



INITIATIVE ON
Asian Mega-Deltas

Co-developing climate-responsive propositions for aquatic food systems in the Bengal Delta to influence transformative policies and investments

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INITIATIVE ON

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Contents

Summary	4
1. Context	4
2. Methodological framework	6
3. Results of the backroom analysis	7
4. Frontroom analysis of policy dialogue outputs	8
5. Interfaces among the discussion points emphasizing climate and the SDGs along with their specific targets	9
6. Climate-responsive policy propositions for sustainable and resilient aquatic food production systems in Bangladesh	11
References	13
Appendix 1. Observations from reviewed documents on national policies, strategies and plans relevant to Bangladesh's fisheries and aquaculture sector	14
Appendix 2. Major global policy recommendations	15

Summary

As the world's largest delta, the Bengal Delta is a key source of aquatic foods for about 170 million people living in Bangladesh. However, aquatic food systems in the delta are highly vulnerable to climate change because of the region's geographical and environmental setting, which is largely affected by sea-level rise and interannual climate variabilities. As such, climatic shocks and stresses, together with poor infrastructural, socioeconomic and ecological factors in the coastal belt of the country, diminish the ability of small-scale aquatic food producers to tackle climate risks. To help develop inclusive climate-responsive aquatic food systems in the region, we initiated policy dialogues with sectoral experts and stakeholders and reviewed a range of documents, starting from current national fisheries policies, strategies and plans, through ongoing research and development (R&D) programs, to global policy recommendations. In doing so, we used a qualitative method to assess reviewed documents before the policy dialogues and then to evaluate the dialogues themselves afterward. The results combine local-level insights from the dialogues, national-level learnings from the R&D programs and a global call to action that has gained momentum for aquatic food systems. We co-developed five key climate-responsive policy propositions to influence ongoing revision of the Bangladesh government's national fisheries policy from 1998. These propositions hold significant potential to help develop sustainable and resilient aquatic food systems, influence the investment framework and, thus, strengthen the growing worldwide footprint of the Bengal Delta's blue economy.

1. Context

As a deltaic country with the world's largest flooded wetlands and the third-largest aquatic biodiversity in Asia, Bangladesh is one of the most suitable regions for aquaculture and fisheries in the world. With an inland water area of about 45,000 km², a 710 km long coastal belt and a 70,000 km² exclusive economic zone off of its shores, Bangladesh's blue economy is of great importance to the country and plays a significant role in securing food, nutrition and livelihood security for its people (Shamsuzzaman et al. 2017). In Bangladesh, the prominence of aquatic foods, which account for 60% of animal protein intake, is reflected in the country's diet. They are also a crucial source of livelihood opportunities (employing more than 10% of the country's population through fishing, aquaculture, handling and processing), and the economy (contributing about 5% to the gross domestic product). However, Bangladesh still faces considerable challenges in its quest for continued development in the aquatic food sector, the most significant of which are the projected impacts of climate change and their continued rise in vulnerable communities (Hossain et al. 2021).

Bangladesh is the sixth-most climate-vulnerable country globally and one of the most vulnerable in Asia. It ranks second in climate vulnerability of freshwater aquaculture and has the lowest adaptive capacity to cope with the impacts of climate change for brackish water production (FAO 2018). Extreme temperatures, erratic rainfall, floods, droughts, tropical cyclones, rising sea levels, tidal surges, salinity intrusion and ocean acidification are all causing serious negative impacts on the lives and livelihoods of millions of people in Bangladesh, offsetting socioeconomic development and resulting in food, nutrition and livelihood insecurity, as well as social disparity and gender inequity in vulnerable communities (Mohammed et al. 2021). The country suffers huge losses and damage every year because of (i) increased incidences of cyclones and storm

surges, higher salinity levels along the coastal belt, extreme temperatures, erratic rain and droughts in the northwest, (ii) monsoons and flash flooding in the northeast, and (iii) large-scale interannual rainfall and temperature variabilities across the country. This endangers lives and livelihoods, increasing the risk of internal displacement and livelihood migration of large populations, and challenging food, nutrition and socioeconomic security in the country (Goosen et al. 2018). From 2011 to 2021, Bangladesh's aquaculture sector lost approximately about USD 140 million because of climatic hazards (Islam et al. 2023).



