Asia–Africa BlueTech Superhighway

Work package 1: Digital Coasts

Co-creating and scaling contextualized digital information systems for small-scale fisheries

Target countries: Kenya, Mozambique and Tanzania
Lead: Alexander Tilley, WorldFish

Vision

All fisheries stakeholders have access to and the capacity to use data to make informed, nature-positive decisions for a sustainable, resilient and equitable future

Objectives

- Improve aquatic food systems management of at least 20% of the coastal zone across Kenya, Zanzibar and Mozambique.
- Strengthen institutional frameworks and regulatory mechanisms of marine. resources through data-driven fisheries management policies developed at local, county and national levels.
- Create evidence on the impact of data and digital services on behavior change in fisheries management and marine conservation.
- Co-create new knowledge on the utility of oceanographic modelling and artificial intelligence in marine resource management.
- Mainstream small-scale fisheries data from local to national databases for policymaking to unleash the full potential of aquatic foods for sustainable oceans, food and nutrition security.

Expected outcomes

- At least 20% of the coastal zone across Kenya, Zanzibar and Mozambique under improved management of aquatic food systems.
- Improved institutional frameworks and regulatory mechanisms of marine resources through data-driven fisheries co-management policies developed at local, county and national levels.
- New knowledge on the impact of data and digital services for behavior change in fisheries management and marine conservation.
- New knowledge created on the utility of control theory and artificial intelligence in marine resource management.
- Small-scale fisheries data is aggregated and mainstreamed into national ocean accounting and food balance sheets to leverage the full potential of aquatic foods to provide food and nutrition security.
- Governments of the three target countries adopt Peskas modules and approaches to enhance national fisheries monitoring systems.
- In each target country, at least one policy or investment decision on sustainable management of fisheries is improved based on evidence provided by Peskas.

Strategy

To enhance sustainable and inclusive digital fisheries information systems for small-scale fisheries in focal countries, the project will initiate a series of participatory workshops with fishing community representatives, government stakeholders and others, to co-design digital solutions that address specific needs and challenges, while building on existing fisheries knowledge, monitoring systems, data and processes. Leveraging novel data science approaches, customized oceanographic models, and machine learning, the project will create a harmonized open data platform for the Western Indian Ocean region that visualizes fisheries trends and provides near real-time, decision-making guidance that adapts to outcomes over time. In the co-development of systems and research, Digital Coasts will build local capacity for data-driven management toward sustainable fishing practices and maximizing the well-being of coastal communities. Throughout the project, continuous feedback will be sought through planning committees and community consultations to ensure the platform remains responsive to the evolving needs of small-scale fishing communities and fisheries managers.

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

AABS has four synergized work packages:
1. Digital Coasts
2. Integrated Multi-Trophic Aquaculture
3. Climate-Smart Technologies for Reducing Aquatic Food Loss and Waste
4. Incentives for Coastal Conservation and Fisheries Management

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

Partnerships

- Kenya Marine and Fisheries Research Institute (KMFRI)
- Norwegian University of Science and Technology (NTNU)
- Western Indian Ocean Marine Science Association (WIOMSA)
- Wildlife Conservation Society (WCS)
- Zanzibar Fisheries Resources Research Institute (ZAFIRI)

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