow-up support along with software activities GRAUS provided seine net for harvesting fish from small scale farmer's pond. After getting Seine net harvesting group member harvested fish and marketing fish from different farmer's pond and earning extra income for maintaining their livelihood. During harvesting fish by seine net they faced some problem for collecting, weighing fish. In respond to field problem of harvesting group GRAUS have planned to provide some follow-up input support to women harvesting group. As a part of follow up support to harvesting group GRAUS have been distributed 01 weight machine, 02 half drum, 10 carrot box and 05 kg net color to the harvesting group on November 15, 2022, at GRAUS office, Bandarban



#### 14.0- Introduction to Smoke Fish in Hilly area in Bandarban:

GRAUS had organized two day long hands on training (17-18 May, 2023) for 10 women entrepreneur under Bandarban Sadar and Rowangchari Upazila (Bandarban-02, Rowangchari-08) on "Introduction of Smoke Fish in Hilly Area" at a suitable venue at Digoliabag (Purbasha Island) under Rangamati District

The technical session of the training facilitated by Ripon Khisha (a experienced smoke fish producer in Mach Bazar of Rangamati). The theoretical and video documentary session jointly facilitated by Mr. Shamsul Kabir (DCOP), Mr. Emdad Hossain, (Senior Manager WorldFish) Mr. S.M Nurun Nabi (ZoR coordinator) and S.M. Zafrullah Samsul (PoC. WorldFish). Project Coordinator Mr. Nazrul Islam and Upazila coordinator Trina Marma assist for organizing venue logistics, food, and transport for participants and so on.

The Training started at 9.00 am of 17th May, 2023 and closed at 3.00 pm of 18 May, 2023



#### 15. Celebration of National Fisheries week 2023 in 3 upazila

To make awareness of high school students along with teachers on The importance of The National Fisheries Week with a commitment of involving people in socio-cultural development through raising the production of the fisheries resources," The theme of Fish week 2023 is "Nirapad Machhea Varbo Desh, Gorbo Smart Bangladesh (The country will be filled with safe fish, Build the Smart Bangladesh)". Students are future leader of the nation so if they aware the importance of fish sector in Bangladesh they will serve the nation in future and also they helps their family member by the message getting fish week meeting



Venue	Date	Sex		Age		Total
		Male	Female	15-29 = y	30+=A	

Bandarban Government Girls high school, Bandarban Sadar, Bandarban	24-07-2023	15	75	78	12	90
Rowangchari High school, Rowangchari, Bandarban	25-07-2023	44	59	98	05	103
Chemi dulu para High school, Kuhalong, Bandarban	26-07-2023	53	47	84	16	100
Total		112	181	260	33	293

## 16. Large size fish culture in demo pond

As a part of input support to advance aquaculture farmer, GRAUS provided 840 (Eight Hundred Forty) larger size carp fingerling and 200 kg crap grower feed to 04 Demo pond farmer in Bandarban and Rowangchari Upazila. Each demo pond aquaculture farmers received 210 pcs of Carp fingerling and 50 kg crap grower feed from GRAUS. The Carp fingerling collected from GRAUS developed Nurserer Mr. Borun Das and feed distributed from GRAUS supported One Stop Service Center establish in Balaghata, Bandarban. The fingerling and feed distributed in early morning. UP chairman member Local administration, Headman and Karbari was present during distribution of fingerling to the farmers

SL	Upazila	Name of Union	Total no of Demo Farmer	Quantity of feed Distributed	No of Distributing Fingerling	Remarks
1	Bandarban	Sualoc, Rajvila	3	150 kg	630	Size-12-14 Inchi
2	Rowangchari	Rowangchari Taracha.	1	50 kg	210	II
	Total		4	200 kg	840	

## 17. Community base Creek Aquaculture

GRAUS developed 04 community creeks in Bandarban (01) and Rowangchari (03) with the support of DoF and WorldFish technical team. The objective of Creek based aquaculture is to include more people in aquaculture intervention and maximizing the production and profit. To developed the capacity of management committee organized two day long hands on training for each Creek members on "Fish culture and Creek management" for 04 creeks at Bandarban and Rowangchari Upazila

The Detail information Creek Based Aquaculture Training are given below

Date	Name of Creek	Location	Total Member	Water area
23-24 May'23	Sultanpur CCD	Sultanpur, Sualoc, Bandarban	21 (M-19 F-2)	100 dec
29-30 May'23	Bagmarapara CCD	Bagmarapara, Noapatong, Rowangchari	26(M-14,F-12)	80 dec
6-7 June '23	Borshilapara CCD	Rowangchari	23 (M-23 )	120 dec
15-16 June'2023	Aungyapara	Rowangchari	21 (M-12, F-9)	100 dec

