Asia–Africa BlueTech Superhighway

Leveraging South–South collaboration to deliver a triple win for nature, people and climate

Bangladesh

The challenge

Bangladesh is a country and culture of aquatic foods, and fish is the foremost animal-source protein in the national diet. Fisheries and aquaculture also drive nearly a quarter of the country's agricultural economy (Islam et al. 2023), bringing essential—though too often marginal and insecure—income to small-scale fishers and farmers. Bangladesh ranks fifth in the world for aquaculture production and in the top 25 countries for marine capture (FAO, 2024). The government aims even higher, seeking to raise total fish production by nearly 75% by 2031 (FAO, 2024). That ambition will place greater demands on the country's 710 km coastline and 70,000 km² exclusive marine fishing zone. It will also run up against the intense and ongoing impacts of climate change, such as rising sea levels, degrading coasts and disastrous weather. Bangladesh has been ranked ninth worldwide for climate disaster risk (Bündnis Entwicklung Hilft, 2023).

Asia–Africa BlueTech Superhighway (AABS)

- A seven-year initiative, from 2023 to 2030, to transform aquatic food systems in Asia and Africa by leveraging South–South collaboration
- AABS is implemented by WorldFish in collaboration with a host of partners
- It aims to improve food and nutrition security, create increased employment and income opportunities and sustainably manage marine and coastal resources to mitigate and adapt to climate change

Phase 1: 2023–2027 in Bangladesh, Kenya, Mozambique, Nigeria and Tanzania

Overall expected outcomes by 2030

- An increase in aquatic food production of up to 500,000 metric tons in target countries, sustainably increasing incomes of 300,000 people by 2030
- At least 150,000 women and youth benefiting from increased income by 2030
- Up to 1.4 million hectares of the coastal zone brought under sustainable management

Donor: UK International Development, under the UK's Climate and Ocean Adaptation and Sustainable Transition (COAST) program of The Blue Planet Fund

Asia–Africa BlueTech Superhighway in Bangladesh

Asia–Africa BlueTech Superhighway (AABS) will help Bangladesh address its fisheries and aquaculture challenges by leveraging South–South collaboration to improve sustainability, resilience and prosperity in coastal communities. Through evidence-based models and partnerships, AABS will enhance the adaptive capacities of small-scale fish workers and farmers, mitigating the effects of climate change and increasing the sustainability of fish production. By focusing on Bangladesh's vulnerable coastal regions, the initiative will not only support the government's goals but also ensure that the livelihoods of these communities are more secure and equitable.

AABS will implement two work packages in Bangladesh:

- **Integrated Multi-Trophic Aquaculture (IMTA)**— adapting and implementing IMTA tailored to local context in Africa and Asia.
- **Incentives for Coastal Conservation and Fisheries Management**—assessing, strengthening and scaling more effective and equitable incentives for coastal conservation and fisheries management.

Integrated Multi-Trophic Aquaculture

Adapting and implementing IMTA tailored to local contexts in Asia and Africa

AABS will contribute to the conservation and sustainable use of coastal and marine ecosystems, nutrition, food security and livelihood improvement through the development and scaling of IMTA systems. These are a family of climate-smart, nature-based systems that integrate fish farming with complementary marine species that feed on fish waste, such as shellfish and seaweed.

Objectives
- Conduct a comprehensive analysis of the context of IMTA.
- Develop new IMTA systems through research and innovation.
- Validate context-specific IMTA business models.
- Scale IMTA systems within and beyond project countries.

WorldFish has piloted significant models in Bangladesh, including a low-cost green mussel–seaweed system that generated income for 400 women-headed households (Abdul, 2021). Approaches piloted here hold promise for African countries as well, which was the inspiration for AABS. However, perfecting fair and sustainable IMTA systems is a complex balancing act between conservation and livelihoods and requires ongoing adaptation and participation by communities.