Conserve and sustainably use the oceans, seas and marine resources

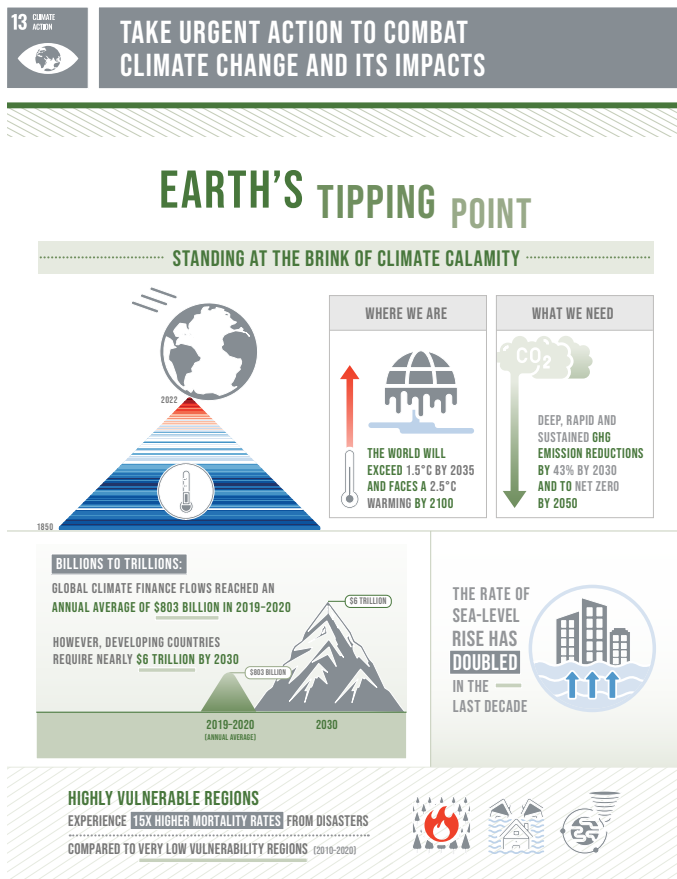
Box 1. Indicators in line with policies, plans and strategies.

14.6.1 Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing

14.b.1 Progress by countries in adopting and implementing a legal, regulatory, policy and institutional framework that recognizes and protects access rights for small-scale fisheries

14.c.1 Number of countries making progress in ratifying, accepting and implementing, through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the UN Convention on the Law of the Sea, for the conservation and sustainable use of the oceans and their resources

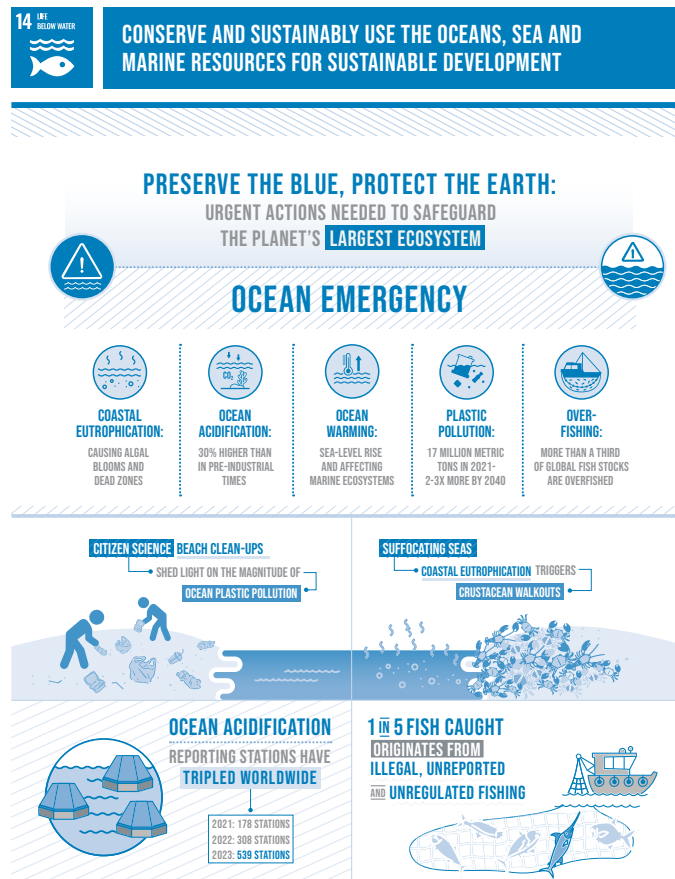
Figure 1. SDG 13: Climate Action.



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The context of aquatic food systems in Bangladesh and their vulnerability to climate change signify the need for a climate-ready national fisheries policy. This would set in motion a major shift to climate-ready science and management by building the resilience of fishing communities, fish farmers, value chain actors and aquatic food-based industries and businesses, including sustainable supply. Policies put in place more than 20 years ago, when hydroclimatic environmental changes and their impacts on aquatic food systems were not yet evident, are now insufficient to tackle the current problem, requiring a revision of the National Fisheries Policy (NFP) of Bangladesh originally formulated in 1998. Moreover, sensible policies are critical to safeguard the planet's largest ecosystems (oceans, sea and marine resources) to achieve the 2030 Agenda for Sustainable Development (Box 1) by taking in account that highly vulnerable zones will experience 15 times greater risk from disasters than low vulnerable regions (Figures 1

Figure 2. SDG14: Life Below Water.

