

# Sustainable Fisheries Management

# U.S. Government's Global Food Security Strategy Activity Design Guidance

This is one of several Activity Design Guidance documents for implementing the U.S. Government's Global Food Security Strategy. The full set of documents is at <a href="https://www.feedthefuture.gov">www.feedthefuture.gov</a> and <a href="https://www.agrilinks.org">www.agrilinks.org</a>.

#### Introduction

Aquatic, or blue, foods are aquatic animals and plants cultivated in (i.e., aquaculture) or captured from (i.e., fisheries) freshwater, marine, or brackish water environments for human food or for animal feed. These foods include marine and freshwater fish, shellfish, aquatic plants, seaweed, and algae. Aquatic foods are essential components of sustainable food systems and critically important to food security, nutrition, and livelihoods. For example, fish provide about 3.3 billion people globally with at least 20 percent of their average, per-capita animal protein intake and are a good source of essential fatty acids and nutrients. (Note that this document refers to fish and other aquatic animals, such as molluscs and crustaceans, collectively as "fish.") Seven of the most nutrient-dense sources of animal protein are aquatic foods, namely, small pelagic fish, bivalves, large pelagic fish, aquatic mammals, salmonids, carps, and cephalopods. The health benefits of eating fish include decreased risk of cardiovascular disease, improved maternal health during pregnancy and lactation, and improved cognitive and physical development during early childhood. (12)

Remarkably, the High Level Panel for a Sustainable Ocean Economy, an initiative supported by 14 countries—Australia, Canada, Chile, Fiji, Ghana, Indonesia, Jamaica, Japan, Kenya, Mexico, Namibia, Norway, Palau, and Portugal—that account for nearly 40 percent of the world's coastlines, estimates that ocean-based food production could increase by up to six times current levels through a combination of sustainable fisheries management and sustainable finfish and bivalve aquaculture. <sup>4,5</sup> In addition, every \$1 invested in sustainably increasing ocean-based food production can yield up to \$10 in benefits, such as healthier diets, higher revenue for local communities, and lower greenhouse gas emissions. <sup>5,6</sup> With the human population projected to reach 10 billion by 2050, sustainably increasing ocean-based food production is critical to meeting food security and nutrition needs and may have a comparative advantage over terrestrial animal production systems in increasing animal protein production with fewer environmental and climate change impacts in certain contexts and geographies. <sup>4,6</sup>

## Terminology and Context

**Fisheries:** The occupation, industry, or season for catching wild fish is termed a "fishery" (or "fisheries"). Fisheries can also refer to the area where fish are caught, the fishing gear or method, the target species of the fishing operation, or the business of catching the fish for commercial, recreational, and subsistence uses. Total fisheries production is valued at \$141 billion annually.<sup>1</sup>



The fisheries sector, including associated postharvest activities, such as fish processing and marketing, provides full- or part-time employment for an estimated 260 million people in marine fisheries<sup>7</sup> and 25 million people in inland fisheries<sup>8</sup> with about half of them women. In small-scale fisheries, women represent 40 percent of all estimated labor and account for roughly 50 percent of postharvest labor (i.e., processing, transporting, trading, and selling of small-scale fisheries catch). Fisheries accounted for over 70 percent of fish production by weight in Africa, the Americas, Europe, and Oceania from 2011 to 2020, and about 60 percent of fish production by weight in Asia (excluding China, which produced almost 15 percent of global captures in 2020, more than the total captures of the second- and third-ranked countries combined), with aquaculture producing the remainder. Healthy fisheries, through their contributions to food security and livelihoods, can help communities adapt to climate change impacts and increase communities' resilience. In addition, healthy fisheries can help with carbon cycling and sequestration, a form of "blue carbon."

