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Enhanced Coastal Fisheries in Bangladesh II (ECOFISH II) Activity

Quarterly Report

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ACRONYMS

AIGA	Alternative Income Generating Activities
ALDFG	Abandoned, lost, or discarded fishing gear
BCG	Bangladesh Coast Guard
BHH	Beneficiary Household
BFDC	Bangladesh Fisheries Development Corporation
BFRI	Bangladesh Fisheries Research Institute
BLS	Business Literacy School
BSCMFP	Bangladesh Sustainable Coastal and Marine Fisheries Project
BSMRAU	Bangabandhu Sheikh Mujibur Rahman Agricultural University
CDCS	Country Development Cooperation Strategy
CFG	Community Fish Guard
CMO	Co-management Organizations
CSG	Community Savings Group
CPUE	Catch Per Unit Effort
CRP	CGIAR Research Program
CVASU	Chattogram Veterinary and Animal Sciences University
DoF	Department of Fisheries
EAFM	Ecosystem Approach to Fisheries Management
ECOFISH	Enhanced Coastal Fisheries in Bangladesh
FMC	Fisheries Management Committee
FCG	Fisheries Conservation Group
EMMP	Environmental Mitigation and Monitoring Plan
HCDF	Hilsa Conservation and Development Fund
HFMAP	Hilsa Fisheries Management Action Plan
IRs	Intermediate Results
IUCN	International Union for the Conservation of Nature
IUU	Illegal, Unreported and Unregulated
LFCC	Landing Center-based Fisheries Co-management Committee
MEL	Monitoring, Evaluation and Learning
MoFL	Ministry of Fisheries and Livestock
MPA	Marine Protected Area
MRE	Meghna River Ecosystem
MSY	Maximum Sustainable Yield
RDF	Recycling and Dumping Facilitator
NSTU	Noakhali Science and Technology University
PES	Payment for Ecosystem Services
PMP	Performance Management Plan
PSTU	Patuakhali Science and Technology University
SAU	Sher-e-Bangla Agricultural University
SDF	Social Development Fund
SUST	Shahjalal University of Science & Technology
ToO	Theatre of Operation
ToT	Training of Trainers
USAID	United States Agency for International Development
USG	United States Government
VFCG	Village Fisheries Conservation Group
WING	Women Income and Nutrition Group
ZOR	Zone of Resilience (Cox's Bazar)

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I PROGRAM OVERVIEW/SUMMARY

I.1 Program Description/Introduction

Introduction

ECOFISH II Activity is a five-year long transformative project of ECOFISH^{BD} that is solely funded by the United States Agency for International Development (USAID) and implemented by [WorldFish](#) in collaboration with the Department of Fisheries (DoF), Bangladesh. Aside from the DoF, the project includes collaborations with the Bangladesh Fisheries Development Corporation (BFDC), universities, conservation organizations, and non-governmental organizations (NGOs). ECOFISH II is assisting the DoF and local fishing communities in establishing adaptive collaborative management (co-management) organization in accordance with the [Ecosystem Approach to Fisheries Management \(EAFM\)](#) framework, with a focus on Hilsa, riverine native catfish (Pangas), and other major coastal and marine fisheries resources. Project also assists the host-fishing communities in the USAID's Zone of Resilience (ZOR), Cox's Bazar district (Teknaf including Saint Martin's Island, Ukhiya, Cox's Bazar sadar, Ramu, Moheshkhali and Kutubdia upazila) and coastal fishing communities in Bhola, Patuakhali and Barguna district of the Meghna River Ecosystem (MRE), and the Nijhum Dwip Marine Protected Area (MPA).

ECOFISH II aiming at enhancing **ecosystem** resilience through establishing effective co-management of coastal fisheries resources in those areas focusing on Hilsa shad, riverine local catfish (Pangas) and other commercially important coastal and marine fish species for the communities reliant on it, and conserving biodiversity including megafaunas. Following the pathway of ECOFISH^{BD}, ECOFISH II has been enhancing artisanal **fishing communities'** resilience by improving the food, nutrition, livelihood and coping strategies of marginalized and poor host fishing communities in Cox's Bazar and in the MRE and MPA. The project emphasizes the sustainability of the ECOFISH^{BD} interventions and adopts its best practices in six Upazilas in Cox's Bazar and seven upazilas of MRE region including MPA under the ECOFISH II Activity.

Project objective and intermediate results

The overarching goal of ECOFISH II is improved social and ecological resilience of coastal fisheries securing equitable food, nutrition and livelihood benefits for artisanal fishing communities. The project would maintain or increase the productivity of fisheries, conserve biological diversity, and enhance ecosystem productivity and economic wellbeing of fishers in the ZOR and MRE including MPA. The project focuses on improved management of natural resources targeting biodiversity conservation leading to indirect adaptation benefits and enhanced adaptation capacity and resilience to shocks and stresses of the reliant communities. To achieve the goal, the project would achieve two Intermediate Results (IRs) and four Sub-IRs, which are as follows:

IR1: Improved management and governance of natural resources that form the foundation of fisheries

- Sub-IR1.1: Improved science outputs for decision-making (ecosystem health assessed and improved; biodiversity assessed and conserved; fisheries dynamics monitored).
- Sub IR1.2: Improved adaptive co-management and fisheries governance (co-management institutions strengthened; EAFM mainstreamed and strengthened; fisheries governance improved).
- Sub IR1.3: Improved policy support (HFMAP implementation ensured; MPA legal framework formulated; Hilsa Conservation & Development Fund and Payment for Ecosystem Services introduced, and transboundary legal framework formulated).

IR2: Improved equity and resilience of food, nutrition and livelihood benefits

- Sub-IR 2.1 Improved livelihood resilience of coastal fishing communities (Livelihood capacity and options diversified; women’s access to finance improved; access to improved technologies and market linkages strengthened, adaptive capacities to climate change and resilience improved).

ECOFISH II working areas

The Theater of Operation (ToO) for ECOFISH II mainly focused on the Zone of Resilience (ZOR), Meghna River Ecosystem (MRE), and the Nijum Dwip MPA areas (Figure 1). The ZOR encompasses the Cox’s Bazar-Teknaf coasts, the Naf River/Estuary Ecosystem and the St. Martin’s Island, covering Teknaf, Ukhiya, Cox’s Bazar, Ramu, Moheshkhali and Kutubdia Upazilas. The MRE includes the Tentulia River in Patuakhali and the Bishkhali, Baleswar and Payra rivers in Barguna districts (Figure 1). The Nijum Dwip MPA area specifically includes the declared 3,188 sq. km at the mouth of Meghna and Tentulia Rivers toward the Bay of Bengal around the Nijum Dwip Island areas (Figure 1). The Nijum Dwip MPA has direct impact on the lives and livelihoods of the people living in 28 unions geographically covering 5 Upazilas (Hatiya, Manpura, Charfasson, Galachipa and Rangabali) designated as Direct Impact Area (DIA). The project continued several interventions in the Direct Impact Area (DIA) of the Nijum Dwip MPA. The project continued its efforts in Alipur-Mohipur and the Kuakata sea beach, along with the surrounding fishing communities in Kalapara Upazila of Patuakhali District, and in the fishing communities around the Pyra River in Barguna District.

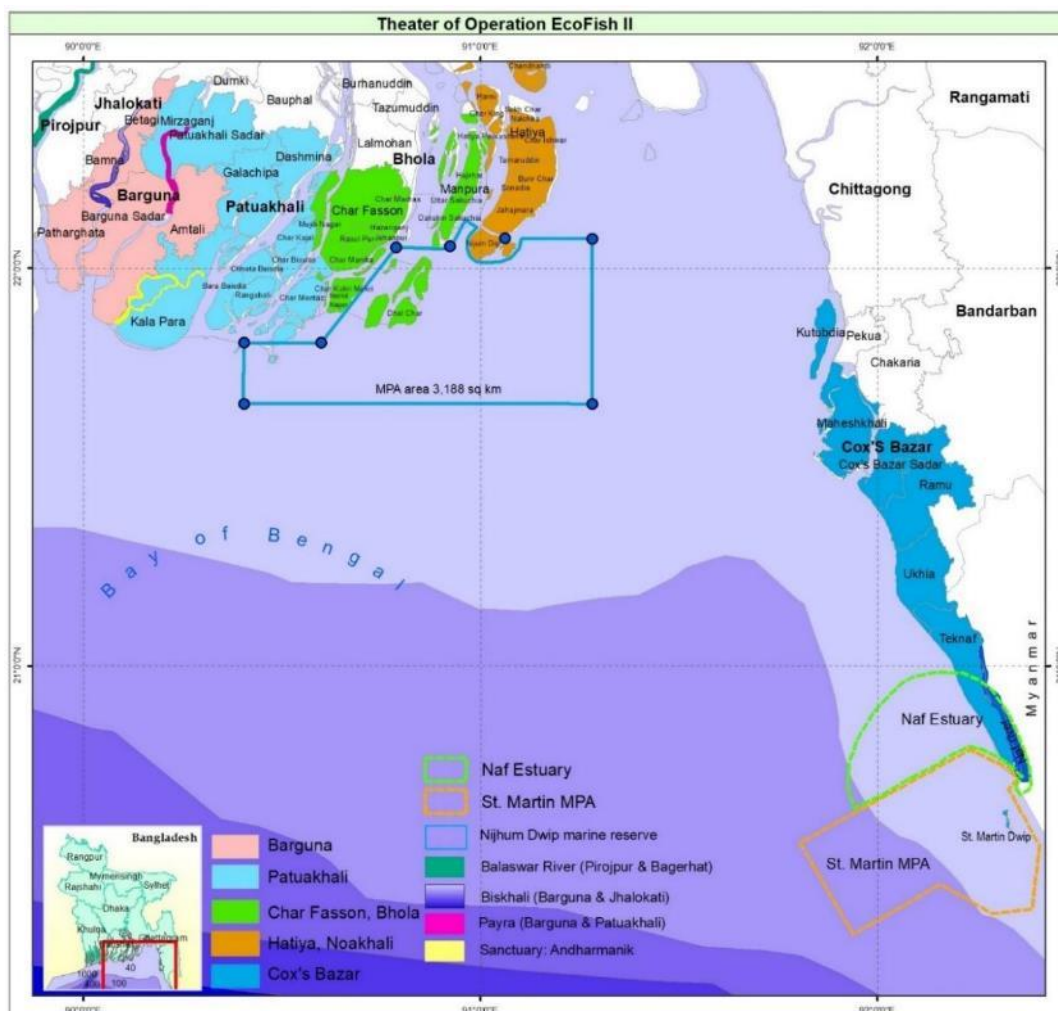


Figure 1. ECOFISH II Theater of Operations (ToO) Year 5.

I.2 Summary of Quarterly Achievements (July-September 2024)

All the ECOFISH II interventions with targets to achieve the USAID standard indicators and custom indicators in improving biodiversity, ecosystem and livelihoods under all the IRs and Sub-IRs in MRE, MPA and ZOR have been summarized in numerical terms and presented in Table 1.

Table 1. Summary of ECOFISH II results to date with performance monitoring indicators

Indicators (Year-5)	Annual Target	Q1 2024	Q2 2024	Q3 2024	Q4 2024	Achievement (% of target)	Reporting
Standard Indicators							
EG.10.2.1: Number of hectares of biologically significant areas showing improved biophysical conditions as a result of USG assistance	62,890	N/A	N/A	N/A			Yearly
EG.10.2-2: Number of hectares of biologically significant areas under improved natural resource management as a result of USG assistance"	237,190	N/A	N/A	N/A			Yearly
EG.10.2-3 Number of people with improved economic benefits derived from sustainable natural resource management and/or biodiversity conservation as a result of USG assistance	15,000	N/A	N/A	N/A			Yearly
EG.10.2-4 Number of people trained in sustainable NRM and/or biodiversity conservation by USG assistance	2,000	N/A	N/A	2,784		139%	Yearly
EG.10.2-5 Number of laws, policies, strategies, plans, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, or adopted as a result of USG assistance	2	N/A	N/A	2		100%	Yearly
CBLD-9: Percentage of USG-assisted organizations with improved performance	85%	N/A	N/A	N/A			Yearly
Custom Indicators							
Number of species newly appeared or reappeared or improved in fishers catch on the Cox's Bazar coast as a result of USG assistance	5	N/A	N/A	5		100%	Yearly
Percentage increase in hilsa and other important marine species (CPUE) on Cox's Bazar coast as a result of USG assistance	5%	N/A	N/A	5%		100%	Yearly
Number of fishing household practiced better fisheries management	3,000	N/A	N/A	N/A			Yearly
Number of households with food and nutrition security (Household Dietary Diversity and Food Consumption Score) increased as a result of USG assistance	3,000	N/A	N/A	N/A			Yearly
Number of households with improved well-being and diversified sources of income as a result of USG assistance	3,000	N/A	N/A	N/A			Yearly
Number of people gaining employment from sustainable fisheries management	50	N/A	N/A	50		92%	Yearly
Number of youth with access to improved technologies and market linkages in ZOR sites as a result of USG assistance.	65	N/A	N/A	50		67%	Yearly

2 ACTIVITY IMPLEMENTATION PROGRESS

2.1 Progress Narrative

The 3rd quarterly progress report of Year 5 describes the accomplishments and achievements of ECOFISH II Activity during July-September 2024 in all the intervened areas, focusing on the Zone of Resilience (ZOR), Meghna River Ecosystem (MRE), and the Nijhum Dwip Marine Protected Area (MPA).

Activities on ecosystem health improvement, coastal biodiversity conservation, and monitoring of coastal fisheries dynamics were accomplished under sub-IR1.1 (Improved science outputs for decision-making) and achieved satisfactory progress. ECOFISH II Teknaf, Moheshkhali, and Kutubdia teams monitored five climate changes indicators related to water quality parameters (Temperature, salinity, pH, dissolved oxygen, and alkalinity) in their respective coasts.

To improve ecosystem health, awareness campaigns, collection and safe disposal of plastic pollutants and discarded net materials from the Teknaf, Ukhiya, Cox's Bazar Sadar, Moheshkhali, Kutubdia, Charfasson and Kalapara coasts have been continued. During this quarter, 58 awareness campaign conducted and about 2,130 kg of such materials were removed by engaging 140 Blue Guards, who have been trained on ecosystem health, biodiversity conservation, and gender sensitization.

Fish landing records of 10 LCFs (Landing Center Facilitators) indicated landings of 67 species with 56 predominant species/groups in the commercial marine fishery that contributed 1,694 tons (t) of fish landing in Cox's Bazar Sadar, Kutubdia, Ukhiya, Teknaf, St. Martin, Charfasson and Kalapara areas. Other than Hilsa, croakers, anchovy, ribbonfish, Bombay duck and shrimps were the major contributors to the landings.

The project engaged 50 Citizen Scientists (CSs) in Cox's Bazar Sadar, Moheshkhali, Kutubdia, Ukhiya, Teknaf, St. Martin and the Nijhum Dwip MPA. Based on the CS's data, catch per unit efforts (CPUEs) of Hilsa and other species/groups in major intervened areas were estimated. The highest CPUE for all species/group together was found in Moheshkhali (2124 kg/boat/day), followed by Cox's Bazar (1436 kg/boat/day), MPA (613 kg/boat/day) and Kutubdia (304 kg/boat/day), while the overall average value was 781 kg/boat/day (Table 5).

For stock assessment of five important species (Talang queenfish, Indian mackerel, Fringe-scale sardine, Big-eye llish, and Sona Sea catfish), fish size monitoring activities have been continued. The size distribution of Talang queenfish was assessed and graphically presented (Figure 4).

During the third quarter of Year-5, ECOFISH II Activity collaborated closely with fishers and boat owners along with other stakeholders to promote marine and coastal biodiversity conservation, safety at sea, and develop a co-management system. ECOFISH II has continued to advance its efforts in developing a landing center-based fisheries co-management model aimed at fostering sustainable fisheries management. In collaboration with fishing villages, the ECOFISH II team organized eight development and coordination meetings for the landing center-based co-management committees (LFCCs) across various regions, including Cox's Bazar Sadar, Moheshkhali, Ukhiya, Teknaf, and Kutubdia in the ZOR area, as well as Patherghata in the MRE region. These events gathered a total of 195 participants from the eight LFCCs, focusing on raising awareness among Executive Committee members about strengthening and operationalizing the LFCCs as co-management organizations.