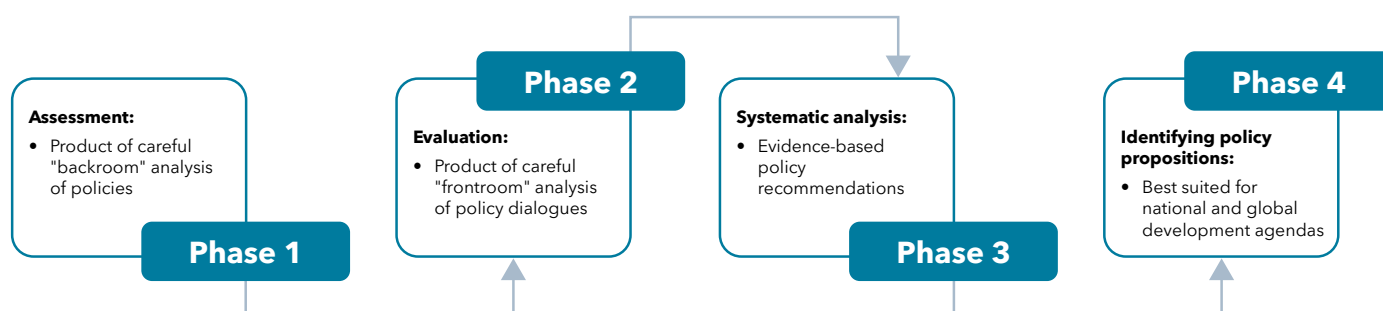


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and 2). Accordingly, integrating aquatic food systems into the development of Bangladesh's Nationally Determined Contributions (NDCs) for climate action would also require the NFP to be climate responsive.

In this line, WorldFish has become a key partner of Bangladesh's Department of Fisheries (DOF). Working jointly, they conducted four policy dialogues at the divisional level to identify (i) location-specific climate risks, (ii) relevant ongoing adaptation interventions, (iii) challenges and potential measures to address and (iv) specific policy supports and/or changes needed to have an impact on the ground. This collaboration will help create inclusive, sustainable and resilient aquatic food systems that align with the country's strategic development goals. To that end, this working paper aims to co-create climate-responsive policy propositions for policymakers, fisheries managers and practitioners, bringing the discussions of the policy dialogues together.

Figure 3. Methodological framework for qualitative policy analysis.



2. Methodological framework

A qualitative approach consisting of four phases was used as a framework (Figure 3) to formulate inclusive key propositions to revise the NFP. During Phase 1, we executed an assessment through a careful backroom review of relevant national (Appendix 1) and global (Appendix 2) policy, strategy and planning instruments for aquatic food systems. We also conducted R&D projects and/or programs to outline important issues and thematic areas, focusing on key features for each thematic area for the next phase of the policy dialogues. Another objective of the review process was to set an expected

goal for each thematic area, taking into consideration their key features and their links to the UN's 2030 Agenda for Sustainable Development. In Phase 2, we conducted four policy dialogues at the divisional level (Figure 4) to identify and evaluate suggestions for policy inclusion. We then analyzed these suggestions under Phase 3 to design specific policy recommendations. Finally, in Phase 4 we checked with national and global sustainable development agendas to co-create inclusive policy propositions to make aquatic food systems in Bangladesh more sustainable and resilient.

Figure 4. Four divisional policy dialogues.









3. Results of the backroom analysis

Fisheries and aquaculture are critically vulnerable to climate impacts worldwide. As such, there is an urgent need for action at both the national and global level. In view of aquatic environmental health and sustainability, policy directions in Bangladesh must take into account climate adaptation, resilience and mitigation measures, as well as conservation measures for wetland ecosystems and biodiversity. This will

reduce the vulnerability of the country's aquatic food sector to climate impacts and build the resilience of aquatic food producing actors. All of these goals, coupled with the key features of the thematic areas listed in Section 2, can contribute to the Sustainable Development Goals (SDGs), tying people, planet, prosperity, peace and partnership together (Table 1).

Table 1. Issues to address during the revision of Bangladesh's 1998 fisheries policy.