Notably, many fisheries face significant, and often converging, threats from overexploitation (e.g., legal but unsustainable fishing, and illegal, unreported, and unregulated (IUU) fishing), climate change, and habitat destruction, as well as chemical, metal, nutrient, and plastic pollution, and invasive species. Inland fisheries also face blocked migration routes due to infrastructure and competing uses for freshwater.<sup>1,5,12,13</sup>

**Sustainable Fisheries Management:** Effective management addresses threats facing fisheries to sustainably optimize production and help achieve the U.S. Government's Global Food Security Strategy (GFSS) strategic objectives of poverty reduction, increased resilience, and improved nutrition outcomes.<sup>14</sup> In fact, the World Bank estimates that improved marine fisheries management could help avoid a loss of about \$83 billion in economic benefits annually. 15 Many organizations, including the U.S. Agency for International Development (USAID), consider Ecosystem Approaches to Fisheries Management (EAFM) the best practice for achieving these goals. The hallmark of EAFM is a shift away from technically oriented, species-based approaches to fisheries management, toward participatory systems approaches that integrate the socioeconomic traits of fishing communities, the biophysical characteristics of the fishery resources, and the institutional arrangements that define the rules and rights of the players in managing fishery resources (see Figure 1). 16 Many of USAID's fisheries programs focus on small-scale fisheries, and the Food and Agriculture Organization of the United Nations (FAO) offers specific, useful guidelines for implementing EAFM in small-scale fisheries in their Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication.<sup>17</sup>

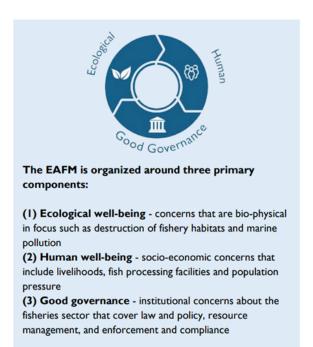


Figure 1. The Three Primary Components of EAFM (Reprinted from USAID Oceans: Assessing Fisheries in a New Era<sup>16</sup>)

Minimizing Food Loss and Waste in Fisheries Value Chains: Addressing food loss and waste in fisheries value chains can greatly improve food security by increasing the availability of micronutrients and decreasing the risk of foodborne illnesses (see the U.S. Government's GFSS Activity Design Guidance on Diets and Food Safety). At the same time, it can also decrease greenhouse gas emissions. About 35 percent of the global fish harvest from fisheries and aquaculture is lost or wasted annually. This is particularly an issue in low-income countries with limited availability and access to the technology needed to safely process, preserve, and transport fish. Investments in environmentally sound methods to process, package, preserve, and transport fish—such as the use of fuel-efficient technologies to preserve fish and develop cold chains—can decrease postharvest loss, increase the quality and quantity of fish available for consumption and sale, mitigate food safety risks, and reduce greenhouse gas emissions from rotting fish. 18,19 These types of investments are particularly beneficial to women, who are often more vulnerable to the food security and economic impacts of postharvest loss due to their engagement in fish processing, transport, and marketing. Specific to the fisheries sector, discards—or the proportion of the catch that is not retained—are currently estimated to be 9.1 million metric tons, or 10.8 percent of the global catch. Policies, such as the banning of discards, can help to incentivize fishers to adopt more targeted fishing gears and practices that have the overall effect of minimizing food waste.<sup>20</sup> Notably, programs targeting private sector actors to adopt more efficient technologies, such as efficient cold chains or dryers, can both decrease food loss and waste and promote better food safety practices.

**Linkages to the GFSS:** The GFSS recognizes fisheries as a vital component of agriculture—along with aquaculture and land-based agricultural practices, such as farming, forestry, and pastoralism—and supports promoting the sustainable management of fisheries as an important strategy for feeding a growing population while providing employment and income. Investments along fisheries value chains, including sustainably increasing fisheries productivity, are key to achieving the three GFSS objectives:

- Fisheries support inclusive and sustainable agricultural-led economic growth. Fish and fish products are among the most traded food items globally, with an export value estimated at \$151 billion in 2020. Positive economic growth from fisheries, in turn, increases the food security and resilience of households, including in marginalized communities, as 90 percent of people employed in fisheries work in small-scale fisheries—often located in rural areas with limited infrastructure, employment opportunities, and access to formal markets. In addition, at least 45 million women participate in small-scale fisheries worldwide, yet women are underrepresented in fisheries management and decision-making. In Importantly, efforts to empower marginalized groups are key to more equitable sharing of economic benefits from the fisheries sector and inclusive economic growth. 22,23
- **Fisheries strengthen resilience among people, communities, countries, and systems.**Fisheries, when managed well, contribute to resilience by providing local sources of nutritious food, diversified livelihoods along the fisheries value chain, and income. For many poor households that experience chronic food insecurity, fisheries provide high-quality food that is often more affordable than other animal source foods, like red meat. Inland fisheries are particularly critical to resilience and nutrition for communities with limited access to ocean resources and for those located in isolated areas and near rivers, lakes, and other inland bodies of water. Fisheries also provide fish to landless households that cannot produce crops and serve as a critical safety net when land-based food production is compromised due to climate change, conflict, and other shocks. So
- Fisheries contribute to a well-nourished population, especially among women and children. Fish are an important source of vital nutrients that are critical for diversified, healthy diets, such as vitamins A, B, and D; minerals, such as calcium, zinc, and iron; and polyunsaturated fatty acids. The nutrients in fish can help improve maternal and child health and combat a range of health conditions, such as childhood stunting and blindness, rickets, anemia, low birth weight, pregnancy complications, and cardiovascular disease.<sup>2,8</sup> Notably, for 22 countries predominantly

in Asia and West Africa, 20 percent of their marine fish catches could meet the dietary requirement for iron, calcium, and vitamin A for children under age five who live within 100 kilometers of the coast. <sup>26,27</sup> Critically, in order to realize the nutritional benefits of consuming fish, food safety risks must also be addressed.

### **Designing Activities**

Investments under the GFSS can target sustainable fisheries management where wild fish are already a critical part of the food system. When designing a fisheries activity, design teams can consider these six guiding questions:

- 1. How does the fisheries activity relate to the broader food system and to food security and nutrition goals in the target geography?
- 2. What threats and drivers impact the target fishery and how do these interact? What opportunities exist to increase sustainability of the fishery?
- 3. What are the desired program objectives and intermediate results for ensuring sustainability of the target fishery and what strategic approaches may be needed?
- 4. Who will benefit from the activity and what social, economic, or political factors may influence the distribution of benefits? What objectives should be included to ensure there are inclusive and equitable benefits?
- 5. Who are effective partners to engage in this activity?
- 6. What is the role of the target fishery in climate adaptation and mitigation and what options are there for managing climate risks to the fishery?

Design considerations in response to these guiding questions are elaborated below:

- 1. How does the fisheries activity relate to the broader food system and to food security and nutrition goals in the target geography? Aspects to consider include the role of the fishery in supporting food security, nutrition, and livelihoods for local communities; the diversity among fisheries actors, e.g., with respect to their available inputs and assets, degrees of specialization, and types of markets they supply; how the target fishery is governed and managed; and the relationship of the fishery to donor and national food security and nutrition strategies and programming in the target geography.<sup>28</sup> The use of the fish is also important to note as export of locally caught fish to foreign markets or to produce fishmeal can threaten local food security, especially when the export value of the fish is higher. Policies and programming that balance the potential food security and nutrition benefits of retaining safe and affordable fish for local consumption with the economic gains from selling that fish are crucial to ensuring that the benefits from fisheries are shared by local communities.
- 2. What threats and drivers impact the target fishery and how do these interact? What opportunities exist to increase sustainability of the fishery? A context analysis, such as a situation model, can be developed to map out the problem context. A good situation model will include food security focal interests, link these focal interests to their direct threats to fisheries, and identify the drivers behind these threats as well as the complex interactions of drivers. Context analyses should be grounded in real-world experience, knowledge of the local context, and scientific evidence. Barriers and opportunities to sustainable fisheries management within the overall food system and barriers to entry along each step of the fisheries value chain can be identified, as can opportunities for inclusive and equitable participation. Also for consideration within the context analysis is the broader risk environment, including risks like price shocks, disease, and conflict.