This quarter, ECOFISH II organized one training on biodiversity conservation, sea safety, and co-management for LFCC leaders in Moheshkhali and Ukhiya, attended by 24 Executive Committee members. The training aimed to raise stakeholder awareness and improve understanding of the Ecosystem Approach to Fisheries Management (EAFM) for managing artisanal fisheries in the Bay of Bengal. Additionally, ECOFISH II held two first aid training and distributed kits to 37 boat skippers. To support biodiversity conservation, trained fishers released 26 entangled megafaunas, including turtles, sharks, and rays, during fishing activities in Moheshkhali.

ECOFISH II commissioned a study to develop organizational frameworks for Fish Landing Center-based co-management committees. Following this, ECOFISH II hosted a Consultation Meeting on Fisheries Co-management at the Golden Tulip the Grandmark Dhaka in Banani. The event brought together key stakeholders from DoF, BFRI, BFDC, Universities, I/NGOs, Fisher Association and USAID to deliberate on the future of Bangladesh's marine and coastal fisheries, focusing on the Landing Center-based Fisheries Co-management Model for Artisanal Coastal and Marine Fisheries Resources of Bangladesh. The Consultation Meeting was a platform to disseminate insights and lessons learned from the ECOFISH II Activity's extensive research and development initiatives.

ECOFISH II is enhancing sustainable fisheries management in Bangladesh through data-driven policy recommendations and collaborative efforts with the Department of Fisheries (DoF). The project has completed a feasibility assessment for two new Marine Protected Areas (MPAs) in Kuakata coast (Patuakhali), and Salimpur coast (Chattogram), contributing to Bangladesh's commitment to conserving at least 10% of its marine areas in line with Sustainable Development Goal (SDG) 14.5. This assessment utilized citizen science and stakeholder consultations, with findings presented at a workshop attended by key officials and experts. Following the workshop, ECOFISH II plans to submit a comprehensive proposal for establishing the new MPAs.

Additionally, ECOFISH II is formulating guidelines for the fisheries blue economy, which aims to balance economic growth with environmental sustainability in the context of Bangladesh's extensive maritime resources. The project has identified opportunities and challenges in advancing this sector, facilitating discussions among stakeholders to explore investment opportunities, community involvement, and critical scientific inquiries for sustainable development.

Furthermore, ECOFISH II has commissioned a study to identify commercially valuable non-conventional fishery products, focusing on biological, nutritional, and market data. The findings reveal diverse marine ecosystems supporting species such as mud crabs, swimming crabs, spiny lobsters, seaweed and various mollusks, which hold significant potential for local consumption and export. Despite their abundance, many of these species remain underutilized. To optimize their use, sustainable stock assessments and cultivation methods are essential, particularly in supporting job creation for women in coastal communities.

ECOFISH II employs a comprehensive livelihood approach designed to enhance resilience among vulnerable fishing households, closely aligned with the Ecosystem Approach to Fisheries Management (EAFM). This strategy focuses on capacity building, income diversification, technological innovation, value chain enhancement, and nutrition development, with particular emphasis on empowering women. The underlying assumption is that by supporting artisanal fishers during difficult periods, such as fishing bans and other restrictions, households will be more inclined to engage in biodiversity conservation by adhering to government regulations and implementing local conservation measures. ECOFISH II involves women from all targeted fishing households through the Women Income and Nutrition Group (WING) and trains local young women as Community Volunteers (CVs), alongside establishing Fisheries Conservation Groups (FCGs) for men.

ECOFISH II has made significant strides in enhancing the livelihood capacities of fishing households, particularly focusing on women. In previous quarters, the program provided capacity-building training and conditional cash transfers to Year-5 beneficiary households, enabling them to establish or enhance micro-enterprises. To support these small businesses, ECOFISH II collaborated with the Department of Livestock Services (DLS) to organize 17 vaccination campaigns for livestock in targeted fishing villages. Despite challenges such as heavy rainfall and political unrest, these campaigns successfully vaccinated 1,229 goats and 4,718 poultry birds, benefiting both ECOFISH II beneficiaries and community members. Additionally, participants received valuable advice on livestock health, highlighting community interest in training local vaccinators for ongoing support.

ECOFISH II also focused on improving access to technology and market linkages for seaweed and green mussel farming. A national workshop held on August 27, 2024, brought together 60 key stakeholders to share research findings and discuss the potential of mariculture in Bangladesh. During this event, a draft

of a 10-year Low-Trophic Extractive Mariculture (LTEM) strategy was presented, outlining systemic challenges and inefficiencies in the sector, such as weak value chains and gaps in coordination among stakeholders. Twelve thematic intervention areas were identified to advance LTEM and foster a blue economy in Bangladesh. Stakeholders collaboratively selected and prioritized specific actions to maximize the potential for mariculture growth, emphasizing the importance of a coordinated and well-researched approach to enhance operational efficiency and product quality.

ECOFISH II has made significant strides in empowering women and improving their income and nutrition through Women Income Generating Groups (WINGs) and Community Savings Groups (CSGs). The project established 169 WINGs focused on regular meetings, Business Literacy School (BLS) sessions, and savings collection with a phased-out approach ensuring sustainability. , During this quarter 4,543 members of 155 WINGs have deposited BDT 1,157,330 as individual savings, and cumulative savings of those WING members as of September 2024 BDT 4,779,485. . ECOFISH II formed 53 women-led CSGs, and among those 33 has been phased out up to last quarter. During this quarter 3 CSGs deposited BDT 29,300 as individual savings, cumulative savings of CSGs as of September 2024 BDT 1,937,333. 117 WINGs and 20 CSGs have been phased out during this quarter.

During this quarter, 65 WINGs (out of 155) received matching fund of BDT 650,000 (BDT 10,000 each). The WING matching fund helps to motivate the WING members to accelerate their savings. This initiative may support accelerating the income of WINGs and create opportunities for allotting loans to a greater number of WING members. Women can fully utilize their money by doing different IGAs.

A final BLS assessment showed improvements in business literacy scores, rising from 22 to 59, and nutritional knowledge scores increased from 45 to 73.

Seven "Women Congress" events brought together 740 participants, primarily from the Women Income and Nutrition Group (WING) and Community Savings Group (CSG), to share experiences, discuss challenges and commitment for future. These events highlighted the positive impacts of training on income opportunities and climate-resilient practices. Participants reported increased financial independence and improved agricultural skills. Overall, the initiative has effectively empowered women, enhanced their nutritional knowledge, and promoted conservation awareness, while emphasizing the need for continued support and capacity building.

ECOFISH II aims to improve nutrition among poor fishing households vulnerable to low income, limited technical knowledge, and natural disasters. Despite challenges like heavy rainfall and political unrest, 1,961 (98.4%) WING members from Year 5 received training on nutrition-sensitive homestead vegetable gardening. Winter vegetable seed packs were distributed to 4,351 beneficiaries (87% of Year 4 and Year 5 members). These packs included a variety of seeds and organic fertilizers for promoting year-round access to nutrient-rich vegetables. The project encourages dietary shifts and confidence among female beneficiaries, enabling them to contribute significantly to household food security and reduce malnutrition.

During this quarter, ECOFISH II assessed the Women Income and Nutrition Group (WING), the Business Literacy School (BLS), and the role of Community Volunteers. Together, these initiatives have evolved into a promising model for promoting scalable best practices that enhance income, nutrition, conservation, and other positive outcomes. This evaluation examined the strengths and weaknesses of the current framework and offered actionable recommendations for refining these initiatives. The findings showed that the WING initiative has proven effective in boosting income, nutrition, and community support among fishing households, with 81% of members rating their performance as "Outstanding" or "Very Good." However, challenges such as social conflicts and logistical issues have been identified. To address these, recommendations include implementing a three-year graduation model and enhancing capacity-building efforts for group leaders. In addition to WING, the BLS has significantly improved literacy and awareness regarding nutrition, gender, and conservation through 24 sessions conducted over 12 months. Participants have shown substantial literacy gains, although they faced challenges such as distractions and limited study spaces. To enhance the effectiveness of these

sessions, suggestions include extending their duration and improving learning materials. Additionally, forty-eight local women serve as Community Volunteers (CVs), supporting 100-120 fishing households each. An impressive 86% of these volunteers were rated as "Outstanding" or "Very Good" in their roles. Overall, the integrated model of WING, BLS, and Community Volunteers demonstrates significant promise for sustainable development and biodiversity conservation. The assessment provides actionable recommendations for refining these initiatives, ensuring their continued effectiveness and impact on the community.

The MEL team finalized 2,000 fishing household's basic information from 21 villages and data were partially analyzed and reported during this quarter. For indicator reporting to USAID, the tools, protocol, and questionnaire development for the initial assessment of 120 informal organizations and annual performance monitoring surveys were completed, but performance data collection and the final assessment will be completed in the 4th quarter. MEL team completed the hiring of 15 data enumerators for the annual performance monitoring survey, and capacity assessment of VF CGs, CSGs and WINGs as informal institutions. Data synchronization and uploading into the database are continuing. For conducting Endline survey, the dRi firm was onboarded during this quarter and both qualitative and quantitative data collection have been completed, and report preparation is currently ongoing.

Two thousand two hundred T-shirts were produced in collaboration with the Department of Fisheries to celebrate National Fish Week. Seven hundred sixty mementoes (mugs) were produced and distributed during the women's congress. One billboard, forty-three banners, and thirty-three festoons were designed, and four placards were printed. USAID's ECOFISH II celebrated National Fish Week, International Coastal Cleanup day, a Women's Congress workshop, and a Consultation Meeting on the blue economy and marine conservation

2.2 Implementation Status

IR1: Improved Management and Governance of Natural Resources

To achieve the IR1 component, science outputs for decision-making (Sub IR1.1) opportunities were created through coastal ecosystem health improvement, biodiversity conservation, and fisheries population dynamics monitoring. For improved adaptive co-management and fisheries governance (Sub IR1.2) in the MRE, MPA and ZOR, the building blocks formation, capacity building of stakeholders and EAFM activities have been continued. The progress on different IR1 activities during July-September 2024 are summarized in Table 2.

Table 2. Summary of progress under IR1 (■ completed ■ in progress ■ yet to start)

Activities	Progress made	Status
Sub-IR1.1: Improved science outputs for decision-making		
Ecosystem health assessment and improvement	<ul style="list-style-type: none"> In the St. Martin, Moheshkhali and Kutubdia coasts climate change indicating five water quality parameters (Temperature, DO, pH, salinity & alkalinity) were monitored. For ecosystem health improvement, awareness campaigns, collection and safe disposal of plastic pollutants and net materials were continued, 58 awareness campaign conducted, and 2,130 kg of such materials were removed from Teknaf, Ukhiya, Cox's Bazar Sadar, Moheshkhali, Kutubdia, Charfasson and Kalapara coasts by engaging 140 local youths as Blue Guards. 	
Biodiversity assessment & conservation	<ul style="list-style-type: none"> SUST continued the activities of data collection on biodiversity and ecological habitats from both the Salimpur, Chattogram and Kuakata, Patuakhali coasts in July to support DoF for MPA declaration. 	
Fisheries dynamics monitoring	<ul style="list-style-type: none"> Fish landing records of 10 LCFs revealed 62 species were landed of which 56 species/groups were predominant in the commercial marine fishery that contributed 1,694 tons of fish landing in Cox's 	

Activities	Progress made	Status
	<p>Bazar Sadar, Kutubdia, Ukhiya, Teknaf, St. Martin, Charfasson and Kalapara areas.</p> <ul style="list-style-type: none"> On-board real-time fish catch was monitored engaging 50 Citizen Scientists (CSs) covering Cox's Bazar Sadar, Kutubdia, Ukhiya, Moheshkhali, Teknaf, and the Nijhum Dwip MPA. The highest CPUE for all species/groups together was found in Moheshkhali (2124 kg/boat/day), followed by Cox's Bazar (1436 kg/boat/day), MPA (613 kg/boat/day) and Kutubdia (304 kg/boat/day), and, while the overall average value was 781 kg/boat/day As a part of stock assessment, fish size monitoring of five important species (Talang queenfish, Indian mackerel, Fringe-scale sardine, Big-eye Ilish and Sona Sea catfish) have been continued. The size distribution of Talang queenfish was assessed and graphically presented (Figure 4). 	
Sub-IR1.2 Improved adaptive co-management and fisheries governance		
Formation and strengthen co-management institutions	<ul style="list-style-type: none"> Conducted refresher training on biodiversity conservation for 209 fisher members within the Fisheries Conservation Groups (FCGs). Organized four refresher training sessions on biodiversity conservation for Village-based Fisheries Conservation Groups (VFCGs), engaging 38 fisher leaders. Held eight organizational development and coordination meetings for LFCCs, attended by 195 Executive Committee members. Provided financial support to strengthen six LFCCs, each receiving BDT 50,000 during the reporting period 	
Strengthen Ecosystem Approach to Fisheries Management (EAFM)	<ul style="list-style-type: none"> Kalapara, Kutubdia, and Charfasson Ukhiya team conducted EAFM training for the executive members of the LFCC. 	
Improved fisheries governance	<ul style="list-style-type: none"> Organized First Aid training and kit distribution training for boat skippers in Cox's Bazar Sadar, Charfasson, Kalapara, and Pathorghata, attended by a total of 91 boat skippers. Held a fisher training on biodiversity conservation, co-management, and responsible fishing practices in Cox's Bazar Sadar, engaging 7 participants. Conducted awareness-raising activities on the 65-Day Marine Ban across all Moheshkhali and Ukhiya stations, with participation from 86 stakeholders across different levels. Supported trained fishers in releasing 26 entangled megafauna species, including turtles, sharks, and rays, during fishing operations. Celebrated National Fish Week 2024 in Cox's Bazar Sadar, Moheshkhali, Teknaf, and Kalapara, involving 327 stakeholders from various levels. 	
Sub-IR1.3: Improved policy support		
New MPA exploration and delineation	<ul style="list-style-type: none"> Organized training on EAFM for LFCC EC members at Moheshkhali and Ukhiya with the presence of 24 members. 	
Fisheries Blue Economy (FBE) Concept Note and Guideline Formulation	<ul style="list-style-type: none"> ECOFISH II has completed a study on exploring opportunities, challenges, and pathways for the fisheries blue economy in Bangladesh Following the study, ECOFISH organized a workshop focused on exploring opportunities, challenges, and pathways for the fisheries blue economy in Bangladesh, and developing organizational modalities for landing center-based fisheries co-management organization. 	
Non-Conventional Fishery Products to Support Blue Economy	<ul style="list-style-type: none"> Completed a study on identifying economically valuable non-conventional fishery products to strengthen the blue economy in Bangladesh. 	

Sub IR1.1: Improved science outputs for decision-making

To generate scientific information, for supporting decision-making for sustainable fisheries management, ecosystem health improvement, biodiversity conservation, and fisheries dynamics monitoring activities have been continued. The progress of different activities are briefly described below:

Ecosystem health assessment and improvement

For ecosystem health assessment, five water quality parameters such as temperature, salinity, pH, dissolved oxygen (DO), and alkalinity were monitored every month using digital equipment at 03 sites. The Kutubdia and Moheshkhali team collected those water quality parameters from three spots in their respective areas. However, the St. Martin’s Island coast data collection was incomplete in August and September due to rough weather. All the parameters were found well within the acceptable limits indicating healthy habitats for aquatic fauna and flora in the surrounding waters (Table 3).