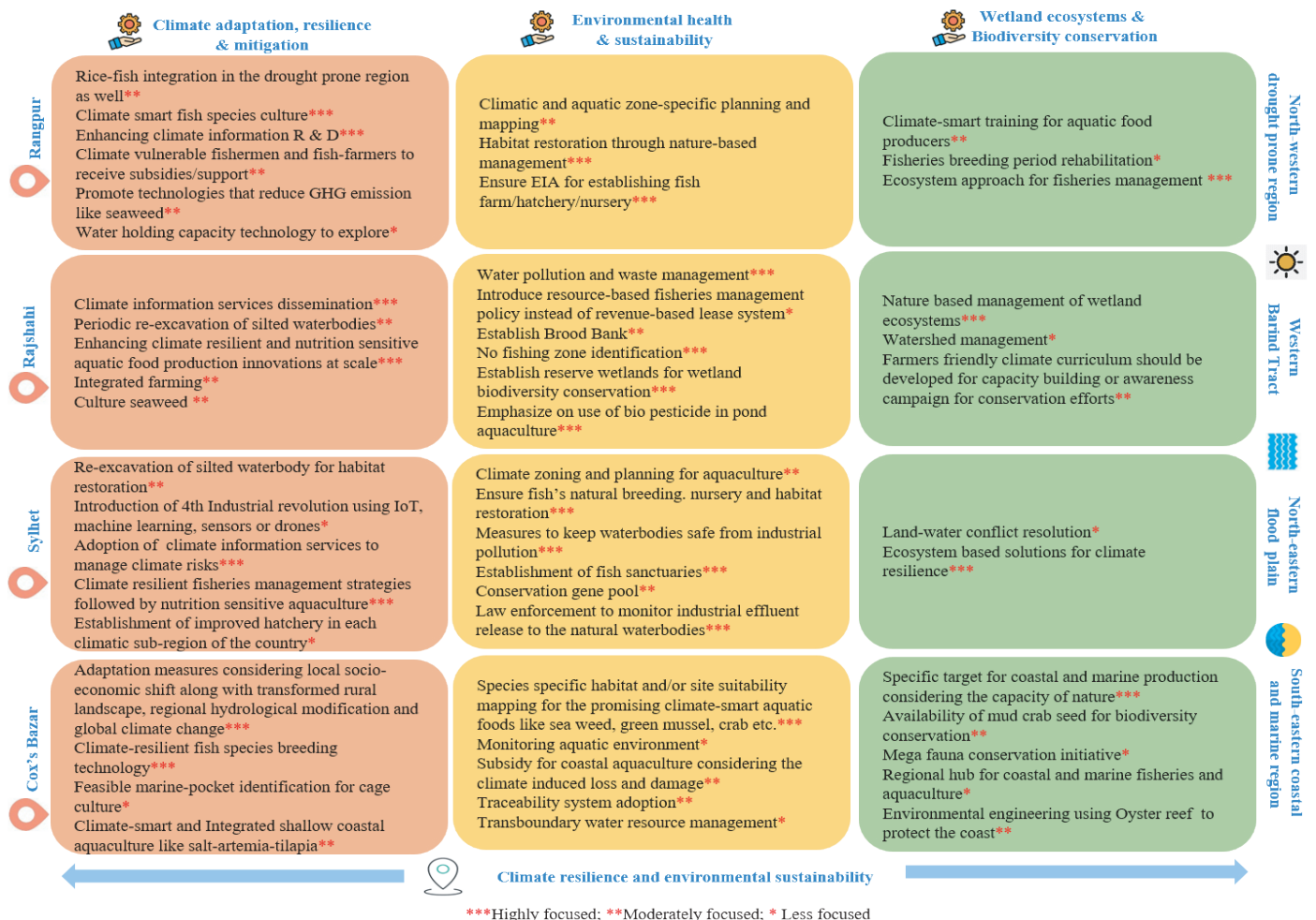
 Issues	 Thematic areas	 Key features	 Expected goals	 Connection to the SDGs
<p>Call for urgent climate-resilient actions in response to climate change and its impacts on the environment and sustainability of aquatic food systems</p>	<p>Climate resilience and environmental sustainability</p>	<p>Climate adaptation, resilience and mitigation</p> <p>Environmental health and sustainability</p> <p>Conservation of wetland ecosystems and biodiversity</p>	<p>Reduction of the vulnerability of the aquatic food sector to climate impacts, and building the resilience of aquatic food producers</p>	

4. Frontroom analysis of policy dialogue outputs

The climate resilience and environmental sustainability thematic area brought together 22 highly focused discussion points for policy-level consideration (Figure 5). Regarding the drought-prone northwestern region of Bangladesh, dialogue covered climate-smart culture of fish species. For the floodplain northeastern region, dialogue centered around climate-resilient fisheries management strategies followed by nutrition-sensitive aquaculture, along with climate-information services tailored for aquaculture and fisheries to manage associated risks as part of climate adaptation and building resilience. Participants from the Western Barind Tract region mostly discussed the dissemination of climate-information services and enhancing climate-resilient and nutrition-sensitive aquatic food production innovations at scale. The southeastern coastal marine region stressed the importance of transferring climate-resilient fish breeding technology and selecting adaptation measures that take into consideration local socioeconomic shifts, along with a transformed rural landscape, regional hydrological modification and global climate change. Conversely, for environmental health and sustainability, mapping site suitability and species-specific

habitat for climate-smart aquatic foods (such as seaweed, green mussel and crab) in coastal regions of the country are important to enhance the blue economy. The discussion in the Sylhet region covered two subjects: pollution and restoration. This included measures to keep waterbodies safe from industrial pollution, such as having law enforcement monitor industrial effluent release into natural waterbodies, establishing fish sanctuaries and restoring natural habitats, such as breeding and nursery grounds. The debate in Rajshahi was similar, as it focused on water pollution and waste management, identifying no fishing zones, establishing reserve wetlands to conserve biodiversity and emphasizing the use of biopesticides for closed aquaculture. In Rangpur, the dialogue recommended proposing nature-based solutions for restoration and conducting an environmental impact assessment before developing fish farms, hatcheries and nurseries. Participants in the working group for conserving wetland ecosystems and biodiversity proposed an ecosystem approach for climate-resilient fisheries management, nature-based solutions for wetland ecosystems management and specific production targets from coastal and marine resources.