## 18. Exposure visit

GRAUS had organized a day long Exposure visit for the fish nurserer on June 20, 2023 at Ma Mothsha Hatchery, Yangcha, Lama. Coral Reef Hatchery, Fashiyakahali, Lama, Bandarban. Bandarban sadar. To increase a strong linkage between old and newly crap-tilapia nurseries commercial carp and monosex tilapia hatchery. Besides gather best experience in nursery and hatchery management. First visiting place was Ma-Mothsha hatchery, where the proprietor Mr. Elias Khan shown his whole carp



hatchery pond, management system, techniques etc. The second visited place was Coral reef hatchery, where all participants experienced by direct technical officer Nazmul Islam, Coral Reef Hatchery. Program was conducted by Nazrul Islam (Project Coordinator, GRAUS) The purpose of this training

described by Md. Emdad Hossain (Senior Program Manager, WF) and Zafrullah Samsul (Aquaculture specialist, WF). Total 10 nurseries owner were present this this program. the visiting during was in Ma motsho hatchery 10.00 am to 11.30 am and at Coral reef hatchery 12.00 pm to 3.30 pm

### 19. Support for Fish Nursey

As a part of building operational capacity of carp nurserer in Bandarban, GRAUS distributed two Acclimatization Tank (Fiber), 3000 liter water holding capacity, Two Oxygen Cylinder (45 liter), 12 bundle of blue net, 06 hapa, 06kg of bird protecting net, 06 digital Balance to 10 best nurserer on Bandarban and Rowangchari on June 19, 2023 from GRAUS head Office, Bandarban. Mr. Emdad Hossain (Senior Program Manager), Mr. Zafrullah Samsul (Aquaculture Specialist) WorldFish, honorable Executive director, GRAUS handed over these nursery inputs. GRAUS MAMCD project staff was present during distribution time. GRAUS maintained the master roll and captured image during distribution of Acclimatization tank to target beneficiaries The acclimatization tank mainly use for hardening fish fingerling during distribution to farmers and also use during marketing of live fish), The Oxygen Cylinder mainly use in fingerling polly bag during transportation of fish fingerling in long distance to farmers With support of PoC WorldFish 10 nurserer was selected from 1. Sultanpur, Sualok, Kibukpara, Rajbila Union Sadar Bandarban and Rowangchari Upazila. The nurserer was selected considering experience and working capacity in Nursery operation.



### 20.0 Distribution of Lemon sapling among Aquaculture farmers

As a part of input support to 250 aquaculture farmers, GRAUS distributed-1000 (one thousand) seedless verity lemon sapling (Horticulture center, Bandarban) to 250 SiS aquaculture farmer in Bandarban, Rowangchari and Thanchi Upazila. Each aquaculture farmers received 04 (four) pcs of lemon sapling from GRAUS. The seedless variety lemon sapling purchased from Horticulture center, Balaghata, Bandarban sadar on 12<sup>th</sup> July 2022

The lemon distributed to the farmer group by local vehicle in early morning. UP member, Headman and Karbari and farmer group leader was present during distribution of fingerling to the farmer



The Detail information Lemon Sapling are given below

SL	Upazila	Name of Union	Total no of Farmer	No. lemon sapling	Remarks
1	Bandarban	Sualoc, Rajbila, Kuhalong	102	408	
2	Rowangchari	Rowangchari Sadar, Noapatong, Taracha, Alekhang	108	432	
3	Thanchi	Bolipara, Thanchi	40	160	



Total	250	1000
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## 21. Development of Harvesting Group

As a part of development harvesting group in potential aquaculture village in Bandarban, GRAUS developed one harvesting group at Sultanpur under Saolok Union of Bandarban sadar. After selection of harvesting group GRAUS organized a day long training on “ Post harvesting technology and Marketing of Fish” at GARUS Office, besides the technical training GRAUS distributed one scene net,(75 yard) one weight machine (100 kg) and 04 carrot box to new harvesting group at Sualok Union, on June 19, 2023 from GRAUS head Office, Bandarban. Honorable Mr. Mong Thui Marma (Chair Person), GRAUS handed over the Scene net and other material to the harvesting group. GRAUS MAMCD project staff was present during distribution time. GRAUS maintained the master roll and captured image during distribution of Scene net to target beneficiaries he scene net mainly use for harvesting fish and fingerling from famers pond so that they can easily marketing fish in with low cost.. With support of PoC WorldFish harvesting group (06 member) was developed from Sultanpur, under Sualok union.