Table 3. Climate change indicating water quality parameters (July-September 2024) in three sites

Parameter Statistic	Temperature (°C)	Dissolved Oxygen (ppm)	Salinity (ppt)	pH	Alkalinity (ppm)
Maximum	39.1	9.1	37.3	8.91	180
Minimum	26.3	3.1	9.5	7.1	15
Average	30.4	5.4	25.3	8.0	96.1

For ecosystem health improvement, 58 awareness campaign for reducing plastic pollutants and discarded net materials were conducted and safely disposed of 2,130 kg of such wastes from Cox’s Bazar Sadar, Moheshkhali, Kutubdia, Ukhiya, Teknaf, Kalapara and Charfasson areas during July-September 2024 (Table 4). A total of 140 local youth volunteers “Blue Guard” in these activities. Blue Guards from all the areas were trained on ecosystem health, biodiversity conservation, and gender sensitization issues and motivated to work closely with ECOFISH II in combating plastic pollution, Ghost fishing by discarded nets, and campaigning to create people’s awareness about those issues.

In this quarter, the collected 2,130 kg of waste includes 441 kg of polythene & soft plastics, 316 kg of plastic bottles and hard plastics, 822 kg of net materials, and 551 kg of non-decomposable other wastes (Table 4). Out of the collected waste, 325 kg of plastic bottles were connected to the local recycler for recycling or reusing the materials, and the remaining wastes were dumped at a nearby safer place from where local municipalities take care of the waste. The efforts will help in reducing pollution- the global problems of plastic and net materials, which will improve ecosystem health for sustainable biodiversity conservation.

Table 4. Quantities of different types of pollutants collected during July-September 2024 from different coastal areas and disposed of the safer areas to improve the coastal ecosystem health

Station	Type of Pollutants with Quantity (kg)					
	Polythene	Plastic bottles	Net materials	Other waste	Total	Connected for recycling/reuse
Charfasson	20	20	36	20	96	17
Cox's Bazar Sadar	106	35	92	180	412	35
Kalapara	50	50	58	47	205	50
Kutubdia	61	86	77	12	236	0
Moeshkhali	76	28	46	136	286	2
Teknaf	37	40	379	50	506	202
Ukhiya	91	58	135	106	390	19
Total	441	316	822	551	2130	325

Biodiversity assessment and conservation

ECOFISH II partner SUST continued to collect socio-ecological data from Kuakata (Patuakhali) and Salimpur (Chattogram) coasts to explore the possibility of declaring more MPAs by the DoF and MoFL in those areas.

Fisheries dynamics monitoring

Species compositions of harvested fish covering bony fishes, cartilaginous fishes and shellfishes were monitored in the major landing centers in Cox's Bazar, Charfasson and Kalapara areas. The dynamics of the status of the fisheries were monitored basically in three ways, firstly- through fish landing monitoring in the major fish landing stations, secondly- through on-board real-time catch monitoring using the Citizen Science approach, and thirdly- through monitoring the sizes (length & weight) of important species. Details of those approaches are described in the following sub-sections:

Fish landing and price monitoring

In Cox's Bazar Sadar, Kutubdia, Ukhiya, Teknaf, St. Martin, Charfasson and Kalapara areas, 10 trained Landing Center Facilitators (LCFs) have been engaged to monitor fish landings in 10 major fish landing centers using smartphone with Bangla apps. LCFs from all the areas were trained on catch monitoring, ecosystem health, biodiversity conservation and gender sensitization issues. They recorded species-wise landing and approximate wholesale prices of those species. The fish landing records revealed 62 fish predominant species/groups in the commercial marine fishery that contributed 1,694 tons (t) of fish landing in the major fish landing center in Cox's Bazar Sadar, Kutubdia, Ukhiya, Teknaf, St. Martin, Charfasson, and Kalapara areas during the reporting quarter. Out of the landed species, landings of 56 major contributors are graphically presented in Figure 3. Other than Hilsa, croakers, anchovy, ribbonfish and Bombay duck were the dominant contributors. Within Hilsa landings, the medium size Hilsa (500g size, 80 t) was the highest contributor, followed by the premium size Hilsa (1kg size, 9 t) and small Hilsa (250g, 4 t). Sardine, pomfret, herring, sea catfish, red seabream, little tuna, mackerels, rays and shrimps were the other important contributors to fish production (Figure 2).

Citizen Science approach for CPUE monitoring

Catch per unit effort (CPUE) is an important indicator for fish abundance monitoring. ECOFISH II introduced real-time catch monitoring system using Citizen Science approach and engaged 50 trained Citizen Scientists (experienced and trained boat skippers). Analysis of the data reveals the catch per unit effort (CPUE) for Hilsa and all other important species/groups harvested and contributed significantly. Based on the CS's data stored in the database in this quarter, CPUEs of Hilsa and other species/groups in major intervened areas were estimated. The highest CPUE for all species/groups together was found in Moheshkhali (2124 kg/boat/day), followed by Cox's Bazar (1436 kg/boat/day), MPA (613 kg/boat/day) and Kutubdia (304 kg/boat/day), and, while the overall average value was 781 kg/boat/day (Table 5). The CPUE indicated a good daily catch of the major species as this quarter partly covered the second peak harvesting season of marine fish.

Table 5. Average catch per unit effort (CPUE, kg/boat/day) in different intervened areas of ECOFISH II as recorded by CSs during July-September 2024

Station	Boat size and engine power			CPUE (kg/boat/day)		
	Boat length (m)	Boat width (m)	Boat power (hp)	Hilsa	Other Fish	Total
Cox's Bazar	10.5	3.5	44	38	1398	1436
Moheshkhali	23.8	14.1	64	234	1890	2124
Kutubdia	11.8	4	32	27	277	304
Ukhiya	7.2	2.4	23	11	88	100
Teknaf	9.5	3.4	22	5	107	111
MPA	13.8	5	133	379	234	613
Average	12.7	5.4	53	116	666	781

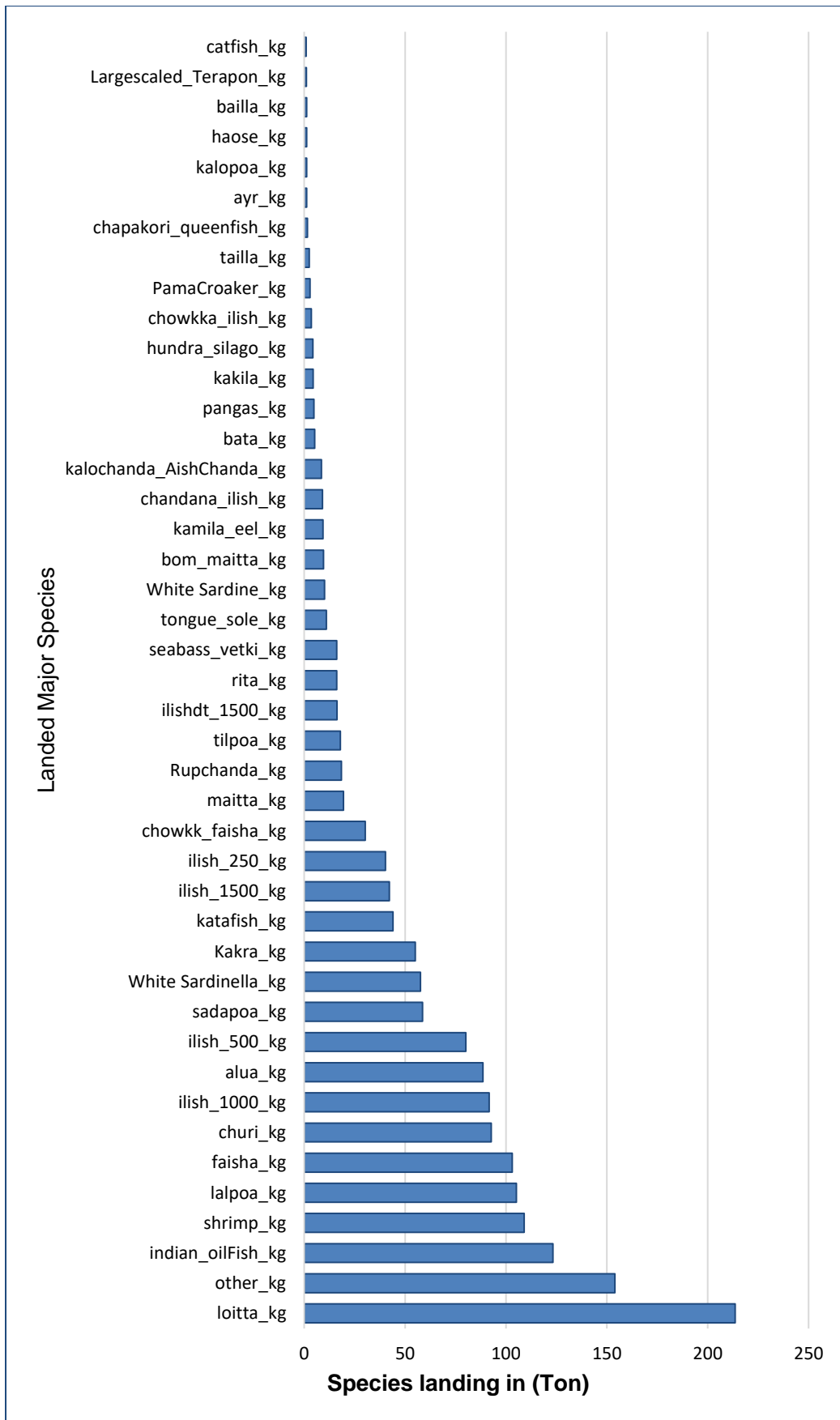


Figure 2. Quantities of 62 major fish landed in the ZOR and MRE during July-September 2024.

Fish size monitoring for stock assessment

ECOFISH II continued stock assessment activities of five important marine fish species other than Hilsa. The selected species were Talang queenfish, Indian mackerel, Fringe-scale sardine, Big-eye Ilish and Sona sea catfish. As a part of stock assessment activities, ECOFISH II field teams have been collecting morphometric data such as total length (TL), standard length (SL), fork length (FL) and weight (W) of the species. During the July-September 2024 period, a total of 2,393 specimens of the selected five species were measured covering Cox's Bazar Sadar, Moheshkhali, Kutubdia, Ukhiya, Teknaf, Charfasson and Kalapara areas. In addition, 262 specimens of Hilsa, Pangas, Croaker and Silver whiting were also measured to monitor the average length and weight of those species during the period.

As a representative, the size compositions of Talang queenfish (*Scomberoides commersonianus*) are graphically shown (Figure 3). The dominant size group was found between 27 cm and 36 cm TL, which consists of 58% of the population. Based on the collected year-round size data along with catch data, the stocks of the five species will be estimated and the MSY (maximum sustainable yield) will be predicted, which will lead to formulating sustainable management measures for those species.

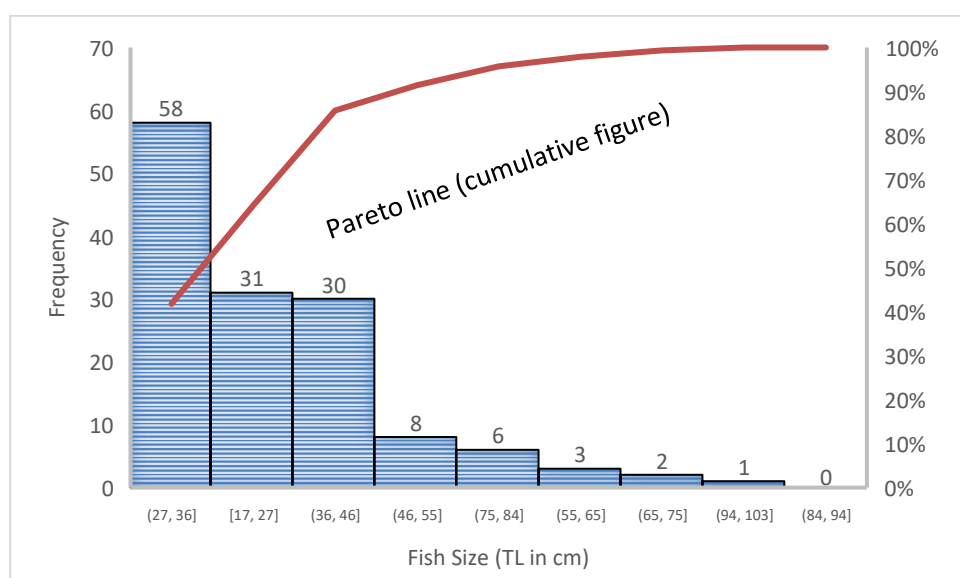


Figure 3. Graph showing size compositions of Talang queenfish (*Scomberoides commersonianus*) during July-September 2024.

Sub-IR1.2: Improved adaptive co-management and fisheries governance

Adaptive Fisheries co-management is a critical component of effective governance for the enhancement and conservation of the Bay of Bengal. As part of its final-year strategy, ECOFISH II has embarked on the establishment and operationalization of landing center-based co-management committees (LFCC) to enhance collaboration with stakeholders involved in artisanal fisheries in the coastal region of Bangladesh. The accomplishments of Sub-IR1.2 include the following activities:

Formation and strengthening of co-management institutions.

The ECOFISH II Activity team organized refresher training focused on biodiversity conservation, engaging a total of 209 fisher members from the Fisheries Conservation Groups (FCGs) in Moheshkhali, Kutubdia and Teknaf (Figure 4). These training courses aimed to reinforce participants' knowledge and practices related to biodiversity preservation. Additionally, refresher training was also conducted for the Village-based Fisheries Conservation Group (VFCG), involving 38 fisher leaders in Moheshkhali. This targeted approach ensures that both grassroots members and leaders are equipped with up-to-date knowledge and skills, enhancing their capacity to contribute to sustainable fisheries management and conservation efforts in their communities.



Figure 4 FCG's Training at Katabuniya, Teknaf (left) and Training on biodiversity conservation, Safety at sea and co-management for VFCG's EC members at Moheshkhali

ECOFISH II continued its efforts to develop a landing center-based co-management model, emphasizing organizational development and strengthening. The initiative focuses on enhancing the skills of the formed Landing Center-Based Co-Management Committees (LFCCs) while also raising awareness among stakeholders. Within this co-management approach, special attention is directed toward increasing the awareness and building the capacity of a diverse range of stakeholders at the landing centers, including *arotders*, boat owners, and others involved in the trading of fish and fisheries products. During this period, eight organizational development and coordination meetings were conducted for the LFCCs, engaging 195 executive committee members across all stations (Figure 5).



Figure 5 Bi-Monthly Meeting of the Landing Center-Based Co-Management Committee (LFCC) in Sonarpara, Ukhiya. This meeting serves as an essential platform for members of the LFCC to discuss ongoing initiatives, assess the progress of co-management strategies, and address challenges faced by the committee. Participants include fishers, boat owners, *arotders*, and other stakeholders involved in the fisheries sector.

ECOFISH II commissioned a study on Organizational Modalities for Landing Center-Based Fisheries Co-Management aimed at promoting sustainable coastal and marine fisheries. This study was led by Md. Masud Rana from Bangladesh and Dr. Romy Carbungel from the Philippines. It focused on conducting an in-depth review of existing fish landing center management systems to identify their strengths, weaknesses, opportunities, and threats. The study aimed to develop detailed institutional frameworks for a fish landing-based co-management model that clearly defines roles, responsibilities, decision-

making processes, and mechanisms for stakeholder collaboration. The goal was to produce comprehensive guidelines for effective organizational modalities in landing center-based fisheries co-management initiatives, thereby contributing to the sustainable management of coastal and marine fisheries.

Following this study, ECOFISH II hosted a Consultation Meeting on Fisheries Co-management at the Golden Tulip the Grandmark Dhaka in Banani. The event brought together key stakeholders from the Department of Fisheries (DoF), Bangladesh Fisheries Research Institute (BFRI), Bangladesh Fisheries Development Corporation (BFDC), various universities, international and national NGOs, Fisher Associations, and USAID. Participants engaged in discussions about the future of Bangladesh's marine and coastal fisheries, with a particular emphasis on the Landing Center-based Fisheries Co-management Model for Artisanal Coastal and Marine Fisheries Resources in Bangladesh. This consultation meeting paved the way for developing a legal framework for a fish landing center-based co-management system.

