

fisheries and food security: FAO mid-term road map



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Outline

What is at stake?

What are the climate risks?

How can we respond?

Adaptation measures at national and local scales

Explore mitigation options

What is FAO Fisheries and Aquaculture

Department doing vis-à-vis climate change?

Over **500 million** people depend – directly or indirectly – on fisheries and aquaculture for their livelihoods

Aquatic foods provide essential nutrition for **3 billion people** and at least 50% of animal protein and minerals to 400 million people in the poorest countries.

Fish products are among the most widely-traded foods, with more than 7% by volume of world production traded internationally.



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Effects on:

Impacts on:

- Ocean currents
- ENSO
- Sea level rise
- Rainfall
- River flows
- Lake levels
- Thermal structure
- Storm Severity
- Storm frequency
- Acidification

Production
Ecology

Species composition
Production & yield
Distribution
Diseases
Coral bleaching
Calcification

Fishing &
Aquaculture
operations

Safety & efficiency
Infrastructure

Communities
Livelihoods

Loss/damage to assets
Risk to health & life
Displacement & conflict

Wider society &
Economy

Adaptation & mitigation cost
Market impacts
Water allocation





- Ecological, Economic and Social Resilience
 - implementation of ecosystem approach to fisheries and aquaculture, the Code of Conduct for Responsible Fisheries
 - livelihood diversification, flexible access rights, public and private insurance
- Technological innovation
- Planned adaptation –policy coherence across sectors (water, agriculture, forestry, CZM)
- Disaster preparedness and response

Lowering emissions:

Carbon capture and storage (sea beds, phytoplankton, and blue carbon) – **BIG NUMBERS 93% carbon storage and 30% sequestration**

Halt the disruption of carbon sequestration in marine ecosystems by ocean acidification and **habitat destruction** (4 times faster than rain forests!)

Incorporate mangroves and floodplain forests in REDD+ and develop blue carbon funds

Reducing or displacing emissions:

Renewable energy potential – tides, currents, waves, wind, hydropower
Marine biofuels

Reducing emissions:

Emissions reductions from aquatic food production systems and maritime transport

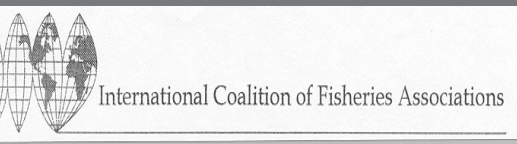
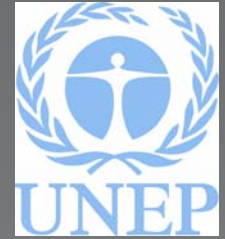


► Expert workshop on “Climate Change Implications for Fisheries and Aquaculture” (April 2008) (HLC, COFI)

► Developing a departmental-wide climate change strategy



<http://www.climatefish.org>



Impacts of climate change on fisheries and aquaculture
Fish production systems most likely to be impacted
Definition of indicators of vulnerability (ecosystem and human well-being)
Document adaptive frameworks, mechanisms and best practices + **Technical Guidelines** on adaptive strategies
Create **awareness, outreach** and develop **capacity-building**

is participating in the **IPCC Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation**

co-organizing **international symposia** (2008, 2010)

supporting the “Global Oceans Community” in efforts to include oceans and coasts in the **UNFCCC negotiations** (WFP15 Oceans Day)

Integrating climate change adaptation and **disaster risk reduction planning** to increase resilience in fishing and aquaculture communities

Improving **adaptability** to climate change in aquaculture and fisheries-dependent communities Africa, Asia and Mediterranean basin

IF/EAA as a means of climate proofing the fish production sector

Understanding the **emissions and mitigation potentials** from FI&AQ

Linking **oceanographic information** to vulnerability indicators and vulnerable systems identification

Participating in the **IPCC's Fifth Assessment Report**

Monitoring climate change in fisheries and aquaculture using **GIS and Remote sensing**



thank you!