- 3. What are the desired program objectives and intermediate results for ensuring sustainability of the target fishery and what strategic approaches may be needed? A results chain can build off the context analysis to help articulate the program objectives, expected results, and assumptions that make up the program's theory of change. Strategic approaches for improved fisheries management can include:
  - Strengthen participatory, stakeholder-driven management of fisheries at the village, district, or regional level. Whenever possible, decentralized fisheries management functions should be accompanied with requisite financial and capacity resources and/or sustainable financing mechanisms.
  - Strengthen policy frameworks to address issues such as harmful fishing subsidies, IUU fishing, the types of fishing gear used, species of fish caught, number and size of fishing vessels active within the target fishery, and factors that impact water quality. Strong policy frameworks can help improve fisheries management, social safety nets, compensation for foregone revenues during biological rest periods, and access to weather insurance premiums, among other benefits.
  - Strengthen organizational capacity of government ministries and departments that manage fisheries and marine protected areas, fishing associations, youth and women's groups, organizations that provide fisheries extension services, and other civil society organizations that represent fisheries stakeholders to improve fisheries management and ensure inclusive and equitable benefits from the sector.
  - Strengthen sustainable fisheries enterprises and create alternative livelihoods, for example by increasing access to markets for sustainably harvested fish; engaging private sector partners; helping small- and medium-scale fisheries entrepreneurs to gain the skills needed to participate in these markets through information, access to finance, and training in financial literacy; and developing alternative livelihood options for fishers in areas that are overfished.
  - Build constituencies and engage champions to support, implement, disseminate, and scale
    up sustainable fisheries management. Working with constituencies to develop and share a
    mutual vision and goals for fisheries management can increase their sense of ownership and
    improve coordination of efforts to achieve these goals. Identifying and training champions on
    ways to improve sustainable fisheries management can help bring about positive behavior
    change among local community members.
  - Improve science, information, and digital capacities for decision-making, policy reforms, and increased transparency and accountability, for instance by helping implementing partners identify data gaps, strengthening the capacity of local universities and research institutions to collect and analyze timely data in a transparent manner, incorporating Indigenous knowledge and practices, building and supporting scientific bodies to make evidence-based recommendations in data-poor settings, and promoting the use of digital tools such as electronic catch documentation and traceability systems, when relevant (see the U.S. Government's GFSS Activity Design Guidance on Digital Technology).
  - Increase traceability and transparency in fisheries value chains. Traceability is the ability to track the movement of a commodity from its source to its end use. In fisheries value chains, traceability can help expose illegal practices and support ecological sustainability, human rights, access to markets, and food safety.
  - Strengthen systems that support risk management and emergency response and recovery to build resilience, for instance by increasing fishers' access to weather-indexed insurance and early warning and monitoring systems. These types of measures, when implemented in an inclusive manner, enable communities to better prepare for shocks.

- 4. Who will benefit from the activity and what social, economic, or political factors may influence the distribution of benefits? What objectives should be included to ensure there are inclusive and equitable benefits? Activities that focus on empowering fishing communities and capacity building should include support for fisheries organizations to better represent the interests and rights of the poor, women, Indigenous Peoples, youth, and other marginalized and underrepresented groups and ensure their meaningful participation in resource governance. Given women's substantial, but often underappreciated, role in the fisheries sector, fisheries activities should consider strategic interventions that achieve gender equality and women's empowerment goals.<sup>29</sup> Importantly, engaging fisheries stakeholders, including women, youth, and other marginalized and underrepresented groups, in fisheries management plans can build a strong constituency for sustainable management practices. Specific questions to ask include:
  - How will the activity benefit or disadvantage poor households or groups and those in vulnerable situations?
  - How will the activity benefit or disadvantage women, youth, Indigenous Peoples, persons with disabilities, and other marginalized and underrepresented groups?
  - How will the activity support local champions and agents of change?
  - How will the activity impact gender and power dynamics (e.g., by benefitting one group over another or by increasing the likelihood of gender-based violence) and monitor any shifts in these dynamics? How can any negative impacts be mitigated and any progress be harnessed?
  - What are the barriers and opportunities to increasing the participation and employment of marginalized communities across fisheries value chains?
  - How will the activity build social capital and agency for women, youth, Indigenous Peoples, persons with disabilities, and other marginalized and underrepresented groups?

