Adapting tuna-dependent Pacific Island communities and economies to climate change

Climate change threatens to disrupt the traditional supply of fish for food security of Pacific Island people, and the vital contributions of tuna fishing to national economies.
The Green Climate Fund (GCF) has approved a request by a consortium of partners to develop a funding proposal for a programme to manage the impacts of climate change on communities and economies that depend on the fisheries sector in 14 Pacific Island countries.

1. What are the expected impacts on food security and economic development?

Rapid population growth in many Pacific Island countries is already creating a gap in the supply of fish needed for food security – sustainable harvests from coral reefs and other coastal habitats can no longer provide the quantities of fish recommended for good nutrition of Pacific Island people. Degradation of coral reefs due to climate change is reducing the amount of fish they can provide, widening the gap in fish supply.

Preliminary modelling of the effects of ocean warming on the distribution of the region’s rich tuna resources shows that the fish will move progressively to the east. The projected redistribution of tuna could reduce total tuna catch from the combined exclusive economic zones of Pacific Island countries by 10-30% by 2050. Lower tuna catches are expected to have significant impacts on the 10 tuna-dependent Pacific Island economies that derive an average of 37% of their (non-aid) government revenue from access fees paid by industrial tuna fishing fleets operating in their waters.

2. Key features of the GCF regional tuna programme

This major programme is being designed to help Pacific Island communities and economies to adapt in two main ways.

1. Increasing access to tuna to fill the gap in fish supply by:
   a. Helping rural communities to scale-up the use of fish aggregating devices (FADs) anchored in nearshore waters to catch tuna effectively and safely.
   b. Improving the supply of tuna for urban communities during transshipment of industrial tuna catches in regional ports.

2. Developing an Advanced Warning System (AWS) based on improved modelling to reduce uncertainty in the impact of ocean warming on tuna distribution.

The AWS will enable tuna-dependent Pacific Island countries to identify the effects of tuna redistribution on industrial fishing patterns with greater confidence, and negotiate effectively to retain the current economic benefits they receive from tuna regardless of the redistribution of the fish.
3. What are the benefits?

The GCF Regional Tuna Programme will improve food security for Pacific Island communities and help secure the important economic benefits that many of the island nations receive from tuna fishing.

Impact Potential
Increase access to fish for many of the four million people who live near the coast in 14 Pacific Island countries.

Paradigm Shift
The Advanced Warning System will enable Pacific Island governments to quantify the loss and damage consequences of tuna redistribution for their economies – something that would be difficult to do with certainty otherwise.

Sustainable Development
Assisting small-scale fishers to catch tuna from nearshore waters is expected to help reduce fishing pressure on coral reefs.

Participating Countries
Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu
Roles and Responsibilities

Technical Support
The Pacific Community (SPC), Pacific Islands Forum Fisheries Agency (FFA) and the United Nations Food and Agriculture Organization (FAO) are providing technical support for preparation of the funding proposal. This support includes:

- Updating SPC’s earlier assessment of the vulnerability of tropical Pacific fisheries and aquaculture to climate change
- Assessing the feasibility of strengthening all relevant components of national FAD programmes in the 14 participating countries, based on SPC guidelines
- Evaluating options for increasing access to tuna offloaded during transshipping operations in regional ports, including improvements to market infrastructure and supply chains
- Designing the sampling programmes needed to identify the spatial stock structure of each tropical tuna species, and the improved modelling, needed to develop the Advanced Warning System
- Exploring the scope for industrial fishing vessels to provide data on sea surface temperature and acoustic data for tuna prey in the water column to improve the modelling

Accredited Entity
Conservation International (CI) is the GCF Accredited Entity for the tuna programme and will oversee development of the funding proposal. CI will also request letters from each of the participating countries’ GCF National Designated Authority to confirm that the programme is supported and aligned with their national priorities. Through a GCF Project Preparation Facility (PPF) grant, CI’s Center for Oceans will also commission all necessary environmental and social safeguards analyses, gender analyses, evaluations of the potential impacts on indigenous peoples, and related analyses required to compile the GCF funding proposal package.

Timeline

- **October 2022**
  - Project preparation begins
- **October 2023**
  - All supporting studies completed
  - National Review & Consultation
- **April 2024**
  - Proposal completed and submitted
  - National Review & Consultation
- **October 2024**
  - GCF approval

Development of this funding proposal is supported by the GCF Project Preparation Facility grant, the Minderoo Foundation and USAID, and is expected to be completed by October 2024.

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