Strengthen Ecosystem Approach to Fisheries Management (EAFM)

Ecosystem Approach to Fisheries Management (EAFM) approach is for the understanding of the need and concept of natural resource management of capture fisheries in developing, implementing, and monitoring plans, and identify the potential benefits and application in decision-making processes related to coastal and marine fisheries in Bangladesh. To strengthen the capacity of the LFCC EC members' training on biodiversity conservation, safety at sea, co-management were organized at Ukhyia Team organized EAFM training for Sonarpara LFCC with a total participation of 09 EC members (Figure 6).



Figure 6 Ecosystem Approach to Fisheries Management (EAFM) training for the newly formed Sonarpara Landing Center-Based Co-Management Committee (LFCC) in Ukhyia

Improved fisheries governance

One of ECOFISH II's key initiatives focuses on training boat skippers in biodiversity conservation and responsible fishing practices to enhance fisheries governance. These training programs aim to increase the knowledge and awareness of boat skippers, who play a vital role in guiding their fellow crew members to comply with regulations and adopt responsible fishing practices that support improved biodiversity. During this quarter, training on First Aid and kit distribution for boat skippers was held in Cox's Bazar Sadar, Charfasson, Kalapara, and Pathorghata, with a total of 91 boat skippers participating

(Figure 7). Additionally, training for fishers on biodiversity conservation, co-management, and responsible fishing was conducted in Cox’s Bazar Sadar, attended by 07 participants, to help them understand resource management as well.



Figure 7 Boat Skipper Training at Charfasson on biodiversity conservation and responsible fishing (left) and Fishers’ training on biodiversity conservation in Cox’s Bazar Sadar

Effective fisheries governance requires legal, social, economic, and political arrangements to manage fisheries. ECOFISH II focuses on resource conservation through awareness building programs. These include awareness and training of fishers on responsible fishing practices and compliance with various spatio-temporal bans. The LFCC focused awareness program on 65 Day Marine Ban was organized in coordination with DoF at Moheshkhali and Ukhiya, and a total of 86 stakeholders from different levels participated in the events (Figure 8). In addition, National Fish Week 2024 was celebrated in Cox’s Bazar Sadar, Moheshkhali, Teknaf and Kalapara with the participation of 327 stakeholders from all levels. (Figure 9).



Figure 8: Awareness program on 65 Day Marine Ban at Ukhiya



Figure 9: National Fish Week 2024 celebration at Teknaf

Sub-IR1.3: Improved policy support

ECOFISH II gathers valuable insights from the field experience, lessons learned, and science-based data to inform policy recommendations, working with and providing supports to the Department of Fisheries (DoF) for policy formulation, approval and implementation. This approach strengthens a sustainable fisheries management framework that combines community engagement, research, and adaptive practices for long-term impact. Key policy support activities facilitated by ECOFISH II for the DoF include:

Assessment for new Marine Protected Area (MPA) declaration and management

The Ministry of Fisheries and Livestock recently declared 734.17 square kilometers of marine area in and around the Naf estuary of the Bay of Bengal as fifth Marine Protected Area (MPA) in Bangladesh marking a significant milestone to Bangladesh’s commitment to conserving at least 10% of its marine areas in alignment with Sustainable Development Goal (SDG) 14.5. This new designation brings Bangladesh’s

protected marine areas to 6.82%, highlighting the country's dedication to advancing marine conservation.

To fully meet this international commitment, Bangladesh requires additional Marine Protected Areas (MPAs), and the Department of Fisheries (DoF) has requested continued support from WorldFish in assessing potential new sites. In response, ECOFISH II, in collaboration with Shahjalal University of Science and Technology (SUST), assessed two areas suitable for potential new MPAs. The Kuakata coast in Patuakhali (south-central) was identified to support the conservation of threatened fish and megafauna species across three biodiversity hotspots. Another proposed area along the Salimpur coast in Chattogram (southeast) is targeted for the conservation of vital saltmarsh habitats, dominated by *Porteresia coarctata*, which provide critical support for diverse species, including shorebirds, mudskippers, horseshoe crabs, and other benthic organisms. This assessment incorporated citizen science, interviews, and local stakeholder consultations.

The findings were presented in a central workshop in Dhaka, attended by the Director General of the Department of Fisheries (DoF), USAID representatives, and researchers and practitioners from organizations such as WorldFish, CNRS, and SDF, along with experts from both technical and social science fields (Figure 9). Following the workshop, ECOFISH II is integrating the feedback received and will submit a comprehensive proposal to the DoF for the establishment of these new MPAs.

Previously, USAID/ECOFISH^{BD} and ECOFISH II assisted the government in declaring the Nijhum Dwip MPA and developing its management plan, gaining valuable insights into the establishment and management of protected areas. The experiences gathered from ECOFISH II underscore that while the declaration of an MPA is a pivotal step in safeguarding aquatic biodiversity, it must be accompanied by the development and implementation of a comprehensive management plan. Such implementation is essential for realizing the full benefits of conservation initiatives, both for ecosystems and the livelihoods that depend on them. For the successful establishment and management of MPAs, it is crucial for the government, philanthropic organizations, and donors to increase their investment in marine conservation.

Exploring opportunities, challenges and way-forward for the Fisheries Blue Economy of Bangladesh

Bangladesh, located in the Indo-Pacific region, possesses significant potential to harness its marine resources for economic growth and development. Following the resolution of maritime boundary disputes with Myanmar in 2012 and India in 2014, the country gained rights to 118,813 square kilometers in the Bay of Bengal, including its territorial sea and Exclusive Economic Zone (EEZ). The fisheries blue economy represents a transformative approach to sustainable resource management, offering the potential to drive economic growth, protect vital ecosystems, and enhance the livelihoods of millions reliant on aquatic resources. However, the sector faces challenges such as overfishing, climate change impacts, weak value chains, and inadequate infrastructure.

The Bangladeshi government's blue economy framework aims to balance economic growth with environmental sustainability by promoting responsible fishing practices, sustainable marine fisheries management, the establishment of Marine Protected Areas (MPAs), and the protection of marine and freshwater habitats. Despite being an emerging sector, the blue economy offers significant growth opportunities within fisheries. To leverage this potential, the ECOFISH II project has commissioned a study to explore the opportunities, challenges, and way forward for advancing the fisheries blue economy in Bangladesh. The findings were presented in a consultation workshop in Dhaka, attended by the Director General of the Department of Fisheries (DoF), USAID representatives, and researchers and practitioners from national and international organizations. Participants were invited to discuss several key questions regarding the fisheries blue economy. They explored what the most promising investment opportunities within this sector are and examined the role local communities can play in its development. Additionally, they considered which areas of scientific investigation are crucial for advancing the fisheries blue economy and identified innovative approaches that could be adopted to enhance coastal aquaculture and mariculture. Through these discussions, participants aimed to uncover actionable

insights that would contribute to the sustainable growth of the fisheries blue economy. However, ECOFISH II is incorporating these feedback into the study and will subsequently submit it to the Department of Fisheries (DoF).



Figure 10. Md. Zillur Rahman, Director General of the Department of Fisheries (DoF), Aditya Sood, Environment Officer at the Office of Economic Growth, USAID/Bangladesh, and Dr. Benoy Kumar Barman, Interim Country Representative for WorldFish Bangladesh, participated in the workshop focused on exploring opportunities, challenges, and pathways for the fisheries blue economy in Bangladesh, developing organizational modalities for landing center-based fisheries co-management system, and assessing site suitability for new Marine Protected Areas (MPAs) in the country. Due to political turmoil, three important topics were combined into a single workshop rather than organizing separate workshop for each.

Non-Conventional Fishery Products to Support Blue Economy

ECOFISH II has commissioned a study focused on identifying commercially valuable non-conventional fishery products to strengthen the blue economy in Bangladesh. This study aims to gather essential biological and nutritional data and to explore the market potential of these non-traditional fishery products. Findings highlight that Bangladesh's marine and coastal waters host diverse ecosystems, rich in species such as fish, shrimp, molluscs, crabs, and seaweed, supporting both local consumption and export markets. Live mud crabs (*Scylla* spp.), highly sought after in East Asia, especially soft-shell varieties, generate higher returns but also increase pressures on wild stocks. Other species like swimming crabs (*Portunus* spp.), spiny lobsters (*Panulirus homarus*), and cephalopods hold significant export value, while nutrient-dense seafoods such as oysters, mussels, and clams offer opportunities for mariculture expansion to meet domestic and international demand. Species with medicinal and pharmaceutical potential, such as sea cucumbers, horseshoe crabs, edible jellyfish, and mineral-rich seaweed, are emerging as valuable resources for both health and food industries.

Despite their abundance, non-conventional species and bycatch, including swimming crabs and cephalopods, remain underutilized due to their size and appearance, though their use could reduce post-harvest losses. Sustainable exploitation of these species requires stock assessments and ecologically sound cultivation methods. Expanding mariculture for species like molluscs and seaweed could also support job creation, particularly for women in coastal communities. A deeper understanding of sustainable harvest levels and responsible practices for these species is essential to balancing ecological health with economic growth, advancing Bangladesh's Blue Economy goals.

IR2: Improved Equity and Resilience of Food, Nutrition and Livelihood Benefits

Sub-IR2.1: Improved livelihood resilience of coastal fishing communities

Strengthening livelihood resilience is the core emphasis of ECOFISH II, which combines the [EAFM](#) (Ecosystem Approach to Fisheries Management) concept in reaching well-being outcomes. This component prioritizes empowering the women of the fishing households through creating and diversifying productive assets, access to innovative technologies, and services, improving existing value chains, and enhancing life skill capacities focusing on gender, nutrition, and income to improve the livelihood resilience. This component also focuses on mobilizing partnerships with public and private sector agencies that could contribute to the sustainability of livelihood interventions. The assumption is that the alternative income of the fishers will help reducing IUU fishing, contributing to the Blue Economy in Bangladesh and mitigating carbon emissions. Altogether, the development of adaptive capacities equips them to withstand various shocks and stressors, making them more responsible for conserving aquatic biodiversity.

Under this component, ECOFISH II implemented four interconnected activities through the WorldFish team, a partner organization TMSS¹ to carry out livelihood-related activities. Chattogram Veterinary and Animal Science University (CVASU) contributed to research on green mussel and seaweed value chain, while Noakhali Science and Technology University (NSTU) assisted in exploring the market orientation of nutritionally sensitive fish and seaweed-based products.

The progress of various IR2 activities to ensure equitable livelihood benefits for both men and women is shown in Table 6. The following sections provide a synopsis of these accomplishments from July to September 2024.

Table 6. Summary of progress under IR2. (■ completed ■ in progress ■ yet to start)

Activities	Progress made	Status
Sub-IR2.1: Improved livelihood resilience of coastal fishing communities		
Diversify and improve livelihood capacity and options	<ul style="list-style-type: none"> The team continued to follow-up with the beneficiary households to ensure that they receive the necessary services for their small businesses. Facilitated 17 vaccination campaigns completing the target for this year, successfully vaccinating 1,229 goats and 4,718 poultry birds. 	■
Access to innovative and climate resilient technology and market	<ul style="list-style-type: none"> ECOFISH II, in collaboration with the DoF, held a national level workshop on August 27, 2024, engaging 60 key stakeholders. ECOFISH II presented a draft of a 10-year Low-Trophic Extractive Mariculture (LTEM) strategy for Bangladesh during the workshop developed in partnership with CVASU. ECOFISH II is currently finalizing the closeout the partnership with NSTU. 	■
Facilitate women's empowerment, income and nutrition improvement	<ul style="list-style-type: none"> Organized 7 "Women Congress" events at seven locations to discuss experiences, challenges, opportunities, and future directions for women's group activities, attending a total of 740 participants (84% women). WING members of year 5 have participated in 277 sessions of the BLS where 7,494 women participated 155 WINGs have saved BDT 1,157,330 during the 3rd quarter and have cumulative savings of BDT 4,779,485 . 3 CSGs have saved BDT 29,300 during the 3rd quarter and 38 CSGs have cumulative savings of BDT 1,937,333. 117 WINGs and 20 CSGs have been phased out following the guideline "WING exit strategy" and "CSG exit strategy" Developed and distributed 8,000 booklets on Nutrition and Gender Awareness for artisanal fishing communities. Conducted a final knowledge assessment for Year 4 WING members, with 	■

¹ [A leading female headed non-government organization \(NGO\) in Bangladesh and South Asia.](#)

Activities	Progress made	Status
	982 participants, where 32% were randomly selected from each WING. <ul style="list-style-type: none"> Conducted three qualitative assessments on key approaches—WING, BLS, and CV. 	
Accelerate nutrition sensitive homestead horticulture	<ul style="list-style-type: none"> Trained 1,961 WING members (98.4%) of year 5 on nutrition-sensitive homestead vegetables gardening. Winter vegetable seed packs were distributed to 4,351 beneficiaries (87% of Year 4 and Year 5) to enhance year-round production and consumption of nutrient-rich vegetables. 	

Diversify and improve livelihood capacity and options

In previous quarters, ECOFISH II delivered capacity-building training and completed conditional cash transfers to selected Year-5 beneficiary fishing households. This assistance empowered women to secure essential resources to establish new household-based micro-enterprises or enhance their existing ones.

The ECOFISH II team has followed up with beneficiary households to ensure they access essential services for their small businesses, particularly focusing on animal vaccination. Collaborating closely with the Department of Livestock Services (DLS), ECOFISH II has aimed to improve the accessibility of animal vaccines for fishing households. During the reporting quarter, the field team, in partnership with DLS and WING, organized 17 vaccination campaigns (Figure 11), successfully vaccinating livestock in all Year-5 target fishing villages, despite frequent rescheduling due to heavy rainfall and political unrest. These campaigns led to the vaccination of 1,229 goats and 4,718 poultry birds, involving ECOFISH II beneficiaries and other community members. Additionally, many participants received prescriptions and advice from vaccinators and para-veterinarians regarding common livestock ailments. While ECOFISH II has facilitated connections between WING members and the DLS, community members expressed interest in training local vaccinators and para-veterinarians within their villages to ensure ongoing, accessible vaccination support.



Figure 11: Vaccinator from Department of Livestock Service (DLS) providing vaccine to goat and poultry at vaccination campaigns facilitated by ECOFISH II at Ukhiya (left) and Kalapara (right)

Access to improved technology and market linkages

Seaweed and Green Mussels farming

After postponing the workshop due to political unrest, ECOFISH II, in collaboration with the Department of Fisheries, successfully conducted a national-level workshop on August 27, 2024. The event engaged 60 key stakeholders, including policymakers, industry representatives, academics, NGOs, and entrepreneurs. Its purpose was to share findings and insights from ECOFISH II's research and development efforts related to the seaweed and bivalve value chains and to discuss future directions for unlocking the potential of mariculture in Bangladesh.

During the workshop, ECOFISH II unveiled a draft of a 10-year Low-Trophic Extractive Mariculture (LTEM) strategy for Bangladesh, developed in collaboration with CVASU. This strategy integrates lessons learned

from the past four years and insights gathered from previous workshops, aiming to tackle the significant challenges impeding the growth and sustainability of mariculture. It highlights that traditional project-focused approaches have often neglected broader systemic needs, resulting in inefficiencies. Additionally, a weak value chain hampers operational efficiency and limits market reach, while coordination gaps among stakeholders fragment collective efforts. Insufficient investment in research has created critical knowledge deficits, and the absence of robust regulatory and certification frameworks leads to inconsistent practices that adversely affect product quality, safety, and export potential.

Twelve thematic intervention areas were identified to address potential barriers to advancing Low-Trophic Extractive Mariculture (LTEM) and fostering a blue economy in Bangladesh, based on literature reviews and key informant interviews. These opportunities were presented in a plenary session, where stakeholders engaged in collaborative discussions to select and finalize specific interventions. Together, they developed a sequence of actions designed to maximize the potential for LTEM growth, considering the specified timeframes for implementation and the likelihood of success for each intervention. This collaborative approach ensured that stakeholders determined the most effective order of actions to facilitate progress in mariculture development.