Figure 5. Policy dialogue on climate resilience and environmental sustainability.














































5. Interfaces among the discussion points emphasizing climate and the SDGs along with their specific targets

Key policy discussion points that are relevant to climate resilience and environmental sustainability do not show any negative impacts. However, they have trade-offs when it comes to maintaining ecosystems for breeding and culturing climate-

smart fish species and sustaining per capita economic growth (SDG 8.1) and achieving higher levels of economic productivity (SDG 8.2) for nature-based solutions and/or ecosystem-based adaptation (Table 2).

Table 2. Interfaces among discussion points of climate resilience and environmental sustainability along with relevant SDGs and targets.

Discussion points	Interfaces with SDGs and their targets				
	Positive edges	Negative impacts	Synergies	Trade-offs	Complex interactions
Implement climate-smart fish breeding technology and culture	 1.2 Reduce multidimensional poverty  2.3 Double agriculture production and incomes of small-scale food producers  14.7 Increase economic benefits		 13.1 Strengthen climate resilience and adaptive capacity  15.6 Share benefits from genetics equitably	 2.4 Maintain ecosystems for land and soil quality	 13.b Raise the capacity for effective planning and management related to climate change  17.6 Cooperate on and provide access to science, technology and innovation
Enhance climate-information services at scale	 13.1 Strengthen climate-resilience and adaptive capacity  14.7 Increase economic benefits  1.5 Build the resilience of the poor and vulnerable		 11.5 Reduce the number of people affected by disasters and the direct economic losses that result  17.9 Conduct effective and targeted capacity building		 13.2 Include climate change measures into national policies, strategies and planning  16.7 Conduct responsive, inclusive, participatory and representative decision-making
Implement NbS/EbA like climate-resilient fisheries management followed by aquaculture, no fishing zones for habitat restoration, reserve wetlands and fish sanctuaries for biodiversity conservation, etc.	 13.3 Build human and institutional capacity  15.a Provide financial resources to conserve and sustainably use biodiversity and ecosystems		 7.2 Share renewable energy  11.7 Create safe, inclusive and accessible green and public spaces  13.b Implement effective climate change-related planning and management	 8.1 Sustain per capita economic growth 8.2 Achieve higher levels of economic productivity	 7.a Enhance international cooperation  11.4 Protect and safeguard world cultural and natural heritage sites  15.b Provide financial resources for conservation and reforestation

Discussion points	Interfaces with SDGs and their targets				
	Positive edges	Negative impacts	Synergies	Trade-offs	Complex interactions
Implement adaptation measures that take into consideration local socioeconomic shifts along with transformed rural landscapes, regional hydrological modifications and global climate change	 13.2 Implement climate change measures into national policies, strategies and planning  14.7 Increase economic benefits  17.7 Develop, transfer, disseminate and diffuse environmentally sound technologies		 6.5 Integrate water resource management at all levels  11.a Establish economic, social and environmental links between urban, peri-urban and rural areas  14.3 Enhance scientific cooperation at all levels		 6.a Increase international cooperation and capacity building  13.a Implement the commitment of developed countries to the UNFCCC  15.3 land degradation-neutral world
Emphasize the use of bio-pesticides in pond aquaculture	 13.b Conduct effective planning and management related to climate change		 11.6 Reduce adverse per capita environmental impacts		 14.1 Reduce marine pollution of all kinds  13.b Conduct effective climate planning and management related to climate change
Implement measures to monitor and keep waterbodies safe from industrial pollution	 6.3 Improve water quality		 6.4 Ensure water-use efficiency across all sectors  14.1 Reduce marine pollution of all kinds		 6.b Ensure the participation of local communities  14.3 Enhance scientific cooperation at all levels
Create species-specific habitats and/or conduct site suitability mapping for promising climate-smart aquatic foods, like seaweed, green mussel, crab, etc.	 13.b Conduct effective planning and management related to climate change  14.7 Increase economic benefits		 14.b Grant access to marine resources and markets for small-scale artisanal fishers		 14.c Conserve oceans and their resources and use them sustainably
Set production targets from coastal and marine ecosystems that take into consideration their natural capacity	 14.a Preserve ocean health and marine biodiversity		 13.b Conduct effective planning and management related to climate change		

6. Climate-responsive policy propositions for sustainable and resilient aquatic food production systems in Bangladesh

A multicriteria evaluation of the discussion points during the policy dialogues (Figure 6) shows that fisheries and aquaculture production systems need to become resilient to climate change. This requires extended climate research on stress-tolerant fish species, developing more resilient open-water fisheries management, extending mariculture, strengthening early warning and climate information and advisory services, and building the capacity of fishers and fish farming communities, with a special emphasis on climate literacy. Accordingly, certain propositions (Figure 7)

hold significant potential to contribute substantially to the development of sustainable and resilient aquatic food systems, influence the investment framework and, thus, strengthen the growing footprint of the blue economy of Bangladesh's Bengal Delta around the world. Moreover, the propositions can potentially act as a niche for future investment in the aquatic food systems sector to have impacts on the ground for climate actions (Figure 8), which are very much in line with the UN's 2030 Agenda for Sustainable Development.

