Contributing to Resilient Fisheries by Strengthening Managed Access Committees

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Building Capacity of MACs to convene and help lead changes in Fisheries Management

- Climate resilience
- Replenishment zone
- Multispecies finfish management
- Recreational fishing
Climate Change and Fisheries Management in Belize

The ability to prepare for, recover from and adapt to impacts of climate change = “Climate resilience”

Focus on
1. Climate change impacts on marine life and Fisheries
2. Community resilience
3. Adaptive Management
Impacts of Climate Change

Sea level rise

Ocean warming

Ocean acidification can erode coral reefs, reducing important habitat for reef-dwelling species

Coastal habitat such as mangroves and seagrass beds are at high risk

Climate impacts on fish
Almost all physiological and behavioral processes in fish are mediated by temperature

As the ocean warms, we can expect that any of these processes might be affected
Sustainability and resilience are related

**Sustainability**
- At scale
- Clear goals
- Scientific assessment
- Sustained yield
- Secure rights
- Effective monitoring and accountability
- Participatory and transparent process

**Resilience**
- Adaptive mgmt.
- Long-term planning
- EBFM
- Co-management
- Innovation
- Cross-jurisdictional cooperation
- Equity
- Connectivity of habitat and populations
- Preventing destructive feedback
- Reserve capacity
- Acceptance of change
- Humility and learning mindset
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Replenishment zones support ecosystems, fisheries and community resilience

Benefits

Help oceans and Marine life thrive
- replenish fish populations
- protect marine biodiversity and ecosystems
- improve resilience to climate change

Strengthen fishing communities and secure livelihoods
- boost cooperation and collaboration among fishermen
- increase community involvement in management
- increase abundance of an important protein source

Increases economic opportunities
- increase fishery value with more abundant fish
- improve income opportunities through better fish handling & marketing coordination
- improve business efficiency and reduce cost for fishermen from collaboration and cooperation among fishermen

Belize commitments

The Marine Spatial Plan
- Belize’s obligations to complete a legally enforceable Marine Spatial Plan (MSP) and designate up to 30 percent of its Ocean in Biodiversity Protection Zones.
- Integrated Coastal Zone Management Plan
- Evaluation of Managed Access
Managing multispecies fisheries in Belize

-Learning from multispecies finfish management

-Benefits of Science-based Management

Steps towards National Multispecies Finfish Management Plan

1. Define social, ecological, and economic goals
2. Identify key target species for management
3. Identify performance indicators
4. Set reference points for each performance indicator
5. Define harvest control rules
6. Collect and manage data
7. Run Assessments
8. Interpret results
9. Adjust fisheries management controls

Adaptive Cycle

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How sustainable recreational and sport fisheries can support community livelihoods and healthy ecosystems

Why it needs to be addressed

- Participation in recreational fisheries is growing in Belize and in some cases it is perceived as rivaling commercial fishing in terms of catch
- It remains largely unmanaged despite its growth
- This growth must be addressed with commitment to manage the opportunities (alternative livelihoods) and risks (overfishing)
- In Belize only the sport fishing species are managed and regulated by the sports fishing regulations (Permit, Tarpon and Bonefish).
- There is a need to balance sustainability while considering socioeconomic benefits and changes in national goals (community resilience and conservation/development)

Belize participates in Caribbean Recreational Fisheries CVA

Caribbean Recreational Fisheries Exchange in Belize
SSF Hub and Belize

About the SSF Hub: https://ssfhub.org/about-ssf-hub

Resources
- Video: Nassau Group Against the Clock
- Guide: Data collection in nearshore fisheries
- Report: Adaptive management of fisheries in response to climate change
- Suggest new resources!

Groups
- Multispecies Management
- Caribbean Small-Scale Fisheries Group
- ICT4Fisheries
- Global Octopus Network

SSF Guidelines: https://ssfhub.org/about/small-scale-fisheries-guidelines

IYFA: https://ssfhub.org/about/international-year-artisanal-fisheries-and-aquaculture-iyafa-2022
**Updates**

*Capacity building Training workshops have been held with all 8 MACs*
- Listening session with fishermen
- Updates provided by Belize Fisheries Department and Co-managers
- Discussions and input from fishermen on thematic areas to enhance fisheries management
- Introduction to SSF-Hub [www.ssfhub.org](http://www.ssfhub.org) and uploading of training video

**Key Highlights**

Fishers and community leaders see the MACs as an important platform
Fishers want to participate in meetings and want to be consulted in fisheries related matters
Covid-19 has negatively impacted several Fishermen Associations ability to convene meetings

*Mr. Oscar Mena  “We fishermen know and are willing to do our part to protect the resources we depend on. This has been our livelihood, we need to work together”*

-One on one meetings and community visit
-Leobihildo Tamai participates in Our Ocean Conference

*Belizean Fisher participation in upcoming UN Ocean Conference*
THANK YOU