Figure 12: The Director General of the Department of Fisheries (DoF), the Director of Blue Economy at DoF, and the Interim Country Director of WorldFish participated in a workshop titled "Seaweed and Bivalve Seafood Value Chain in Bangladesh: Research Outcomes and Future Directions" held at the DoF.

Fish-based items production and marketing

NSTU is currently finalizing the necessary deliverables to successfully conclude its partnership in the upcoming quarter. This process includes reviewing and compiling all project outcomes, reports, and documentation to ensure that all commitments and expectations are fulfilled.

Facilitate women’s empowerment, income and nutrition improvement

Operationalization of WING

ECOFISH II continues to support the institutional development of 169 Women Income Generating Groups (WINGs) formed in years 4 and 5, focusing on regular meetings, Business Literacy School (BLS) sessions, savings collection, and leadership development. In this 3rd quarter, Year 5 WING members actively participated in sessions 9-12 of the BLS, achieving an attendance rate above 85%.

Year 4 and Year 5 WING members have continued their savings activities by updating passbooks and bank registers. In the recent quarter, 155 WINGs saved a total of BDT 1,157,330. As of September 2024, 4,543 members from 155 groups have collectively saved BDT 4,779,485.

ECOFISH II has phased out 70% of the Women Income and Nutrition Groups (WINGs), having completed the transition for 117 out of the total 169 groups. This achievement follows the implementation of a structured "WING exit strategy," which was designed to ensure that the groups can sustain their activities and benefits independently after the project's support ends. During this reporting period, it has

conducted phaseout meeting (Figure 13) with 117 out of 169 WINGs with the participation of 3,424 women.

According to the matching fund distribution guideline, the WINGs that have operated for a minimum period (year 4 WINGs-11 months and year 5 WINGs-6 months), ensured 80% regular savings, regular savings deposition in the bank, regular meetings with the participation of around 80% members, writing meeting resolutions correctly, updated passbook and registers (savings and bank) accurately and IGA performance is satisfactory will get matching fund of BDT 10,000 (Ten thousand) per WING. The WING matching fund helps to motivate the WING members to accelerate their savings. This initiative may support accelerating the income of WINGs and create opportunities for allotting loans to a greater number of WING members. Women can fully utilize their money by doing poultry and livestock rearing, vegetable gardening, fish culture, sewing/clothing business, grocery, dried fish business, handicraft, basket making business, and other small-scale business etc. This assistance encourages WING members to save frequently and assists at the beginning of loan activities among the WING members. During this quarter 65 WINGs received matching fund of BDT 650,000 (BDT 10,000 each).



Figure 13: ECOFISH II officials facilitating the phase out meeting with WING members.

As part of the exit strategy, a booklet² on nutrition and gender awareness has been developed with thematic illustrations to make the key messages more understandable for all WING members, reinforcing what they have learned during the WING awareness sessions. The booklet covers essential nutrition topics, including dietary diversity, optimal nutrition practices during the critical 1,000-day window, adolescent nutrition, hygiene promotion, sanitation, safe drinking water, family planning, and the prevention of early marriage. Gender awareness is also integrated as a crucial component. A total of 8,000 booklets have been printed and distributed (Figure 14) to the ECOFISH II beneficiaries across years 1 to 5.

² Islam and Sharmin. 2024. Booklet on Nutrition and Gender Awareness for Women in Marine and Coastal Artisanal Fishing Communities. Printed in *Bengali*.



Figure 14: The cover of the booklet on nutrition and gender awareness (left) and its distribution at Ukhiya (right)

The team has conducted the final knowledge assessment of BLS with 982 members of year 4 WINGs which is 32% of the total members representing each WING. This has been conducted to assess the changes in their knowledge and practices on nutrition, gender, conservation, and basic literacy since they graduated from the BLS after completing 24 sessions conducted twice a month and awareness sessions. This assessment evaluated changes in knowledge and practices related to nutrition, gender, conservation, and basic literacy after completing 24 sessions. Results show a significant enhancement in business literacy, with average scores increasing from 22 in the initial assessment to 59 in the final evaluation. Skills improved notably: the percentage of participants able to sign their names rose from 29% to 65%, those reading and writing in Bengali increased from 20% to 55%, and general calculation proficiency improved from 23% to 62%. (Figure 15). The BLS program has had a substantial impact, empowering women economically and increasing their involvement in household and community decision-making while raising awareness of gender issues, nutrition, and aquatic biodiversity conservation.

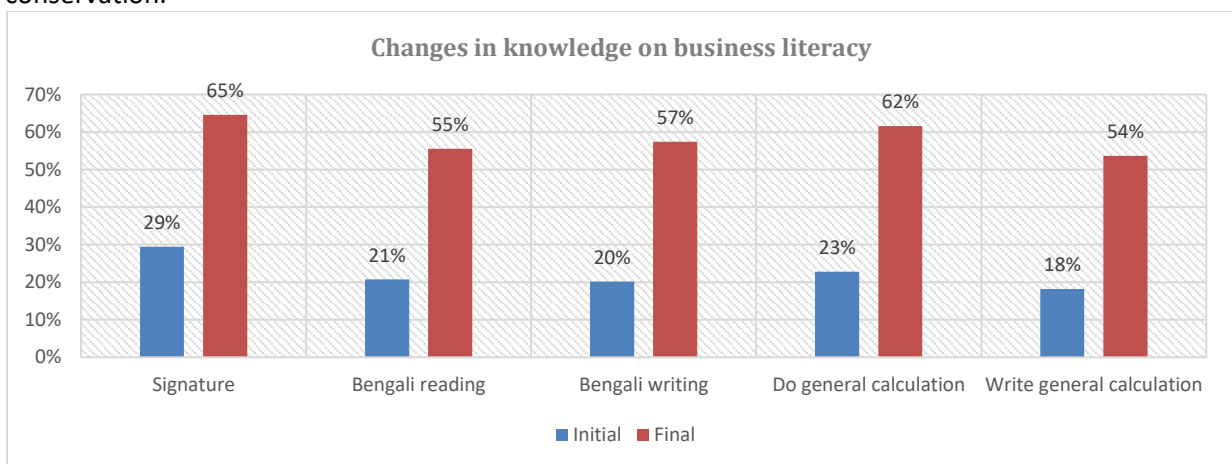


Figure 15: Changes in knowledge on business literacy of the year 4 WING members

On the nutrition front, a notable shift in nutritional knowledge and practices has been observed. Their knowledge score increased to 73 at the final assessment while it was 45 at the initial stage signifying their overall understanding of child and maternal nutrition and other essential nutritional practices. For basic nutrition-related ten questions were asked, and Figure 16 presented the change in their knowledge level on the specific subject matter; knowledge has improved in every aspect, but remarkable changes are found for dietary diversity, nutrition for the first 1000 days of children, vegetable importance, and critical times of handwashing.

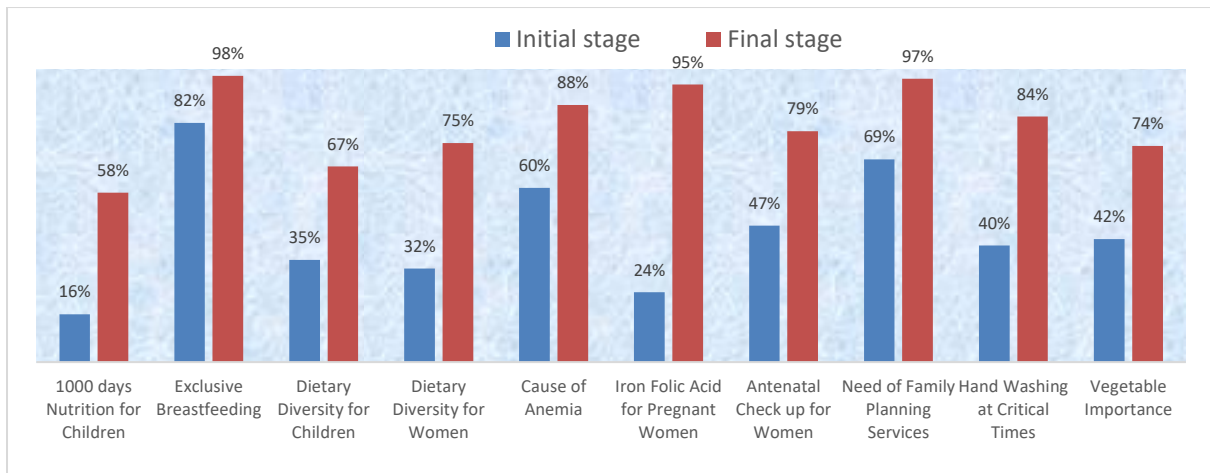


Figure 16: Percent of year 4 WING members have knowledge on 10 aspects of nutrition.

Community Savings Group (CSG)

ECOFISH II has formed 53 women-led Community Savings Groups (CSG) during 2020-2022 and continued its support to run its group activities up to date. During the 3rd quarter, the field team facilitated a total of 6 meetings with 167 CSG members. It was reported that only 3 CSGs saved BDT 29,300 during this quarter and 38 CSGs have collectively saved BDT 1,937,333 up to September 2024.

As ECOFISH II is in its fifth year, it has initiated the gradual phasing out of the CSGs following the “CSG Exit Strategy” guideline, aiming to empower CSG members to independently manage group operations, leading to the conclusion of associated activities. During the 3rd quarter, the team organized 20 CSGs phased out meetings (Figure 17) with 547 members. Up to this quarter, all 53 CSGs have been successfully phased out.



Figure 17: Community Savings Group (CSG) phase-out meeting at Dakshin Shilkhali, Teknaf (left) and Kupdhon, Patharghata (right)

Women Congress: Upazila level exposure workshop for WING and CSG leaders

ECOFISH II hosted seven one-day "Women Congress" events, gathering women from artisanal fishing households across seven stations. The events were celebrated under the slogan "Women are becoming aware of biodiversity conservation, contributing to life and livelihood!" As part of the exit strategy, the Congress aimed to share experiences regarding the challenges, opportunities, and future directions of women's group activities while facilitating connections with various stakeholders. A total of 740 participants attended, with women constituting 84% of the attendees (Figure 18). Among the participants were officials from the Upazila Administration, the Department of Fisheries, Livestock Services, Agriculture Extension, and Women Affairs, along with private sector representatives, female Blue Guards, Community Volunteers, members of landing center-based fisheries co-management committees (LFCC), representatives from partner organizations, service providers, media professionals, and ECOFISH II team members.

Women from various artisanal fishing villages expressed their delight in participating, viewing the event as a valuable opportunity to share their experiences. They highlighted the positive impact of the ECOFISH II project on their lives, particularly through training that opened alternative income opportunities and introduced climate-resilient technologies. While many previously struggled to grow vegetables, now nearly all women in the fishing community cultivate seasonal vegetables in their homestead gardens, benefiting financially and nutritionally. They have adopted practices like sack bag and rooftop gardening, using their additional income to support household needs and cover education and health costs. Additionally, they have started individual and group savings, learning to manage their finances and engage with banking services. The Business Literacy School (BLS) initiatives have significantly enhanced their knowledge and skills. Many women expressed gratitude for their newfound abilities to sign, read, write, and perform basic calculations. The key messages from awareness sessions on nutrition, gender, and conservation were well-received, with participants appreciating the BLS materials, including nutrition flipcharts, food plates, and various subject booklets. They committed to continuing the positive initiatives fostered by their participation in the ECOFISH II project.

Community Volunteers and female Blue Guards also shared their perspectives on their current capacities in income-generating activities, nutrition knowledge, and conservation efforts. Their contributions are recognized within the community, boosting their confidence for self-development.

Despite these significant achievements, participants discussed ongoing challenges, particularly the impacts of climate change on coastal fisheries, difficulties in maintaining consistent capacity-building efforts, and limited market access for fishing communities. Women expressed aspirations for more advanced skills training, better access to services such as vaccinations and input and output markets, and improved infrastructure to enhance their economic activities. Government officials and private sector representatives assured participants that ECOFISH II beneficiaries would continue to receive support and cooperation beyond the project's duration. The Department of Fisheries (DoF) pledged to provide Fisher Identification Cards (FID) to all listed fishers involved in ECOFISH II, ensuring that genuine fishers can benefit from government social safety net programs.



Figure 18: Glimpse of Women Congress at different stations in participation of women from fishing households and other relevant stakeholders.

The event provided a platform for women beneficiaries to share their experiences and suggest future interventions to strengthen their roles in household and community resilience. Participants highlighted the need for continued support from ECOFISH II, particularly in capacity building and market linkages for sustainable growth. The commitment from government officials and private sector representatives to support ECOFISH II beneficiaries beyond the project's duration presents a promising opportunity to sustain these achievements and further empower fishing communities.

Accelerate nutrition-sensitive homestead horticulture

ECOFISH II focuses on improving the nutrition situation of poor fishing households due to their vulnerability to factors like lower income, limited technical knowledge, and homestead space constraints. Fishing villages are also vulnerable to natural disasters like tidal surges and waterlogging. However, some beneficiaries adopt climate-resilient techniques like rooftop gardening, sac bag, and tower gardens, despite limited land availability.

A total of 1,961 WING members (98.4%) from Year 5 have received training in nutrition-sensitive homestead vegetable gardening (Figure 19), despite facing challenges from unusually heavy rainfall and political unrest. The training was designed to enhance participants' technical skills in homestead gardening, allowing them to utilize these skills beyond the ECOFISH II program. Beneficiaries were connected with essential services and markets through the training, which was facilitated by Sub-Assistant Agriculture Officers (SAAOs) from the Department of Agriculture Extension (DAE) or Local Service Providers (LSPs) from the private sector. The sessions were conducted in a participatory manner, incorporating interactive materials to effectively engage participants.



Figure 19: Sub-Assistant Agriculture Officer (SAAO) from the Department of Agriculture Extension (DAE) is facilitating training on homestead horticulture at Cox's Bazar Sadar (left) and Teknaf (right).

Heavy rain damaged most of the vegetable yards of the beneficiaries and considering this, year 4 WING members are included to provide winter vegetable seed pack along with the year 5 members. Thus, in this reporting period, winter vegetable seed packs have been distributed to 4,351 beneficiaries (87% of year 4 and year 5 beneficiaries) to strengthen their year-round production and consumption of nutrient-rich vegetables. Based on local demands, beneficiaries were provided with 6-9 types of vegetable seed seeds (Figure 20) including Country Bean, Red Amaranth, Spinach, Bottle Gourd, Tomato, Brinjal, Yard Long Bean, Sweet Gourd, Ridge Gourd and organic fertilizers (4 kg of vermicompost/BHH) to encourage year-round production and consumption of a diverse, nutrient-rich diet.



Figure 20: Winter vegetable seed distribution to years- 4 and 5 WING members at Kalapara (left) and Kutubdia (right)

The ECOFISH II project promotes vegetable cultivation and dietary shifts among fishing households, introducing best practices and extension services for year-round access to nutritious foods. Female members gain confidence to support their families. Beneficiaries, particularly women are now much more confident to contribute to household food security and reduce malnutrition.

Qualitative assessment of WING, BLS and CV approach

The Women Income and Nutrition Group (WING), together with the Business Literacy School (BLS) and the engagement of local women Community Volunteers, has emerged as a promising model for promoting scalable best practices that enhance income, nutrition, conservation, and other positive, albeit unintended, outcomes. However, before endorsing this approach for livelihood enhancement and conservation efforts—or for any future rural development initiatives—ECOFISH II conducted an assessment (Figure 21) of its outcomes during this quarter. This evaluation examined the strengths and weaknesses of the current framework and offered actionable recommendations for refining these initiatives.