Figure 6. Multicriteria analysis of the discussion points to develop policy propositions.

*Multicriteria	Effectiveness	Efficiency	Equity	Responsiveness	Appropriateness	Feasibility	Trade-Offs	Sustainability	Substitutability	Liberty
	+++ ++ +	+++ ++ + -	+++ ++ + -	+++ ++ + -	+++ ++ + -	+++ ++ + -	+++ ++ + -	+++ ++ + -	+++ ++ + -	+++ ++ + -
Highly focussed policy discussion points										
Climate-smart fish species breeding technology and culture	20 80	70 30	40 60	10 60 30	20 50 30	10 60 30	40 20 10 20	80 20	10 50 20 10	20 40 10
Enhancing climate information services at scale	40 60	20 50 30	10 80 10	10 60 20	10 90	10 60 30	30 30 40	10 70 20	10 40 10 20 20	20 60 10
Nature based Solutions/Ecosystem based Approach for conservation and management	30 60 20	20 50 30	30 70	10 30 60	10 60 30	10 40 50	30 60 10	20 20 60	10 10 10 20 50	20 60
Adaptation measures considering local socio-economic shift along with transformed rural landscape, regional hydrological modification and global climate change	20 70 10	20 30 50	10 20 60 10	70 30	10 80 10	50 30 20	10 60 10 20	10 60 30	20 20 10 10 40	10 50 20 10
Emphasize on the use of bio-pesticide in pond aquaculture	20 60 20	10 40 50	30 60 10	10 20 70	10 70 20	30 70	50 20 20	10 60 10 20	10 60 10 20	20 80
Measures to monitor and keep waterbodies safe from industrial pollution	30 60 10	20 30 50	10 20 60 10	40 60	80 10 10	20 60 20	10 70 20	10 60 30	50 10 10 30	20 60 20
Species specific habitat suitability mapping for the promising climate-smart aquatic foods	20 10 70	20 60 20	10 10 60 20	20 70 10	40 60	20 70 10	20 20 20 60	60 30 10	30 70 10 60	10 20
Production target considering the capacity of nature/Sustainable harvest	10 70 20	70 20 10	50 20 30	70 20 10	20 40 20 20	20 10 50 20	10 20 10 20 40	20 40 20 20	10 10 20 10 50	50 20 30

* Concept along with an illustration of the multicriteria for evaluating the policy propositions.

Criteria	Concept	Illustration	Score	
			Positive range	Negative range
Effectiveness	A valued outcome to achieve	Likelihood of achieving the policy goal		
Efficiency	Beneficial from an economic perspective	Providing benefits in relation to costs		
Equity	Fair social allocation of cost-benefit and risks	Pareto criterion (justice for all)		
Responsiveness	Satisfied the needs of particular groups	Citizen science	Extremely likely +++	Extremely unlikely ---
Appropriateness	Political, social and cultural acceptability	Likelihood of acceptance, support and adoption		
Feasibility	Administrative, technical and legal perspective of implementation	Likelihood of implementation	Very likely ++	Very unlikely --
Trade-offs	Advantages and disadvantages	Zero-sum		
Substitutability	Possibility of not producing the expected outcome	Act of replacing	Likely +	Unlikely -
Sustainability	Ability to maintain beneficial effects in the longer term	People-planet-prosperity		
Liberty	Extended or restricted privacy	Individual rights and choices		

Figure 7. Climate-responsive policy propositions.

