



4. Markets for new stocks and insurance

To strengthen and support livelihoods based on new fish varieties and catch, it is necessary to institutionalise and create a market and value chain. The women self-help groups could be one way of creating a market for new varieties. Another example is to strengthen the value chain and market for dry fishing.

Furthermore, insurance could be another measure which secures livelihoods in a situation of reduced catch and loss of infrastructure due to extreme weather.

Case study:

The M S Swaminathan Research Foundation has developed a Fisher Friend Mobile Application (FFMA) as a support tool for fisher community to make informed decisions. The application provides



critical, near real time information and knowledge on the Ocean State Forecasting (OSF), Potential Fishing Zones (PFZ), markets, GPS, weather, and government schemes to reduce risk and secure livelihoods.

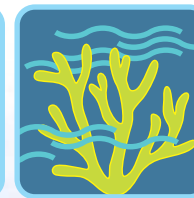
Sustainable Fishing Practices and Diversified Livelihood

We⁴ Climate
Climate Literacy and Marine Litter Management in the East Coast of India

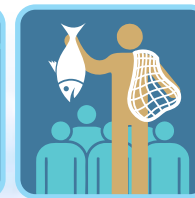
Building Resilience of Fisher Communities



Sustainable marine fishing



Diversified livelihood to supplement income



Co-management and governance for participatory decision making



Markets for new stocks and insurance for securing livelihood



Building resilience of fisher communities

The impacts of climate change are visible on the marine ecosystem and associated livelihoods. Fishermen are one of the main occupational groups that are dependent on the marine ecosystem for its livelihood.

The fisheries sector provides employment to millions of people and contributes to food security in the country. But, today, they are experiencing new challenges due to climate change. The small scale fisher communities in particular are most vulnerable to the impacts of climate change especially due to the rapid variation and decline in fish productivity.

To secure their livelihoods and build resilience, fisher- folk need to adapt and alter their fishing practices as well as create a structure for new livelihood options.

1. Sustainable marine fishing

Climate change not only leads to a decline in the fish population but it also alters the spatial and temporal distribution. In order to cope with such variations, fishermen needs to adopt a combination of indigenous knowledge and sustainable fishing practices. Sustainable marine fishing ensures that a sufficient breeding population of fish is maintained in the ocean. This could be achieved by reducing the overfishing habit through a combination of practices such as using nets with the correct mesh size, adopting selective fishing, preventing use of large scale fishing gears, and others.



One example of sustainable fishing practice is to use square shaped mesh nets instead of the diamond-mesh nets, as it allows small fishes to escape.

2. Co-management and governance

To secure the livelihoods of small and large fishermen within the community, it is necessary that all of them share equal opportunity and



benefits. Co-management is a participatory process, which involves different levels of actors from the communities, the government and other stakeholders who jointly agree to share the responsibility. The village level governance of fisherman involves tasks which include taking decisions on the when, where and who of fishing;

suggesting correct fishing practices; ensuring that the community adopts sustainable fishing practices; and protecting the natural breeding grounds for fish such as mangroves. The steps involved in setting up a co-management regime at the village level are, formation of fisher groups and associations, establishing legal framework, and developing rules. The co-management regime not only ensures community level actions but also creates a platform for the exchange of knowledge and awareness.

3. Diversified livelihood

To ensure an income source as and when the fish population is low, and enhance their earning capacity, fisher communities could practice non-fisheries economic activities such as ecotourism, sea weed cultivation and others.

Sea weed cultivation and farming: The micro algae found in the ocean is a source of food and also raw material for number of products. Cultivating and farming sea weeds, especially through women self help groups, could be an extra source of income.