The WING Initiative: A Platform for Resilient Livelihoods³

The assessment of the Women Income and Nutrition Group (WING) aimed to evaluate its effectiveness and determine the extent to which intended outcomes were achieved. Utilizing a qualitative approach, the evaluation involved 17 Focus Group Discussions (FGDs) with WING leaders across 17 villages, ensuring representation from participants in both Year 4 and Year 5. Additionally, 18 interviews were conducted with Community Volunteers, supplemented by Key Informant Interviews with Research Associates and TMSS representatives, to gather insights into the implementation and effectiveness of WING. The performance of the WING group was commendable, with 81% rated as "Outstanding" or "Very Good," reflecting significant contributions toward achieving WING objectives. The initiative successfully fostered collaboration among members, emphasizing income-generating activities and improved nutrition, while participants acknowledged the value of social bonds through shared learning and community support. However, challenges such as social conflicts, varying capacities among members, and logistical issues regarding meeting spaces and savings collection were identified. To enhance the sustainability of the WING initiative, it is recommended to implement a three-year plan featuring a graduation model and a clear sustainability strategy focused on capacity-building for leaders, strengthening group management, and promoting community stewardship activities. Overall, the WING initiative has effectively strengthened social bonds and created a supportive environment for community development.

Business Literacy School (BLS): Integrating Literacy, Nutrition, Gender, and Conservation practices

The Business Literacy School (BLS) is acknowledged as a best practice for enhancing basic literacy and business development, while also serving as a platform for increasing awareness of income, nutrition, gender, and conservation among WING members. The BLS comprises 24 sessions conducted over 12 months, with two sessions each month, facilitated by Local Community Volunteers (CVs). The evaluation assessed the effectiveness of the BLS sessions in enhancing literacy and the knowledge gained through the structured curriculum while identifying strengths and areas for improvement in the overall approach. A qualitative methodology was used, incorporating structured interviews with both open- and closed-ended questions, as well as focus group discussions (FGDs) and key informant interviews (KIIs). This included 17 FGDs with WING Leaders to ensure representation from participants in both Year 4 and Year 5, alongside 18 interviews conducted with Community Volunteers.

This comprehensive evaluation provided valuable insights into the impact of the Business Literacy School (BLS) sessions and the overall effectiveness of the project. The BLS approach was essential in enhancing business literacy among illiterate women in the fishing community, delivering much-needed education through user-friendly materials like nutrition flipcharts. Engaging elements such as the introductory

³ Sharmin, D. 2024. [Power Dynamics in Marginalized Fishing Communities Shift with Women's Empowerment](#). WorldFish blog

"*Jorinar Golpo*" and rhythmic components, like "*Borno diye chondo*," enriched the learning experience. While BLS sessions fostered a supportive environment that encouraged mental relaxation and meaningful engagement, challenges affected their effectiveness. Distractions from children attending sessions, a shortened duration, and limited home study space hindered learning. Participants suggested reducing the volume of topics covered daily for deeper understanding. They expressed a desire to improve their village and educate their peers, reflecting a culture of self-learning and financial growth. Support from husbands encouraged attendance, and snacks during sessions enhanced the experience.

The bi-monthly schedule balanced learning with household responsibilities, but Year Five's rapid topic coverage compromised material absorption. Recommendations included extending session durations or increasing their number in Year Four. Participants valued all materials, particularly the flipcharts, and suggested larger flashcards and writing practice papers for enhanced visual learning. Facilitators were generally supportive, though improving their facilitation skills could boost engagement.

The participation rate was high, with many enthusiastic learners, although some hesitated to attend due to receiving project support money. Participants called for more time dedicated to awareness sessions focused on nutrition, gender issues, and conservation. Significant outcomes included improved reading, writing, and basic calculation skills among previously illiterate women, leading to increased awareness of education's importance and a commitment to their children's schooling.

Despite challenges such as inadequate seating during adverse weather, family support proved crucial for attendance, underscoring the importance of community involvement in women's education. Community Volunteers (CVs) appreciated their training, which enhanced their collaborative problem-solving skills, though discomfort arose when outsiders were present, potentially hindering open communication.

To improve BLS sessions, several recommendations were made: increase the number of classes, establish a dedicated learning space, allocate more time for awareness sessions, and include real-field demonstrations. Limiting participant numbers to 20 would enhance engagement while integrating awareness messages and "*Jorinar Golpo*" into materials would create comprehensive resources. Training facilitators, incorporating basic English and counting skills, and extending the program to at least Class Five were also suggested. Enhanced follow-up, monitoring, and streamlined documentation processes would further improve the initiative, alongside introducing BLS sessions for men to broaden the program's impact.

Community Volunteers: Bridging the gaps⁴

ECOFISH has successfully mobilized 48 local women as Community Volunteers (CVs), each supporting 100-120 fishing households by focusing on income generation, nutrition, literacy, and conservation awareness, particularly among women. These volunteers are crucial in promoting savings and biodiversity conservation while engaging actively with members of the Women Income and Nutrition Group (WING) and Fisheries Conservation Groups (FCG) to drive sustainable outcomes for both marine biodiversity and community livelihoods. The project aims to assess the contributions, strengths, and areas for improvement of these volunteers to ensure alignment with objectives aimed at enhancing the livelihoods of fishing households and contributing to biodiversity conservation.

The evaluation employs a qualitative approach through structured interviews, focusing on 18 interviews with CVs, 17 focus group discussions (FGDs) with WING Leaders from various villages, and key informant interviews (KIIs) with Research Associates and TMSS staff. The performance of the CVs is commendable, with 86% rated as "Outstanding" or "Very Good." These women are motivated by a desire to uplift their communities, viewing their roles as both a blessing and a source of personal fulfilment, leading to increased recognition and respect within their communities. CVs facilitated Business Literacy School (BLS) classes, WING meetings, and training sessions, supporting savings collection and conducting household visits to assess income-generating activities and vegetable production. They also organized nutrition sessions and assisted with vaccination campaigns. Despite facing challenges, CVs have observed

⁴ Sharmin, R. and Sharmin, D. 2024. [Community Volunteers' Journey of Empowering Women](#). WorldFish blog.

significant positive changes in their communities. Many women have now strengthened their household-based income-generating activities like poultry, goat farming and tailoring, and their knowledge of nutrition has improved significantly, emphasizing dietary diversity and maternal health.

The capacity development of CVs has been transformative, equipping them with essential skills in various areas, leading to improved public speaking skills and resourcefulness. Their work has fostered a sense of unity and group cohesion, with empowered women advocating for conservation practices and demonstrating a commitment to health and hygiene.

Sustaining the work and results of CVs is crucial for maintaining positive community impacts. A gradual phase-out strategy is essential, as the cessation of support from the Business Literacy School (BLS) could hinder progress. While beneficiaries may continue vegetable production, ongoing support is necessary to ensure continued development. The experiences of CVs have profoundly impacted their personal growth and those they serve, exemplified by stories of individual success and community development. The CV approach effectively implements project activities, allowing for trust and quick information sharing within the community. However, challenges such as the partial engagement of CVs, skills deficits, and biases based on political and social status must be addressed to maximize the approach's impact.

To enhance the effectiveness of the CV approach, recommendations include ensuring full-time engagement of CVs, recruiting educated and skilled individuals, providing enhanced capacity-building initiatives, and organizing service linkage meetings with relevant departments. Incorporating male volunteers alongside female CVs can promote gender balance and inclusivity, while foundational training will equip CVs with the necessary skills for effective project implementation. These strategies will strengthen the CV model and ensure its long-term success in community development and conservation efforts.



Figure 21: Senior Nutrition Specialist conducting FGD with WING members at Moheshkhali (left) and KII with a Community Volunteer at Ukhiya (right) for qualitative assessments of the WING, BLS and CV approach

4 COMMUNICATIONS

As communication outcomes, 2200 T-shirts were produced and distributed in collaboration with the Department of Fisheries during the national Fish Week 2024 celebration. USAID's ECOFISH II has organized a day-long "Women Congress" with the participation in Cox's Bazar Sadar, Ukhiya, Teknaf, Kutubdia, Maheshkhali, Charfassion, and Patuakhali. These women are more than just participants; they are the changemakers. This congress was more than just a meeting; it was a testament to women's growing power and influence in coastal communities. By taking the lead in conservation efforts, developing alternative livelihoods, and driving social change, these women are securing a brighter, more sustainable future for their families and the precious coastal ecosystems they depend on.

In addition, USAID's ECOFISH II successfully hosted a vibrant Consultation Meeting at the Golden Tulip, the Grandmark Dhaka, Banani. The event brought together key stakeholders to deliberate on the future

of Bangladesh's marine and coastal fisheries, focusing on the Fisheries Blue Economy, Fisheries Co-management, and Delineation of new Marine Protected Areas (MPAs) in Bangladesh.

The Consultation Meeting was a platform to disseminate insights and lessons learned from the ECOFISH II Activity's extensive research and development initiatives. The discussions were structured around Exploring Opportunities, Challenges, and Way Forward for the Fisheries Blue Economy of Bangladesh, Developing Organizational Modalities for Landing Centre-based Fisheries Co-management Committees (LFCCs), Conducting Site Suitability Assessments for New MPAs in Bangladesh.

One talk show on RTV, in collaboration with the Department of Fisheries, was telecasted during the National Fish Week.

Thirty-six media engagements on print, electronic, and new media were ensured during these three months, along with eleven social media posts, including WorldFish Bangladesh, WorldFish Global, and USAID Bangladesh's social media channels.

Table 7: Media coverage of ECOFISH II during the July- September 2024 period:

S.N.	News Title/ Event Name	Name of the Media	Links
1.	National Fish Week	Daily Bangladesh Pratidin, Daily Observer, Daily Jaijaidin, dhakatimes24, amarsangbad, barta24.com, Ctgsangbadbd24.com	Daily Bangladesh Pratidin , Daily Observer , Daily Jaijaidin , dhakatimes24 , amarsangbad , barta24.com , Ctgsangbadbd24.com
2.	Boat skipper training	Daily Bangladesh Pratidin, Barishaltimes, Daily Kaler Kantha	Daily Bangladesh Pratidin , Barishaltimes , Daily Kaler Kantha
3.	Coastal cleanup day	Daily bd-pratidin (Kalapara), Daily bd-pratidin (Teknaf), Daily Observer, Daily Jaijai Din, barta bazar, somoyer konthosor, Banglar awaz, Cox news today, Cox's Bazar Life	Daily bd-pratidin (Kalapara) , Daily bd-pratidin (Teknaf) , Daily Observer , Daily Jaijai Din , barta bazar , somoyer konthosor , Banglar awaz , Cox news today , Cox's Bazar Life
4.	Women congress	Ekattor.tv, Daily bd-pratidin, Daily Observer, My TV, Bangladesh post, Daily jaijai din, Alokito Protidin, barishaltimes, daily post, amar sangbad, CBC news, Ajker Bhola	ekattor.tv , Daily bd-pratidin , Daily Observer , My TV , Bangladesh post , Daily jaijai din , Alokito Protidin , barishaltimes , daily post , amar sangbad , CBC news , Ajker Bhola
5.	Consultation Meeting on blue economy, marine conservation	Financial Express, Daily Observer, Bangladesh Post, Daily Sun	Financial Express , Daily Observer , Bangladesh Post , Daily Sun



জাতীয় মৎস্য সপ্তাহ-২০২৪ উপলক্ষে আর্টিভিডির বিশেষ অনুষ্ঠান “মাছের দেশ”



Figure 22: From left to right Talk Show on National Fish Week and Billboard on awareness raising

5 ENVIRONMENT

The Environmental Monitoring and Mitigation Plan (EMMP) provides a basis for the systematic implementation of Initial Environmental Examination (IEE) and Environmental Assessment (EA) conditions. Its purpose is to determine whether the proposed project interventions have any potential adverse impacts on the environment as well as to suggest a mitigation plan to reduce environmental consequences. The ECOFISH II Activity strengthens the ability of fishing communities to extract maximum benefit from coastal environments using sustainable practices and to mitigate the adverse effects of climate change. Like throughout the project implementation period, in third quarter of Year 5 (July-September 2024), the project carefully followed the EMMP guidelines.

- ECOFISH II ensured to meet EMMP requirements or exceed the requirements complying with the approved EMMP guideline.
- Activities that are Categorically Excluded like training, community mobilization, other capacity-building activities, workshops or meetings and information transfers are those for which no environmental impact is expected.
- The EMMP establishes a Negative Determination with Conditions for activities that have the potential for negative impact on the environment but where the inclusion of mitigation measures can prevent significant impacts.
- The EMMP does not identify any proposed activities that have the potential for a significant effect on the environment (Positive Determination), requiring an Environmental Assessment.

6 MONITORING EVALUATION & LEARNING (MEL)

Monitoring, Evaluation and Learning (MEL) activities are the key to project management and performance management and project learning and accountability. The summary of the progress of MEL activities of ECOFISH II during this quarter is given in Table 8.

Table 8. Progress summary of MEL activities (■ completed ■ in progress ■ yet to start)

Activities	Progress made	Status
Basic HHs Information of Year-5 BHH	Collected basic household information from 2,000 artisanal fishing households in 20 fishing villages using the ODK-based application.	
Baseline and End-line/post-intervention assessment of non-formal organizations (120 organizations)	Baseline assessment of 120 non-formal organizations completed at end of 4 th quarter (2023) of Year 4. Post-intervention assessment will be completed in the next two months (Oct-Nov'24) of Year 5.	
Assessment of Economic Benefit of Target ECOFISH households (540 HHs)	The tools, protocol and questionnaire for the assessment have been completed and data collection will be completed in the next two months (Oct-Nov'24) of Year 5	

Activities	Progress made	Status
Endline Survey	The endline survey was completed this quarter by the selected research firm, and both quantitative and qualitative data were collected from the target beneficiaries. The report preparation is ongoing, and the results will be published in the project's annual and closing report.	
Database development and activity monitoring system	Data synchronization and uploading into the database are continuing. Orientation on MEL activities for Year-5 activities was completed and the data collection template has been prepared.	

Basic HHs information

A GIS-based approach utilizing Google Earth was employed to finalize around 20 villages for Year-5 intervention. The Basic Household Information (BHII) survey served to understand the socio-economic status of the fishers and their willingness to participate in the ECOFISH-II project. During this quarter, cross-checked and finalized beneficiaries with the database for 2,000 beneficiary households were selected for Year 5. MEL regularly supported the program team in updating beneficiary information, including corrections to WING member names and FCG member names.

Baseline and End line/post-intervention assessment of non-formal organization

Organizations with improved capacity to address climate change issues have increased their ability to adapt to the adverse situations resulting from climate change. The MEL team gathered baseline data from 120 non-formal organizations during the fourth quarter of Year 4 (2023) and plans to carry out a post-intervention assessment in the next two months (Oct-Nov'24) to evaluate changes in institutional indicators.

Database development and activity monitoring system

As part of the regular process, in this quarter, efforts have been focused on operating a centralized online system for data input, storage, and information dissemination. This initiative includes both hardware and software components aimed at enhancing the monitoring system. Additionally, staff members have been trained in the proper utilization and access of the offline-online database. The database tracks ECOFISH II activities and various features, including village locations, which can be visualized through Google Earth. Furthermore, all necessary tools for monitoring Year-5 (2024) activities and compiling information from previous years have been finalized. These efforts provide the project management team with valuable insights into key features of specific ECOFISH II interventions, facilitating further planning and decision-making processes.

Annual Performance Survey for Indicator Reporting

During this quarter, the Monitoring, Evaluation, and Learning (MEL) team taken all preparations (selection of data enumerators, developed online survey tools) to be conducted in October'24 for the annual performance survey for indicator reporting. The survey will cover Cox's Bazar district (Teknaf, Ukhyia, Cox's Bazar Sadar, Kutubdia, and Moheshkhali), Bhola district (Char Fasson Upazila), Patuakhali district (Rangabali and Kolapara), and Barguna district (Barguna Sadar). The survey consists of both quantitative (Household interview) and qualitative (institutional) methods. A total of 660 samples will be collected, with 540 fisher households survey and 120 focus group discussions (FGDs) will be conducted qualitatively with (VFCGs), (LFCCs), and (WING). To initiate the process, the MEL team first obtained approval for the survey, then selected data enumerators, provided them with one-day training on the survey tools, and commenced the survey.

Endline Survey for Final Evaluation

Preparation of the endline survey, which began in the 2nd quarter and continuing this quarter. After finalizing the research firm, the MEL team supported the survey by providing a comprehensive beneficiary list for random sampling. The MEL team also conducted regular follow-up and coordinated with the beneficiaries, who are primarily fishermen and spend extended periods at sea. The team

ensured effective communication with the fishermen to determine their availability at home, and this information was shared with the survey team to facilitate timely survey completion.