<u>FAO's Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries</u> is a critical resource for this work as it places "a high priority on the realization of human rights and on the need to attend to vulnerable and marginalized groups," specifically within the small-scale fisheries sector. The guidelines include guiding principles to help ensure the full participation of marginalized groups, secure tenure rights, and improve governance of resources.<sup>17</sup>

5. Who are effective partners to engage in this activity? Key objectives that guide USAID's partnerships are to promote local leadership; increase equity and inclusivity in partner relationships; implement bold, creative, and innovative approaches; lower barriers for potential partnerships; and identify new sources of funding to sustain partnerships and scale impact. As such, USAID's fisheries management activities involve working with a variety of partners, including local organizations, government ministries, universities and research institutions, the private sector, foundations, public international organizations (PIOs), and nonprofit groups. USAID specifically prioritizes partnerships with locally led organizations and those that are connected to or have a deep knowledge of the communities in which activities are based in order to build local capacity and ownership. Locally led organizations may include fishing cooperatives or other community-based natural resource management groups. Government partners can include ministries that oversee marine and freshwater fisheries, marine affairs, agriculture, food safety, trade, gender and women's affairs; offices of law enforcement; and public research institutes and universities. Potential private sector partners include agricultural banks, lending institutions, and retailers that source their goods from small-scale fishers or provide sector-specific goods and services.

6. What is the role of the target fishery in climate adaptation and mitigation and what options are there for managing climate risks to the fishery? USAID activities should consider the current and potential role of the target fishery in climate adaptation and mitigation, given the local context. At the same time, the impact of climate stressors—including higher water temperatures, extreme weather events, changes in rainfall patterns, sea level rise, and ocean acidification—should also be assessed and climate considerations should be integrated into fisheries management plans. Measures like fisheries index insurance and increased access to early warning systems that warn fishers of weather impacts from climate change can further strengthen the contributions of fisheries to resilience. In addition to the point-of-harvest, activities should also consider climate impacts to seafood value chains more broadly. For instance, how could the activity build resilience to the parts of the value chain that are most vulnerable to climate shocks? Successful adaptation strategies will need to be tailored to the local context and target vulnerable producer groups. USAID's Climate Risk Screening and Management Tools, including the Agriculture Annex and Environment and Biodiversity Annex, can help activity designers assess, address, and adaptively manage climate risks to fisheries and associated value chains in their target geographies.

### Programming in Practice

<u>USAID</u>'s investments in marine conservation and sustainable fisheries, which total about \$40 million annually in more than 20 countries, focus on increasing human well-being co-benefits, such as food security, through EAFM and sustainable management along the value chain. Tailoring to the local context, USAID aims to strengthen resource governance, support participatory decision-making, recover degraded fish stocks through ecosystem-based management, empower women and other marginalized and underrepresented groups, improve the contributions of fisheries to local livelihoods and food security, combat IUU fishing and forced labor in fisheries, and promote transparency in fisheries licensing, agreements, and value chains.<sup>31</sup>

The following programming examples span the diversity of USAID fisheries activities across the Feed the Future, Biodiversity, Adaptation, and humanitarian assistance portfolios:

- Ghana Fisheries Recovery Activity (GFRA, 2021–2026): GFRA is a five-year, \$17.8 million activity that aims to mitigate the near collapse of Ghana's small pelagic fisheries—sardines, mackerel, and anchovies—and establish a foundation for their ecological recovery. The health of Ghana's fisheries is critical to maintain economic opportunity and food security for Ghanaian fishers and coastal communities, as well as conserving coastal and marine biological diversity. Currently, Ghana's fisheries face critical challenges from overharvesting by both industrial and small-scale fishing operations, habitat loss, pollution, and climate change. GFRA strives to reduce fishing overcapacity and improve small pelagic fisheries management to encourage ecological sustainability and marine biodiversity conservation, while also improving the socioeconomic well-being, food security, and resilience of fishers and coastal communities. Key strategic approaches include improving supplemental livelihoods for fishing communities, especially women and youth; boosting private sector engagement and market linkages; strengthening government capacity in fisheries policy and decision-making, regulation, and enforcement; strengthening fisheries science and research; and enabling stakeholders to make positive, sustainable change. GFRA strives to reduce fishing communities, especially women and youth; boosting private sector engagement and market linkages; strengthening government capacity in fisheries policy and decision-making, regulation, and enforcement; strengthening fisheries science and research; and enabling stakeholders to make positive, sustainable change. GFRA strives to make positive,
- Resilient Coastal Communities (RCC, 2022–2027): RCC is a five-year, \$25 million activity in northern Mozambique that blends agriculture, biodiversity, and climate change resources to improve the resilience of coastal communities where rich, yet fragile, land and marine ecosystems are at risk of climatic shocks and human-inflicted degradation. A particular focus is placed on working to strengthen community organizations to better manage nearshore fisheries through the

enforcement of no off-take zones. Additionally, improved, community-based mangrove management and sustainable off-take approaches are emphasized, working primarily with women on mariculture and nontimber forest product opportunities. Improved mangrove management also lays the groundwork for potential carbon finance investments. The implementing partners work with stakeholders to identify and promote employment and enterprise opportunities, especially for youth. The activity works proactively with public, private, and civil society stakeholders to improve the resilience of households, communities, and regional systems. There is growing evidence of ongoing recruitment from coastal communities by groups engaged in violent extremism, which is exacerbated by limited livelihood opportunities in these coastal communities. Supporting realistic opportunities that improve the sustainable livelihoods of large numbers of people, particularly for youth and women, while having positive impacts on large areas of high biodiversity marine ecosystems is prioritized.<sup>33</sup> (Funding source: Feed the Future, Biodiversity, and Adaptation.)

- Indonesia Sustainable Ecosystems Advanced (SEA, 2016–2021): SEA partnered with Indonesia's Ministry of Marine Affairs and local governments to strengthen small-scale fisheries management, increase enforcement of maritime laws, protect globally significant marine ecosystems, and improve marine spatial planning. SEA also engaged coastal communities and fisheries stakeholders, including women and youth in particular; over the course of the activity, the participation of women increased from 2 to 16 percent through the "SEA champions" initiative, which supports women in becoming leaders in sustainable fisheries management and marine conservation. With support from SEA, the Government of Indonesia created 14 marine protected areas that cover 1.6 million hectares, and local governments strengthened marine spatial plans for an area covering approximately 17 million hectares. In over half of the marine protected areas established by SEA's support, fish biomass either remained stable or increased; in addition, fishers' incomes improved, and 350 fishers received almost \$80,000 in funds in 2020 to invest in sustainable initiatives within their communities. (Funding source: Feed the Future and Biodiversity.)
- Philippines Ecosystems Improved for Sustainable Fisheries (ECOFISH, 2012–2017):
  ECOFISH worked with local governments and the Philippines Department of Agriculture's
  Bureaus of Fisheries and Aquatic Resources to improve ecosystem-based fisheries management
  in eight key marine biodiversity areas and develop a variety of market-based initiatives to
  increase economic opportunities for small-scale fishers and support conservation enterprises.
  ECOFISH achievements include a 24 percent increase in fish biomass within select fisheries; a 12
  percent increase in the number of people experiencing socioeconomic benefits, such as higher
  fish catch, incomes, or fish consumption in focal areas; and improved management of 1.8 million
  hectares of municipal marine waters. ECOFISH also worked with women to diversify their
  livelihoods by providing training to participate in the tourism industry and raise crabs using
  eco-friendly methods. USAID's Fish Right program (2018–2023) is building on these
  achievements by addressing biodiversity threats, improving marine ecosystem governance, and
  increasing fish biomass in Philippine waters. (Funding source: Biodiversity.)
- Enhanced Coastal Fisheries in Bangladesh (Bangladesh ECOFISH, 2014–2019): Bangladesh ECOFISH was jointly implemented with Bangladesh's Department of Fisheries to support fishing communities reliant on the Megna River ecosystem, with a particular focus on establishing comanagement of hilsa shad (*Tenualosa ilisha*) sanctuaries. Bangladesh ECOFISH's strategies included generating high-quality evidence on local fisheries to aid management decisions, engaging fisheries stakeholders through comanagement committees, providing training and inputs to diversify livelihoods of fishing households, and improving policies to support fisheries management. Bangladesh ECOFISH successes include a 31 percent increase in the maximum sustainable yield of hilsa from 526,000 metric tons per year in 2016 to 690,000 metric tons per year in 2019, a significant increase in the quantity of fish available to local communities. The