## 22.0 Establishment of New CFC

GRAUS implemented the MAMCD project for the development of Nutrition-sensitive aquaculture and market channels in Bandarban since June 2021. To promote and development of aquaculture market actors and service provider GRAUS planned to establish community Feed Center (CFC) in potential areas of Bandarban. According to planed activity a Community feed center have been established at the village of Rijbila Nicherpara under Rajbila union of Bandarban Upazila on August 2023. Experts from WorldFish paid valuable support to establish the CFC. All the machines purchased from local vendor with the technical instruction of WorldFsih experts. The Objective of Community Feed center is as Follows



- Produce fish feed with locally available feed ingredient
- Marketing feed in community level among fish farmer
- Sale fish feed comparatively low price so that marginal farmer can buy
- Act as technical service provider for fish farmer
- Better utilization of local feed ingredients
- Opportunity to buy on credit

The CFC owner name is Mr. Usihanu Talukder, Basically he is young and educated person (Electrical Engineer) wants to do some social business rather searching job.

Mr. Zafrullah Shamsul and Md. Nazrul Islam (P.C) GRAUS jointly visited the site and discussed the detail aim and objective with the owner of the center. After herring all, the owner agreed to establish the CFC close to his homestead in a rural Bazar at Rajbila Union in Bandarban

Based on agreement GRAUS provided the following material to the owner of the Community feed center

Sl #	Name of Item	No	Date of Receipt	Remarks
1	Crushing machine	1.00	27-8-2023	
2	Pellet machine	1.00		
3	Mixture machine	1.00		
4	Auto Holler	1.00		

5	Motor (20HP, 25 HP)	2.00		
6	Chases	2.00		
7	Cut out Ware	1.00		
8	Spare parts	1.00		

### 23.0 One stop Service Center

GRAUS implemented the MAMCD project for the development of Nutrition-sensitive aquaculture and market channels in Bandarban. To promote and development of aquaculture activities project worked for aquaculture farmer and different aquaculture service provider/market actors for smooth supply of aquaculture inputs for the benefit of farmer which will help the increase of aquaculture production. MAMCD project will be phase out on 31<sup>st</sup> August 2023. So as a exit strategy GRAUS established a One stop service center in Balaghata, middle of Bandarban Sadar Upazila. The Name of the center is Lucky poultry feed, Chicks and medicine center and profiteer name is Mr. Nezam Uddin. Mr. Zafrullah Samsul and Md. Nazrul Islam (P.C) GRAUS jointly visited the site and discussed the detail aim and objective with the owner of the center. After herring all, the owner agreed to establish the center within his existing poultry input marketing shop at Balaghata Bandarban

The key objective of the one stop center-



- Keeping aquaculture inputs for sale
- Testing the water parameter as per farmer need
- Providing basic technical tips to aquaculture farmers
- Keeping aquaculture learning material for support to farmers
- Keeping record to farmer support

Based on verbal commitment GRAUS provided the following material to the owner of the one stop service center

Sl	Name of Item	No
23.1	<b>Aquaculture Kit Box</b> a. PH Meter b. D.O Meter c. Aquaculture Chemical	01
23.2	Sign Board	01
23.3	Wooden self for Keeping feed	01

## 4.0 Lessons Learnt

### 4.1 Key Lessons Learnt

Within this implementation period of MAMCD project gained a lot of lessons like –introduce appropriate technologies according to farmer pond/water resources, culture short period high value fish species for seasonal pond, need to available aqua inputs/ medicine near farmer's community/cluster, develop harvesting/ marketing group as needed, More support for new nurserers to make available of fish fingerling as per demand of farmer's. Need more close linkage among the farmer's and aquaculture backward and forward service providers? Need to practice pond record book writing by the farmers etc.