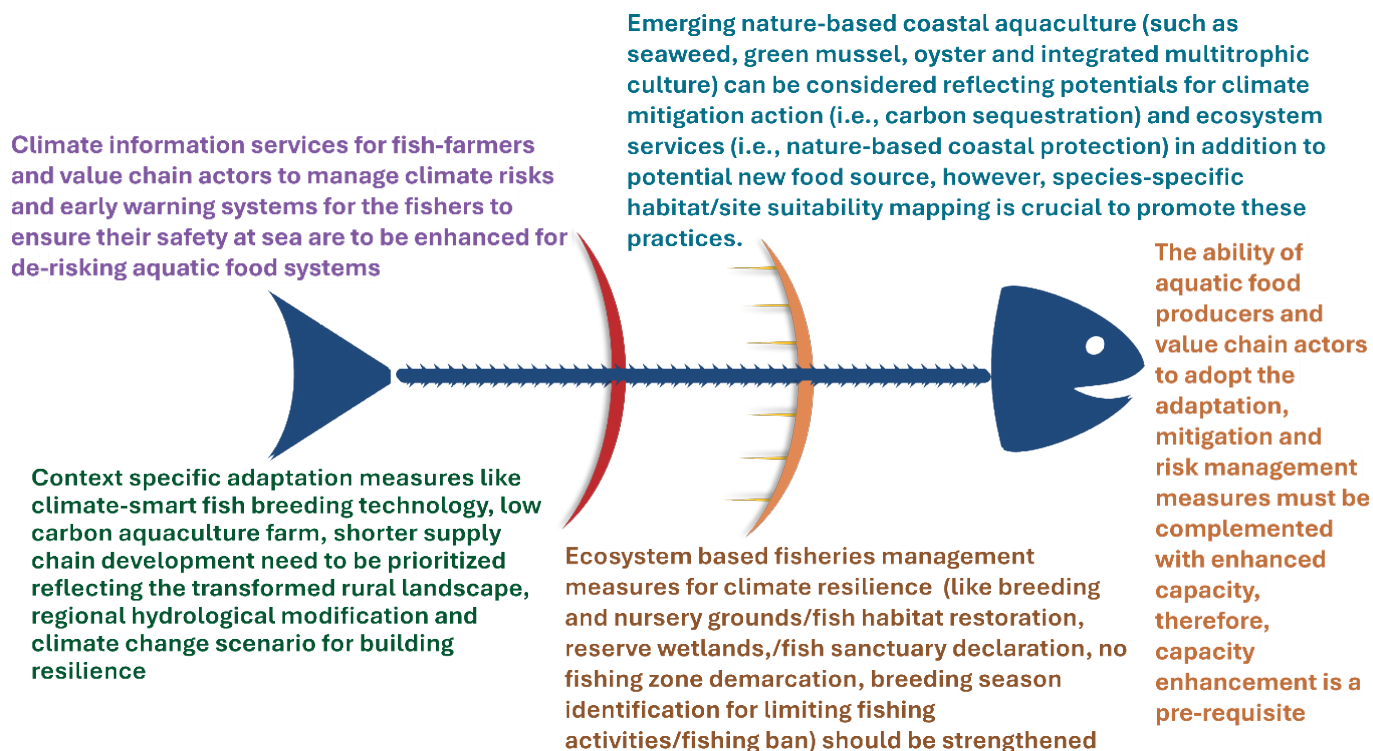


Figure 8. Wide range of impacts of climate action on aquatic food systems.



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Appendix 1. Observations from reviewed documents on national policies, strategies and plans relevant to Bangladesh's fisheries and aquaculture sector

National policies, strategies and plans	Major observations
National Fisheries Policy (NFP) 1998	The NFP lacks several emerging issues of the sector: the nutritional values of aquatic foods; climate adaptation, mitigation and resilience; food loss, waste, availability, accessibility and affordability; perspective of the aquatic food systems sector (interconnected freshwater and brackish water aquaculture, both inland and marine fisheries).
National Fisheries Strategy (NFS) 2006	The NFS was formulated to propose ways that the NFP could be implemented and support offered to guide the sector. However, being aware of the DOF's initiative to revise the NFP, this strategy requires further evaluation immediately after the revision process, recognizing the future requirements of the growing aquatic food sector, given that it is likely to change as rapid development continues.
National Aquaculture Development Strategy and Action Plan (NADSAP) 2013	The NADSAP was developed for the 2013-2020 period and aligned with the 1st Country Investment Plan (CIP1) of 2010-2015 and the 6th Five-Year Plan (6FYP) 2011-2015. Since the 2nd Country Investment Plan (CIP2) of 2016-2020 and the 8th Five-Year Plan (8FYP) of 2020-2025 are already live, this strategy and action plan accordingly require modification for sustainable, socially responsible and environment friendly aquaculture development.
National Sustainable Development Strategy (NSDS) 2010	The NSDS is based on the long-term development vision of Bangladesh's government, particularly the 6FYP, the Perspective Plan of Bangladesh 2010-2021 and other pledged sectoral existing plans, policies and strategies (like fisheries and aquaculture) to meet the SDGs. Meanwhile, the 8FYP and the Perspective Plan of 2041 are both in place, and the NFP is under revision. This requires aligning the NSDS with the latest national plans and sectoral revised policy to achieve Bangladesh's SDG commitments.
Second Country Investment Plan (CIP2) 2016	CIP2 highlighted the resolution of nutrition-sensitive food systems, which are integral to tackle hunger and malnutrition, and to achieve the SDGs, particularly food and nutrition security. By making aquatic food systems nutrition-sensitive and sustainable, the country can achieve CIP2's strategic objective to ensure availability, affordability and access to nutritious, safe and healthy foods for all. However, this transformational change will require a revised NFP that includes the nutritional value of aquatic foods in order to reduce malnutrition and hidden hunger for public health as well as food and nutrition security.
The 8th Five-Year Plan (8FYP) 2025	The strategic aim of the 8FYP is promoting prosperity and fostering inclusiveness. To reach this aim, the plan highpoints a wide-ranging strategy of inclusiveness, a sustainable development pathway resilient to climate change and attaining SDG targets, along with LDC graduation impacts. In addition, the broad part of the plan delineates a policy framework for promoting inclusiveness, reducing poverty and inequality. The plan also sets out the sectoral strategies where fisheries and aquaculture are planned. It includes specific targets to attain by the 2025 fiscal year to promote inclusiveness and reduce inequality and poverty to 15.6% and extreme poverty to 7.4%. The plan also aims to strengthen the initiatives of the sector to ensure inclusive growth that will bring about women's empowerment, social inclusion and protection. All of this reveals that the NFP 1998 requires inclusiveness through a social, economic, environmental and climate lens for resilience as well as sustainability.
Perspective Plan of Bangladesh 2041	This plan, with a vision up to 2041, sincerely articulates transforming the country from a lower to an upper middle-income country by 2031 and a high-income country by 2041, together with eradicating extreme poverty by 2031 and achieving zero poverty by 2041. To make its vision into reality, one of the key strategic goals and milestones of the plan is paradigm shifts in food systems (agriculture, fisheries, aquaculture, livestock and poultry) to enhance productivity, economic gain and resilience to climate change and other environmental challenges. As such, the NFP revision process should be harmonized with the mid- and long-term mission, vision and goals recognized for this plan and bring the tri-focal approach of aquatic food systems: climate change, environmental sustainability and socioeconomic inclusion.
Bangladesh Delta Plan (BDP) 2100	The BDP was formulated mainly to deal with the long-term climate challenges and extreme natural events of this Asian mega delta. Most importantly, the plan seeks to integrate the medium- and long-term aspirations of Bangladesh to achieve upper middle-income status and eliminate extreme poverty. Being a prosperous country, Bangladesh faces longer term challenges when it comes to sustainable management of water, ecology, environment and land resources in the context of their interaction with natural disasters and climate change. The BDP identified the country's food systems that are most likely to bear the loss and damage from climate change, variability and extremes that could be significantly higher than the estimated global average loss. Considering this likely loss and damage for the food system sector, the plan also proposed strategies in an integrated and holistic way. These included improved wetland ecosystem management for the development of fisheries; sustainable marine fisheries resources management; and interaction among climate change, environment, biodiversity, nutrition and livelihoods, etc. So, including aquatic foods in the upcoming policy revision is crucial to achieve the country's longer term development goals.