average weight of hilsa increased from 510 to 915 grams over the first two years of the activity, with fisher household incomes increasing by up to 65 percent. Bangladesh ECOFISH also established 148 women-led community savings groups, 575 hilsa conservation groups, and 133 village-level fisheries management committees. Bangladesh ECOFISH provided training to 20,800 fishers (30 percent women) on strategies to manage the natural resource base more sustainably and conserve biodiversity. To highlight women's participation in fisheries management, Bangladesh ECOFISH organized an annual Fishers Women Congress.<sup>38</sup> (Funding source: Biodiversity.)

• Emergency Support for Fisheries in Dominica (2017–2018): In response to Hurricane Maria in 2017, the Office of U.S. Foreign Disaster Assistance (now the Bureau for Humanitarian Assistance) invested \$750,000 in Dominica to help fishing cooperatives repair infrastructure damaged by the hurricane. The emergency aid targeted 12 priority cooperatives and benefited 2,200 fishers across the country. Fisheries are an important source of livelihoods and food security in Dominica; on average, fish provide about 20 percent of Dominica's average animal protein intake.<sup>39</sup> (Funding source: Humanitarian assistance.)

#### Additional Resources and Tools

#### **Activity Design**

- Library of USAID Sustainable Fisheries Management Situation Models and Results Chains
- USAID's Sector Environmental Guidelines: Wild-Caught Fisheries and Aquaculture
- FAO Technical Guidelines for Responsible Fisheries
- FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication
- The Future of Food from the Sea
- Assessing Fisheries in a New Era
- Seafood Alliance for Legality and Traceability (SALT) Comprehensive Traceability Principles
- USAID Marine Tenure Resources
- Developing Situation Models in USAID Biodiversity Programming
- Using Results Chains to Depict Theories of Change in USAID Biodiversity Programming
- Technically Strong and Politically Savvy—Enhancing Thinking and Working Politically When Practicing the Conservation Standards at USAID
- Example Fisheries Activity Notices of Funding Opportunity: <u>USAID/Ghana, USAID/Indonesia</u>

#### **Gender and Social Inclusion**

- Advancing Gender in the Environment: Gender in Fisheries—A Sea of Opportunities
- <u>Integrating Gender Equality and Women's Empowerment Across the Program Cycle, Including</u> Guidance on the Mandatory Gender Analysis (ADS 205)
- <u>Suggested Approaches for Integrating Inclusive Development Across the Program Cycle and in</u> Mission Operations (ADS 201 Additional Help)
- USAID Optional Social Impact Assessment Framework
- New Partnerships Initiative

#### **Climate Change**

- USAID Climate Risk Screening and Management Tools Agriculture Annex
- USAID Climate Risk Screening and Management Tools Environment and Biodiversity Annex
- Climate Risk Management Proves Critical to Sustaining Food Security in Cambodia
- Managing Fisheries in the Face of Climate Risk

- The Ocean as a Solution to Climate Change: Five Opportunities for Action (see Sustainable Food section)
- <u>Unpacking the United Nations Framework Convention on Climate Change (UNFCCC) Global Stocktake for Ocean-Climate Action</u>

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