Create opportunity of fish collection from farmer's pond. Need credit support for small fish culture to buy inputs in time

#### **4.2 Challenges**

There are some common challenges to develop sustainable aquaculture market channels in Bandarban hill district .During project implementation the following challenges was faced by project

- COVID-19 lockdown
- Communication and mobile net work
- Input purchase and transportation for farmers in rural areas of Bandarban
- Group mobilization due to scattered distribution of fish farmers,
- Long distance of market from farmer community
- Availability of aqua inputs in aquaculture season

#### **4.3 Key Innovation of the Project**

Implementing nutrition sensitive aquaculture is a key Innovation of the project. Besides Hapa based SRT nursery is another key innovation of the project, establishment of carp-mola fish nursery and SIS fish nursery also a nice innovation. Development of fish harvesting group, community feed manufactures, linkage with farmers and aquaculture market actors rising awareness on nutrition and gender among women and youth are the key innovation of the project,

#### **4.4 Impact and Sustainability of the intervention:**

Through the initiatives of the intervention, the rural hilly fish farmers are receiving different aquaculture inputs- like spawns, fish fry, fingerling, yearlings near to the hand of fish farmers. Fish Nurserers are selling the fish seeds near to the fish farmers and a market has created. Fish feed and lime are now available in the upazila sadar. Market linkage has created a strong bondage among the fish farmers and aquaculture market actors. 25 % new fish farmers developed in the geographical area, 50 % production increased and Fish consume rate has increase near about double.

#### **4.5 Recommendation/ Future Direction:**

- Need more technical support and capacity building training for the fish farmers
- Need to developed more aquaculture market actors in the hilly area
- Need to utilize water resource and reach more farmers in these Upazila
- Should be more focus on technical and business training through inclusive market approach to the farmers of the community.
- Need to increase community-based approaches with co-management systems.
- Need to introduce SIS fish species in Bandarban
- Need to work with Commercial fish farmers in Bandarban
- Need to establish One Stop Service Center (OSSC)
- Need to establish more Community Feed Center (CFC)

## 5.0 Project Budget and Financial Management

GRAUS Project management budgeting the action of determining the total funds that are allocated for a specific project. The budget is usually estimated by the project coordinator along with the project management team and consists of all the projected costs for the implemented project.

Financial Management performed as per financial guideline of GRAUS. Finance Officer was assigned to keep all financial documents and Finance Manager oversee the financial parts. As it is fixed grant, all milestone deliverables are strictly checked by finance team.

## 6.0 Annexures

### 6.1 Success Story

#### Tribal women adopt improved aquaculture practices as an option for livelihood in Bandarban

Aquaculture has considerable potential as a livelihood option for the poor people, especially women in Bandarban, the remote hilly district of Bangladesh. However, a large number of ponds and creeks in the district are not fully utilized to grow fish due to the lack of farmers' knowledge and skills for improved aquaculture farmers, and the availability of quality fish seed, feed, and other aqua inputs at reasonable prices. Consequently, the productivity is significantly lower in comparison to other districts of Bangladesh.

With a view to changing the existing situation, the Feed the Future Bangladesh Aquaculture and Nutrition Activity supported GRAUS, a local NGO to implement the intervention, "Promotion of Aquaculture and Nutrition Intervention" in 2021. Initially, GRAUS worked with 330 small-scale pond farmers, 70% women, under PANI in Rowangchari and sadar upazila of Bandarban. Based on the progress of PANI, GRAUS, in collaboration with the Aquaculture Activity worked on the intervention, 'Market Actors and Market Channel Development (MAMCD) with 250 farmers.



As a result of the Activity support, some farmers have been able to improve their livelihood by increasing the productivity of their pond aquaculture through the application of appropriate knowledge and skills. They also have become aquaculture lead persons in their community, and now, they play a vital role in the dissemination of technical knowledge among other farmers to help increase their productivity. Subali Tanchangya of the village Wagoi para of Rowangchari upazila is one of the successful farmers, who has been a role model for other aquaculture farmers in the locality (Photo-1). Besides pond culture, she also cultivated vegetables in the pond dikes and homestead area (Photo-2). From the produced vegetables, she met her daily vegetable requirements and sold the rest amount in the nearby market. In 2022, she earned BDT 7,900, equivalent to USD 78.25 from dike cropping. From her 30 decimal pond, she sold 200 kg fish and earned BDT 41,600 BDT, equivalent to USD 412. Besides, she and her family consumed estimated 48 kg fish. Before receiving the support from GRAUS she got very negligible production from the same pond. Subali Tanchangya received the best aquaculture farmer award from GRAUS during the Farmers Field Day in 2022. Other than Subali, another 12 fish farmers have achieved mentionable success to improve their lives by adopting improved aquaculture practices and have reported 60% higher production in comparison to production in the past.

**QUOTES FROM BENEFICIARIES**

Subali Tanchangya says, "I have seen the hidden gold-silver in my pond by adopting improved aquaculture practices. I think, fish culture can be a reliable livelihood option for rural women of hilly areas".

Prepared By



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