For the quantitative data collection, we planned a sample size of 600 fisher households from 12 intervention villages under ZOR (Cox's Bazar Sadar, Teknaf, Ukhiya, and Moheshkhali) and under MRE & MPA (Char Fasson, Hatiya, and Rangabali). Similarly, we sampled 600 fisher households from 11 non-intervention villages under ZOR (Cox's Bazar Sadar, Teknaf, and Moheshkhali) and under MRE & MPA (Char Fasson, Hatiya, and Rangabali). For the qualitative data collection, 20 FGDs were conducted 13 at the community/village level and 7 at the Fish Landing Center/Machghat level. Both qualitative and quantitative data collection have been completed, and report preparation is currently ongoing.

7 IMPLEMENTATION CHALLENGES

In the current reporting quarter, the project faced significant challenges due to political unrest and adverse weather conditions, severely impacted field operations and necessitating several adjustments. Additional safety protocols were implemented to mitigate risks associated with both political unrest and hazardous weather conditions, ensuring the well-being of field staff. Some specific challenges are given below:

- Some activities like women's congress, WING phase-out meeting, vaccination campaign, horticulture training etc. cannot be executed on time due to the political unrest and then excessive rain & flood.
 - In the 3rd quarter, due to heavy rain, the landing of fish was very low. As a result, L-W data of fish counted low and seriously affected and most caused damaged vegetable seedlings and washed away the garden whose house under the hill in CXB sites.
 - Most of the villages are affected by heavy rainfall and roads become muddy: a barrier to normal field movement.
 - Household visits and regular office activities have been disrupted as employees worked from home due to the countrywide turmoil.
 - Teknaf to St. Martin route was in danger due to heavy rainfall, a strong current in the estuary, shallow water depth, and firing from Myanmar or Arakan Army on the Bangladesh border coast.
 - Fishermen regularly take part in Manab-Bandhan to open the Naf River for fishing and mostly they inhabitants who depend on fishing from Jaliapara to the Hnila River coast in Teknaf.
 - Food crisis and the high price of any type of food in Teknaf and St. Martin are observed due to the flood in Chattogram, Feni, Cox's Bazar and the closing of the land port of Teknaf.
 - The conflicting situation at Shamraz Ghat between LFCC committee members and the newly formed ad-hoc committee of Arotdar, which has taken responsibility recently, indicates power transforming with the change of government.
- Strengthening or institutionalizing co-management committees/groups (FCG, VFCC, LFCC) in the village or fish landing centers is crucial, which takes a longer time.
 - Ghost fishing, IUU fishing and non-conventional fishing awareness a prime need to establish sustainable coastal and marine fisheries resource management which takes a longer time for policy development with multisectoral departments of the Bangladesh Government.
 - Implementation of management plan for declared Marine Protected Areas (MPA) are crucial and very much needed to protect, and effectively utilize marine resources, and its conservation biodiversity.
 - Market and business models as well as climate-smart technology development for dried fish, fish powder, seaweed and green mussel take time and need to identify business stakeholders.
 - Engagement of stakeholders (public, private) in Blue Economy initiatives is a big challenge, which will take longer to mainstreaming.

8 INTEGRATION OF CROSSCUTTING ISSUES AND USAID FORWARD PRIORITIES

8.1 Gender Equality and Women Empowerment

ECOFISH II integrates gender equality and women’s empowerment into every component of the project, using a household-based approach to ensure inclusivity. Men engage in Fisheries Conservation Groups (FCGs), while women participate in Women’s Income and Nutrition Groups (WINGs), receiving training in income-generating activities (IGAs), business literacy, savings, and education on business management, nutrition, gender, and biodiversity conservation. Men, meanwhile, attend gender sensitization sessions designed to foster supportive attitudes toward women’s empowerment.

To date, ECOFISH II has established 169 WINGs with 4,983 women from artisanal fishing households, providing a platform for skill development and shared knowledge. This quarter, 7,494 members from 68 WINGs (Year 5) attended 277 Business Literacy School (BLS) sessions. In addition, 1,961 WING members (98.4% of Year 5) received training on nutrition-sensitive homestead vegetable gardening, with winter vegetable seed packs distributed to 4,351 beneficiaries (87% of Year 4 and Year 5 beneficiaries) to encourage consistent production and consumption of nutrient-rich vegetables. Final BLS assessments indicate significant progress, demonstrating that 100% of women are now actively engaged in strengthening household-based economic activities and contributing to household income. This represents a substantial increase from 71% at the baseline, despite the considerable challenges women faced in sustaining their income-generating activities. WING members continue to maintain their passbooks, savings, and bank records, with 4,543 members from 155 WINGs collectively saving BDT 4,779,485 as of September 2024. ECOFISH II also supports 20 Community Savings Groups (CSGs) formed in Years 2 and 3, where 1,175 members from 38 CSGs have saved a combined BDT 1,937,333. Both WING and CSG activities are driving positive shifts in savings behavior among women in fishing households.

To further encourage behavioral changes and raise awareness around gender equality, ECOFISH II facilitated gender sensitization sessions across 14 events, reaching 275 participants, including members from VFCG, FCG, LFCC, as well as boat owners and skippers.

During this quarter, ECOFISH II organized seven “Women Congress” events across different locations, bringing together 740 participants (84% women) from artisanal fishing communities. Designed as part of the project’s exit strategy, the Congress gave women leaders from remote coastal villages a valuable platform to share their experiences, challenges, and goals with high-level stakeholders in an urban setting. Officials from key government departments, private sector representatives, and ECOFISH II team members attended to celebrate the women’s achievements in income generation and business literacy. Participants highlighted how training, support for income-generating activities, business literacy, savings, and homestead gardening have significantly improved both their nutritional and financial well-being. Anecdotal evidence indicates that the empowerment status of women has improved following the interventions of ECOFISH II. To further investigate these changes, ECOFISH II has commissioned a study led by Dr. Md. Wakilur Rahman, a Professor at Bangladesh Agricultural University, who is serving as a consultant for the Endline Gender study. The primary objective of this study is to assess changes in gender dynamics within small-scale fishing communities by measuring against the baseline⁵ using the Women’s Empowerment in Fisheries Index (Pro-WEFI).

⁵ Rahman, et al. 024. [Women Empowerment Status in the Coastal Fishing Communities of Bangladesh](https://doi.org/10.1177/21582440241250114). *Sage Open*, 14(2). <https://doi.org/10.1177/21582440241250114>

8.2 Sustainability Mechanisms

The following steps have been taken to ensure the sustainability of the project:

- For mainstreaming the co-management organizations with other activities of the Department of Fisheries, ECOFISH II has secured a letter of cooperation issued by the Director General of DoF and Chairman of BFDC to the different level officers of the department, will help implement the project activities in collaboration with DoF and BFDC that will ultimately improve the sustainability of ECOFISH II outcomes.
- Formation of Fisheries Conservation Groups (FCG) and Village-based Fisheries Conservation Groups (VFCG) in all intervened fishing villages.
- Strengthening the capacity of formal and informal organizations (i.e. CSG and WING) for women empowerment and linking with DoF, DAE, DLS or Govt. Cooperative activities and public-private sector services.
- Promotion of AIGAs, community savings and technical support for women in fishing villages will be continued.
- Nurturing of well-trained and motivated local youth volunteers (Blue Guard, Community Volunteer).
- A revised version of the Hilsa Fisheries Management Action Plan (HFMAP) will serve as guidelines for Hilsa fishery and biodiversity conservation until 2030.
- Management of the MPA in the Nijhum Dwip and Naf MPA would sustain the benefits of the biodiversity conservation approach.
- Policy support in selecting the most effective Brood Hilsa Ban period and continued support in implementing the allowable mesh size regulation (6.5 cm) for Hilsa gillnetters will ensure sustainable Hilsa management.

8.3 Global Climate Change

As continued supports, ECOFISH II strengthens the resilience and adaptive capacity to climate change by supporting sustainable and climate resilient fisheries, AIGAs, gender equality and increasing social capital of the fishing communities. ECOFISH II in partnership with CVASU monitored water quality parameters, the impact of salinity intrusion, water level rise, temperature rise, and increased frequency and magnitudes of cyclonic storms would be considered with greater importance to cope with the obvious climate change related issues. ECOFISH II started intervention in the most climate vulnerable area, the St. Martin, Moheshkhali and Kutubdia Island to generate scientific information and management to combat climate change. The project continued efforts on developing the adaptive capacities of the targeted fishing households to cope with climate-induced events like cyclones, heavy rainfall, and other calamities.

8.4 Policy and Governance Support

ECOFISH II project has been implementing in close collaboration with different departments of the Government of Bangladesh, DoF, BFDC, BFRI, universities, national and international NGOs, private organizations to carry out the program sustainable manner. Policy support in selecting the most effective Brood Hilsa Ban period and continued support in implementing the allowable mesh size regulation (6.5 cm) for Hilsa gillnetters will ensure sustainable Hilsa management. These policy supports will remain to be enormously useful in biodiversity conservation year after year. ECOFISH II prepared the Nijhum Dwip Management plan and submitted it to the Ministry of Fisheries & Livestock (MoFL) through the Department of Fisheries. The government has approved the management plan and ECOFISH II started implementation in the Nijhum Dwip MPA. In addition, ECOFISH II in partnership with SUST assessed the Naf River estuarine area and proposed a new MPA covering 860 km² area and the Ministry of Fisheries and Livestock officially declared a 734.17 km² area as the Naf Marine Protected Area (MPA) through a [gazette notification](#) under Marine Fisheries Act 2020. In response to request of DG-DoF, ECOFISH II partner SUST conducted site suitability assessment activities to support government for declaring new MPAs in Kuakata, Patuakhali and Salimpur, Chottagram coasts.

8.5 Local Capacity Development

Capacity building of project staff, local volunteers and target beneficiaries is a continuous effort in ECOFISH II project to achieve the project objectives. Major achievements on capacity building activities/trainings, meetings, awareness programs, workshops conducted during July – September 2024 summarized in the following Table 9:

Table 9. Lists of capacity building activities/trainings, meetings, awareness programs, workshops

Activity	Objective	Achievement
Mid-Year Progress Review and Way Forward Meeting on Year-5 work plan held in 7-8 July 2024	To discuss the progress up to June 2024 and review the planning of July-October 2024 activities.	Developed exit strategy of local volunteers, and handover procedure of the data/results generated by the Volunteers
Training on Marine Biodiversity Conservation, Responsible Fishing and safety at sea	To build awareness on Marine Biodiversity Conservation & Responsible Fishing and safety at sea	A total of 37 participants attended the training sessions They were provided Life Jackets and First Aid Box
Training on nutrition-sensitive homestead vegetable gardening	equip beneficiaries with sustainable horticulture skills, relevant knowledge	24 Interactive training sessions, facilitated where 707 participants are Year 5 WING members.
“Women congress 2024” in September 2024.	Experience sharing on women’s contribution in HH economy through nutrition sensitive income generating options.	A total no. of 7 events were organized in seven upazila field offices where more than 700 WING leaders participated.
International Coastal Cleanup Day 2024 celebration	highlights the importance of conserving marine biodiversity and enhancing ecosystem health by removing harmful waste.	Around 400 participants actively participated in seven events. The celebration included a rally, discussion meeting and beach cleaning.
Consultation Meeting on Fisheries Blue Economy, Fisheries Co-management, and Delineation of new Marine Protected Areas (MPAs) in Bangladesh.	disseminate insights and lessons learned from the ECOFISH II Activity's extensive research and development initiatives	The event brought together key stakeholders to deliberate on the future of Bangladesh's marine and coastal fisheries, of new Marine Protected Areas (MPAs) in Bangladesh.
ECOFISH II Activity Management Team (AMT) Meeting	Share the activity plan with the AMT members to guide the field team smoothly	A total no. of 3 AMT meetings held during the reporting period.
ECOFISH II Team (All Staff) Meeting	Discussed progress, challenges and future activities.	Three team meetings held during the reporting period.



Figure 23: Participants Women Congress



Figure 24: ECOFISH II Mid-year review meeting



Figure 25: Workshop on “Seaweed and Bivalve Seafood Value Chain in Bangladesh: Research Outcomes and Future Directions showcasing research on seaweed and green mussel farming” held at DoF.

8.6 Public Private Partnership (PPP) and Global Development Alliance (GDA) Impacts

From the beginning of the ECOFISH II implementation, several consultation meetings were convened with private entrepreneurs, DoF, Universities, fishers’ associations to explore the potential of private-public partnerships (PPP) that create favorable business opportunities along the fish value chain and for high-potential AIGAs. In partnership with CVASU and DoF, the project is developing appropriate technologies along the value chain in seaweed and green mussel farming and conducting field trials with the fishing communities in ZOR for seaweed and green mussel farming as AIGA. These types of partnership initiatives have been continuing in the seaweed and green mussel value chain for farming and food safety with CVASU and small-scale private sector actors, composite nutrient-rich ready-to-use dried fish and seaweed power production and marketing with NSTU and private sector (for example- CoxBazarShop.com). Ecosystem health improvement through local youth volunteers (Blue Guard) and co-management organizations, fish catch monitoring at both public and private fish landing centers including BFDC Ghats, Cox’s Bazar Alipur, Patuakhali engaging trained and equipped boat skippers (Citizen Scientist) and local volunteers like Landing Center Facilitators. ECOFISH II works with public departments like DAE and DLS, the private sector and “Community Volunteers” (motivated and trained local women) to support empowerment of women of the artisanal coastal fishing households through capacity building, linking with public and private sector services, raising awareness on health and nutrition, on biodiversity conservation, basic literacy, nutrition-sensitive home-based food production and generating income from other than fisheries etc.

8.7 Science, Technology, and Innovations

To generate high-quality scientific information to support decision-making for sustainable fisheries management, the project integrated the 'improved science outputs for decision-making' component through assessing and improving ecosystem health, assessing and conserving biodiversity, and fisheries dynamics monitoring activities. Scientific assessment of biophysical as well as socioeconomic aspects has been continued to delineate new MPAs in the Kuakata, Patuakhali and Salimpur, Chattogram coasts as requested by DG, DoF. These activities are implemented in partnership with CVASU and SUST. Furthermore, the project continued its partnership with CVASU and NSTU to facilitate "research in development" within the "Access to Technology and Market" activity. The insights gained from the partnership can help the fishing and coastal communities in improving their resilience. Key achievements in science and innovation as the continued effort of the project are summarized below:

- The qualitative and quantitative information generated on coastal fish diversity targeting vulnerable fish and megafauna species will get management priority.
- Juveniles' information will guide in determining the breeding season of important commercial fish species to help the government in fine-tuning the marine fishing ban.
- The innovation in seaweed farming technology disseminated to coastal communities might be generating employment and income and supporting the families to build resilience. This would help reducing the fishing pressure on coastal marine fisheries.
- Through biophysical and socio-economic information around the Naf River estuary areas, a new Naf MPA declared by the government and a sustainable management plan would be formulated to help manage the biodiversity hotspots covering both the Naf estuary and adjacent coasts.
- Site suitability assessment activities for Kuakata, Patuakhali and Salimpur, Chattogram coasts will help DoF in declaring and managing the MPA for the improved management of biodiversity and habitats.
- Developed depuration protocol of wild-farmed green mussels for food safety. Tissue culture protocol developed for indoor seaweed farming for year-round seaweed seed supply
- Developed in-situ captive breeding-based green mussel farming technology
- Finally, the continued efforts on the innovative digital approach of "Citizen Science" in catch monitoring would generate new tools for sustainable resource management involving the fishers.