Appendix 2. Major global policy recommendations

Globally relevant policy particulars	Major observations
Recommendations on food security and nutrition for fisheries and aquaculture by the Committee on World Food Security (CFS) 2014	<ul style="list-style-type: none"> • Ensure fish's deserved position in food security and nutrition strategies, policies and programs. • Promote policies and management for sustainable fisheries and aquaculture. • Design climate change adaptation strategies for food security and nutrition in line with aquatic food systems. • Seize opportunities and address the challenges of aquaculture development. • Recognize the contribution of small-scale fisheries in food security and nutrition. Contribute to SDGs 5, 6, 8, 10, 13 and 15.
Encouraging policy change for sustainable and resilient fisheries by the Organization for Economic Co-operation and Development (OECD) 2019	<ul style="list-style-type: none"> • Invest in data and improve the governance of data collection and scientific evidence production to better motivate, prioritize and design policy change. • Make greater use of commitment mechanisms to initiate policy change. • Make policy change more legitimate and acceptable by adopting a whole-of-government approach to address the socioeconomic issues affecting coastal communities. • Encourage inclusive, open and transparent dialogues with stakeholders, and across branches of the administration, throughout the processes of policy change.
Role of aquatic foods in sustainable healthy diets, UN Nutrition 2021	<ul style="list-style-type: none"> • Promote changes in consumer behavior and demand toward more sustainable, diverse and low-trophic aquatic foods. • Sustainably improve the supply of aquatic foods for human consumption and build the resilience of aquatic foods. • Improve the governance of aquatic resources for food security and nutrition. • Promote policies that prioritize aquatic foods for domestic consumption over export, particularly in areas with high rates of malnutrition. • Encourage implementation of long-term solutions for improved food safety of aquatic foods, including improved governance at all levels as well as behavioral and systemic changes. • Reform subsidies to prioritize support for small-scale producers to sustainably harvest and farm aquatic foods for better livelihoods, food security and nutrition. • Democratize knowledge, data and technologies to co-create meaningful knowledge and usable innovations.
Food system priorities to end hunger and protect the planet, UN Food Systems Summit 2021	<ul style="list-style-type: none"> • Sustain aquatic food. • End hunger and improve diets. • De-risk food systems. • Protect equality and rights. • Boost bioscience. • Protect resources. • Harness digital technology.

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CGIAR Initiative on Asian Mega-Deltas

The CGIAR Initiative on Asian Mega-Deltas aims to create resilient, inclusive and productive deltas, which maintain socio-ecological integrity, adapt to climatic and other stressors, and support human prosperity and wellbeing, by removing systemic barriers to the scaling of transformative technologies and practices at community, national and regional levels. To learn more about this Initiative, please visit <https://www.cgiar.org/initiative/asian-mega-deltas/>

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