Strategy
- AABS will begin with a fresh situational analysis of coastal Bangladesh to update the **comprehensive environmental assessment** for IMTA in the country. This will include reviewing lessons learned so far in implementing IMTA, and analysis of the current policy and regulatory environment. It will also look at how well extension services and experts in the country can support more farmers taking up IMTA.
- **Farmer surveys** will assess the current level of willingness to adopt IMTA systems, including the income thresholds and other factors necessary to incentivize more farmers to try them. The surveys will also collect farmers' perspectives on the key risks and challenges they face in adopting IMTA systems.
- **Market assessments** will gather information on what species of fish, shellfish and seaweed local consumers are interested in buying, at what prices, and what marketing might be needed.
- Once these fundamentals are established, the project will **develop a demonstration site** for different combinations of fish–shellfish–seaweed production. Working with local communities and technical experts, this will become a site to train farmers on IMTA, monitor production metrics and adapt the model as needed. Regional workshops and international knowledge exchange visits will disseminate the successes widely.

Incentives for Coastal Conservation and Sustainable Fisheries Management

Assessing, strengthening and scaling incentives for more effective and equitable coastal conservation and fisheries management

Incentives are increasingly promoted as a means to strengthen individual or collective motivations to engage in behaviors that support marine conservation and resource management objectives, by mitigating short- to medium-term costs for coastal communities. They can be provided through various ways including social protection, subsidies, property rights and market-based tools. Examples include rewards for compliance with closed fishing seasons, eco-credit schemes offering conditional loans, as well as policies and programs that strengthen and diversify coastal livelihoods or develop sustainable markets for marine resources.

However, key challenges for incentive-based approaches include 1) limited evidence linking incentives to behavior change or ecological outcomes, particularly in marine environments; 2) lack of equitable governance that undermines the effectiveness of incentives and 3) limited investment and innovative financing strategies for conservation and fisheries management. In Bangladesh, AABS will address these challenges through the following objectives and strategy.

Objectives
- Build knowledge on opportunities and challenges for incentives in coastal and marine conservation and fisheries management, and build capacity for their design, implementation and evaluation.
- Strengthen institutional and policy environments for incentive-based approaches to coastal and marine conservation and fisheries management.
- Strengthen incentives for the conservation and management of selected coastal areas.
- Ensure financial sustainability of incentive-based approaches.

Strategy
- AABS will **map and assess past and current use of incentives** in conservation and fisheries management in Bangladesh, building knowledge on opportunities, challenges and best practices.
- AABS will work with government and other partners to **identify needs and support the strengthening of institutional, legal and policy frameworks** on incentives for coastal conservation and fisheries management.
- AABS will also work with the government and other partners to **develop financing strategies** to ensure the sustainability of incentives in conservation and fisheries management.
- AABS will **assess and strengthen incentive-based approaches at selected coastal sites**, including through impact evaluation and improvements in governance and equity of conservation and fisheries management.

Partnerships
- Chattogram Veterinary and Animal Science University (CVASU)
- Fisheries and Marine Resource Technology (FMRT) at Khulna University (KU)
- International Institute for Environment and Development (IIED)

Find out more
Blog: Towards Socially Just Fisheries Management and Conservation in Bangladesh

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"The lack of agency is a major issue for these isolated communities. We need to ensure their voices are heard and that they are involved in shaping the decisions that impact their lives."

– Dr Samiya Selim, University of Liberal Arts Bangladesh, at the AABS Theory of Change Workshop, Dhaka

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Scan for more information

Why invest in aquatic foods in Bangladesh?
Aquatic food systems have a large and distinct sphere of impact

Provides **food, nutrition and livelihoods**

#5
Bangladesh's global rank in aquaculture production (FAO, 2024).

24.75 kg
Annual fish consumption per capita (WorldFish, n.d.)

60%
Share of fish in animal protein intake (Nordhagen, 2023)

18.2 million
Bangladeshis employed in fisheries and aquaculture (WorldFish, n.d.)

Is an engine for **economic growth**

300% Increase in Bangladesh's aquatic food production since international standards for fisheries were set in 1995 (FAO, n.d.)

From 4.9 to 8.5 million tons
Increase in fish production targeted by Bangladesh as part of becoming an upper-middle-income country by 2031 (UNB, 2023)

Reduces **carbon footprint** and **environmental stress**

Around the world, aquatic food systems produce nutrient-dense foods with lower emissions than land-produced livestock (Nordhagen, 2020).

Small fish and bivalve aquaculture stresses the environment less than chicken, the most efficient major terrestrial animal-source food (Oceana, 2023).

For more information, please visit www.worldfishcenter.org

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