9. STAKEHOLDER PARTICIPATION AND INVOLVEMENT

The Activity continued in partnership with the Department of Fisheries, four Universities and NGOs (TMSS). ECOFISH II expanded collaboration with public departments like BFDC, BFRI, DAE, DLS and private sector actors to strengthen effective activities implementation. In all cases, relevant officials, fishers and other local stakeholders played key roles in planning and implementing the activities. The following important stakeholders' consultation meetings, visits (DoF, USAID and WorldFish's team) and other discussions were convened during the reporting quarter:

- ECOFISH-II organized a mid-year Progress Review and Way Forward Meeting on the Year-5 work plan on 7-8 July 2024. The field team presented the progress (January-June 2024) against planned activities and budget, lessons, and plan for July-October 2024 activities, and local-level exit strategy in the meeting. Scientists (component leads), specialists, the MEL team, and the financial team also presented the achievements and plan for next month's activity in the meeting. Group work has been

done and discussed in 3 themes: i) Exit strategy with local Volunteers (BG, CS, LCF) and handover of the data/results generated by the Volunteers, ii) Discuss and finalize LFCC work plan for July 24-June'25 and exit strategy for LFCC, and iii) Exit strategy: handover of CSG and WING, mariculture, fish drying with key information and results and documents to DoF.

- In partnership with the Department of Livestock Services (DLS), eight vaccination drives were conducted across Moheshkhali, Kutubdia, and Kalapara upazilas. These campaigns successfully vaccinated 368 goats and 2,396 poultry birds, engaging 330 ECOFISH II beneficiaries and other community members. By providing accessible veterinary services, these initiatives aim to improve small livestock and poultry health and long-term community well-being.
- During the reporting period, the team conducted 24 training courses on nutrition-sensitive homestead vegetable gardening for 35.5% (707 members) of Year 5 WING members. This training is part of the project's phase-out strategy, aiming to equip beneficiaries with sustainable horticulture skills. Interactive training sessions, facilitated by Sub-Assistant Agriculture Officers or local service providers, were conducted to enhance practical knowledge and connect participants with relevant services and markets.
- ECOFISH II in collaboration with the Department of Fisheries (DoF), hosted a workshop on "Seaweed and Bivalve Seafood Value Chain in Bangladesh: Research Outcomes and Future Directions" showcasing research on seaweed and green mussel farming. The Director General and senior officials of the DoF, Researchers, university faculties, private sector representatives and officials from WorldFish participated in the workshop and discussed future strategy to enhance the blue economy with mariculture technology. <https://x.com/WorldFishCenter/status/1830878548665512362>
- USAID's ECOFISH II, in collaboration with the Department of Fisheries Bangladesh, has celebrated International Coastal Cleanup Day 2024 in Cox's Bazar Sadar, Ukhiya, Teknaf, Moheshkhali, Kutubdia, Charfasson, and Kalapara Upazila. Around 400 participants including motivated local youth volunteers (Blue Guards), Citizen Scientists, Landing Center-based Fisheries Co-Management Committee members, and local stakeholders actively participated in seven events. The celebration included a rally, discussion meeting and beach cleaning. This day highlights the importance of conserving marine biodiversity and enhancing ecosystem health by removing harmful waste.
- USAID's ECOFISH II successfully hosted a Consultation Meeting on 28th September'24 at the hotel Golden Tulip the Grandmark Dhaka, Banani. The event brought together key stakeholders to deliberate on the future of Bangladesh's marine and coastal fisheries, focusing on the Fisheries Blue Economy, Fisheries Co-management, and Delineation of new Marine Protected Areas (MPAs) in Bangladesh. The Consultation Meeting was a platform to disseminate insights and lessons learned from the ECOFISH II Activity's extensive research and development initiatives. The discussions were structured around Exploring Opportunities, Challenges, and Way Forward for the Fisheries Blue Economy of Bangladesh, Developing Organizational Modalities for Landing Centre-based Fisheries Co-management Committees (LFCCs), Conducting Site Suitability Assessments for New MPAs in Bangladesh.
- Organized a day-long "Women Congress" with the participation of the women members of artisanal fishing households in 7 stations. The event celebrated with the slogan "Women are becoming aware of biodiversity conservation, contributing to life and livelihood!" As part of the exit strategy and aiming to share experiences including challenges, opportunities, and way forward of the women's group activities and for service linking of those groups with different stakeholders the Women Congress was organized with 740 participants (623 women). The event was attended by officials from the Upazila Administration, the Department of Fisheries, Livestock Services, Agriculture Extension,

and Women Affairs, private sector representatives, female Blue Guards, Community Volunteers, members of landing Center-based fisheries Co-management Committees (LFCC), representatives from partner organizations, service providers, media professionals, and ECOFISH II team members including Activity Management Team (AMT) members.

Key implementing partners (Universities and NGOs) and their sub-projects, activities and their progress made so far are shown in Table 10.

Table 10. Major partners, their objectives/activities and progress to implement ECOFISH II Activity

Sl #	Name of Partners	Name of Sub-project	Progress in brief
1	Chattogram Veterinary and Animal Sciences University (CVASU)	Blue Food Production through Seaweeds and Green Mussels Farming in the South-East Coastal Waters of Bangladesh	CVASU reported based on the achievement of milestones of this project on Blue Food Production through Seaweeds and Green mussel farming are ongoing. The contract extended for SUST up to September 2024 and CVASU submitted the following activities/deliverables: a) Development of insight gained from the research and development initiative of ECOFISH-II on the mariculture (seaweed and green mussels) initiatives; b) Develop future research and development strategies for Bangladesh of the mariculture initiatives (seaweed and green mussel) involving key actors and c), conduct national-level workshops involving key stakeholders in mariculture to present the Bangladesh mariculture strategies and subsequently refine the strategy based on the feedback received during the workshop.
2	Noakhali Science and Technology University (NSTU)	Impact of market orientation on nutrient rich ready-to-use (RTU) fish and seaweed powder	NSTU reported based on the achievement of milestones of this project on the Impact of market orientation on nutrient-rich ready-to-use (RTU) fish and seaweed powder are ongoing. The contract extended for SUST up to October 2024 to perform the following activities/deliverables: a) Document the insights gained from the "research and development" initiatives of ECOFISH II on dried fish, preparation of fish powder and other products and c) Organize a national-level workshop with key stakeholders in the dried fish value chain, disseminating the outcomes and experiences emphasizing future initiatives. (Milestone – 5) (Milestones 1-4 will remain the same).
4	Shahjalal University of Science and Technology (SUST)	Zoning of MPA for Saint Martin- Teknaf Peninsula through integration of stakeholder perceptions and Scientific information Vis-a`-vis climate change	SUST reported based on the achievement of milestones of this project on “Zoning of MPA for Saint Martin- Teknaf Peninsula” are ongoing. SUST proposed a new MPA in the Naf River estuary area and evaluated the geo-spatial suitability of the coastal ecosystem of Bangladesh for MPA delineation through integrating socio-economic and ecological information. SUST contract upto October 2024 to perform the following activities/deliverables for assessment to delineate new MPAs: i) Socio-economic issues relevant to MPA and management priorities; ii) Ecological and biodiversity hotspot around Kuakata coast and Salimpur coast; iii) Land use patterns and current human activities at coastal ecosystem; iv) Spatial plan of potential MPA, and v) Stakeholder consultation workshops.
5	TMSS	Improved livelihood resilience of coastal fishing communities (ECOFISH II)	TMSS reported based on the achievement of milestones of this project on “Improved livelihood resilience of coastal fishing communities (ECOFISH II)” extended up to October 2024. <ul style="list-style-type: none"> • The selected 2,000 poor artisanal fishing households were organized into groups (FCG and WING) and effectively functioning, and livelihood knowledge and skills of the selected

SI #	Name of Partners	Name of Sub-project	Progress in brief
			<p>fishing household members enhanced and engaged in AIGA for better livelihood and better market linkages established.</p> <ul style="list-style-type: none"> • Technical training and regular extension services, critical inputs for start-up provided to the selected artisanal fishing households for micro-enterprise development. • 70 Women Income and Nutrition Group (WING), Business Literacy School (BLS+) and 70 Fisheries and Conservation Group (FCG) established and operationalized, and improved their savings behavior. • Improved capacity build among 2,000 beneficiary households on nutrition-sensitive homestead horticulture for Year-round production and consumption of nutrient rich vegetables. • Improved knowledge on better fisheries resources conservation and biodiversity for future. • The project beneficiary households are well connected with technical and financial services and market.

10. LESSONS LEARNED

- Research/study on “exploring fisheries blue economy opportunity”, “LFCC-based co-management strategy development”, “Ghost-gear fishing reduction & non-conventional fishing management”, Livelihood intervention impact” and “Gender-responsive study” will assist to find the way forward of the project.
- NAF MPA declaration (with the help of ECOFISH II) and gadget notification by MoFL (Department of Fisheries) will open the door for future management of declared MPAs.
- Women Income and Nutrition Group (WING) plays a good role in women's empowerment, strengthening the learning process related to different kinds of social awareness initiatives (strengthening household bondage, the importance of savings, nutrition-sensitive childcare awareness sessions, household nutrition improvement sessions, savings, IGA training, and adult learnings etc.).
- Artisanal fishers can play an important role in establishing an adaptive co-management system through LFCC in fish landing centers towards better marine/coastal biodiversity conservations.
- Involvement of youth volunteers (BG, CS, LCF and women CVs) in natural resource management (coastal & marine) can play an important role to conserve biodiversity, reducing pollution, helping in real-time catch monitoring activities and women empowerment.
- Fishing ban (22-day brood Hilsa ban, 65-day marine ban, and 61-day sanctuary ban) temporally affected the resilience of fishers’ livelihoods leading to higher catch in the coastal areas.
- Boat skippers as well as FCG and VFCG members training on biodiversity conservation was an important and effective step to build awareness on marine biodiversity conservation and responsible fishing.
- Research on extensive outdoor seaweed culture, indoor seaweed culture for seed production and green mussel culture created a new dimension in the project that helped to find the future way forward.
- Official ties of ECOFISH II with DoF through a Letter from DG helped in building more collaborative implementations of the activities both in field offices and head office, which became supportive of more policy-level contributions of the Government and sustainability of the activities.

II. MANAGEMENT AND ADMINISTRATIVE ISSUES

Based in the WorldFish offices in Dhaka, the Activity Management Team (AMT) consists of the ECOFISH II Chief of Party/Team Leader, two IR Scientists, a MEL Manager, a Project Manager, a Senior Nutrition Specialist, a Training Specialist, a Gender Specialist (based in Cox's Bazar), a Communication Specialist, and a Senior Project Accountant responsible for decision making, planning and implementing the activities of the annual work plan, guiding field team, partners, and maintain relationship with Department of Fisheries, other public-private organizations, and ensuring USAID and WorldFish compliances. An Assistant Project Accountant is also deployed in Cox's Bazar to look after regional financial activities in Cox's Bazar. In the seven field offices, seven Research Associates and nine Research Assistants, and seven Office & Admin Assistants have been deployed in implementing the project intervention sites. A Monitoring Officer (based in Cox's Bazar) and a GIS & Data Analyst (based in Dhaka) working with MEL team. The Field Offices are in Cox's Bazar Sadar, Ukhiya, Teknaf, Moheshkhali, and Kutubdia in the ZOR, Cox's Bazar district; and in Kalapara of Patuakhali, Charfasson of Bhola in the MRE. At each of the offices, normally a 3-member team with a Research Associate, Research Assistant, and an Office & Admin Assistant are deployed, however, two Research Assistants deployed in Cox's Bazar Sadar and Kalapara (including Patharghata of Barguna district), considering the workload.

12. PLANNED ACTIVITIES FOR THE NEXT TWO MONTHS

Table 12 Activities planned for the next two months (October-November'2024)

Major Activities	Target
IR 1: IMPROVED MANAGEMENT & GOVERNANCE OF NATURAL RESOURCES	
IR 1.1 IMPROVED SCIENCE OUTPUTS FOR DECISION-MAKING	
Climate change indicating water quality parameters (DO, salinity, pH, alkalinity and temperature) monitoring in the St. Martin, Moheshkhali and Kutubdia coasts	Monthly
Campaign on improved ecosystem health and biodiversity, reduction of discarded net & plastic pollutants from the beach and fish landing centers by engaging Youths Blue Guards (140 BG)	Fortnightly
L-F & L-W data collection of 05 important artisanal species by 09 Landing Center Facilitators (LCF)	Monthly
Landing & price monitoring in eleven important landing centers by 09 Landing Center Facilitators (LCF)	10 days/month
Real-time on-board catch (CPUE) monitoring engaging 50 Citizen Scientists (CS)	3 days/month
Phaseout Meeting with BGs, CSs & LCFs in 7 stations	07
IR 1.2 IMPROVED ADAPTIVE CO-MANAGEMENT AND FISHERIES GOVERNANCE	
Formation and strengthen of co-management institutions	
LFCC development and coordination meeting (bimonthly), 2024	05
Support to LFCC (management and development activities)	4
LFCC Phase out meeting	10
Phaseout Meeting with wings, FCG, LCF and volunteers (St. Martin)	01
Strengthen Ecosystem Approach to Fisheries Management (EAFM)	
Boat Owner Training on biodiversity Conservation and First Aid Kit use	01
Boat Skipper training on biodiversity conservation, safety at sea and responsible fishing (day-long); 30 Participants/boat Skippers	01
Ecosystem Health Improvement Campaign through BGs (# events)	14
Improve Fisheries Governance	
Fishers Congress to share experience of Biodiversity conservation, Improved Ecosystem health and improved Fisheries governance through non-formal organizations like FCG, VFCG and LFCC (Event- one per field office)	07
Awareness events on “22 days of hilsa fishing ban”	07
IR 1.3 IMPROVED POLICY SUPPORT	
Assessment activities to support DoF for delineating new MPAs in the Kuakata, Patuakhali and Salimpur Chattogram (Partner SUST)	Share with DoF
Consultant’s activities for Fisheries Blue Economy Concept Note and Guideline Formulation	Final Report
Consultant’s activities for identifying the non-conventional fishery products in Bangladesh to enhance Fisheries Blue Economy	Final Report
Consultant’s activities on developing a comprehensive guideline for organizational modalities on landing center-based fisheries co-management initiatives for sustainable coastal and marine fisheries management	Final Report
Enhancing Science Outputs for Ecosystem Health, Biodiversity, and Fisheries Management of ECOFISH II	Final Report
IR 2 IMPROVED EQUITY AND RESILIENCE OF THE FOOD, NUTRITION AND LIVELIHOOD BENEFITS	
IR 2.1. IMPROVED LIVELIHOOD RESILIENCE OF COASTAL FISHING COMMUNITIES	
Phase out meeting /exit meeting of WING (Number of WING)	52
Provide matching funds for savings activity to WING of 2023 and 2024 (Number of WING)	90
Additional support to cyclone Remal affected beneficiaries of year 5 (Number of beneficiaries)	30
LSP development support to Community Volunteers: Capacity building training (Number of CV)	48
LSP development support to Community Volunteers: Start-up support (Number of CV)	48
Provide winter vegetable seed packages to year 4 and year 5 beneficiaries (Number of beneficiary)	632
Conduct endline gender formative research	Final Report

Major Activities	Target
Study to capture lessons learnt on ECOFISH II livelihood intervention and future direction for contributing towards aquatic conservation and ecosystem protection	Final Report
Proximate composition analysis of Seaweed and green mussel (New)	01
OTHERS ACTIVITIES	
Organize National level result sharing and phase out the workshop of ECOFISH II in October 2024	01
Endline Survey for final evaluation	Final Report
Performance survey for indicators reporting	Final Survey
Story Book, Documentary, Fact Sheet on the component's Key achievements	03
Prepare a Catalog on non-conventional fishery products (# of Copy)	300
Round table discussion/ Talk show	01
Development of different types of Extension Materials (Module, Guidebook, Festoons, Flipchart etc.)	01
Published op-ed	01
Organize ECOFISH II AMT and Monthly Team Meetings	02, 02
Asset disposal plan preparation and sharing with USAID	-
Closeout of Field Offices	07
Monthly and Annual reports	02, 01

I4. HOW ECOFISH II HAS ADDRESSED A/COR COMMENTS FROM THE LAST PROGRESS REPORT

There was no genuine concern that needed to be addressed.

“Working together to conserve biodiversity, improve ecosystem health and fishers’ livelihood”



Photo credit: Dilruba

