

Vulnerable yet viable: Fisheries and aquaculture amidst global change processes



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SESSION 15: “Fisheries and aquaculture in the face of climate change: Current actions, identified solutions and opportunities in support of sustainable livelihoods and food security.”

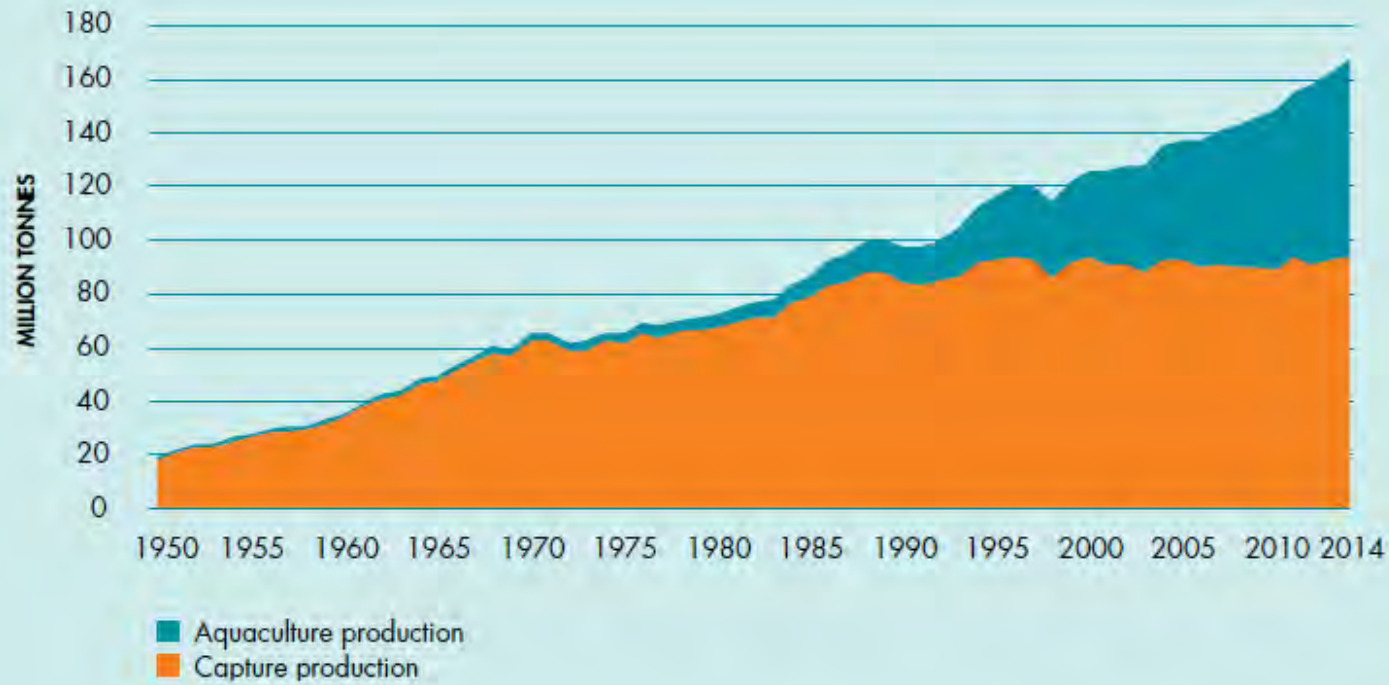
- Showcase current solutions and opportunities (good practices, tools and approaches) for how to respond to climate change
 - (i) Holistic and integrated approaches
 - (ii) Human rights based approach to development
 - (iii) Policies, strategies and initiatives for adaptation, mitigation and resilience-building

Introduction



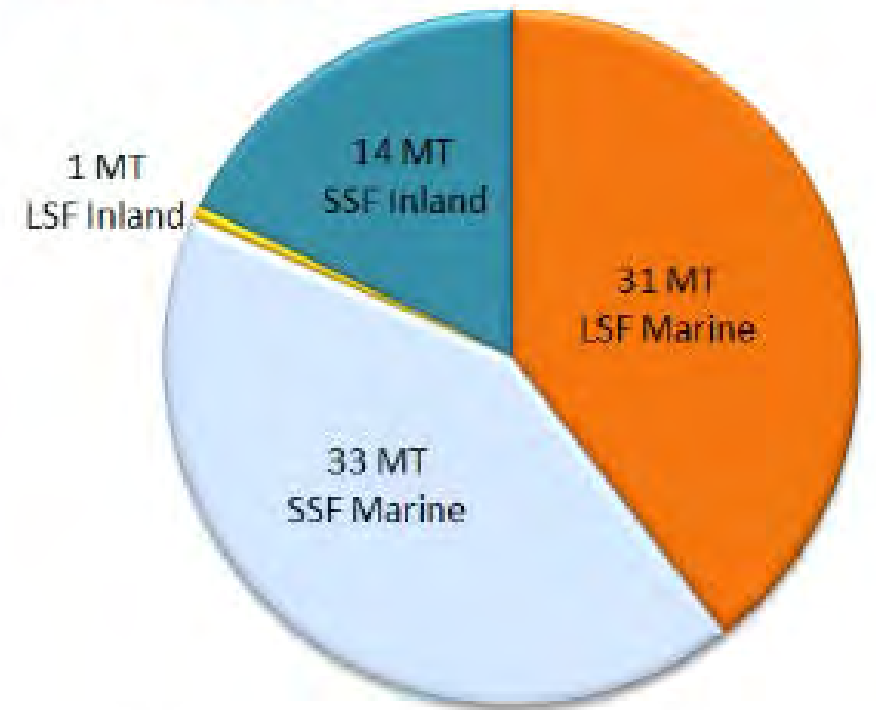
- Small-scale fishing is a large rural sector, especially Asia and Africa
- Provide jobs, livelihoods, food security, and cultural identity
- Some 90% of 38 million fishers are classified as small-scale (FAO 2015)
- Employ more than 90 percent of the world's capture fishers and fish workers, about half of whom are women
- Contribute about half of global fish catches
 - Two-thirds in the case of catches destined for direct human consumption

WORLD CAPTURE FISHERIES AND AQUACULTURE PRODUCTION



FAO 2016

Total annual catch



Source: World Bank/FAO/WorldFish (2010)

Introduction

- Dispossessed of their livelihoods, food security, property rights and cultural identity through the impacts of various driving forces:
 - Climate change is a major one but
 - Expansion of large-scale industrial fisheries
 - Growth of unabated aquaculture
 - Creation of protected areas
 - Unsupportive policy frameworks
 - Re-allocation of coastal resources to other uses
- Despite importance, many SSF communities continue to be vulnerable and marginalized



Introduction

- What strategies and approaches can be used to build on the existing strengths to reduce vulnerabilities and enhance viability of fisheries and aquaculture systems in the face of persistent global change, including climate change?
- SSF vulnerability is a multidimensional, complex, highly dynamic, and relative



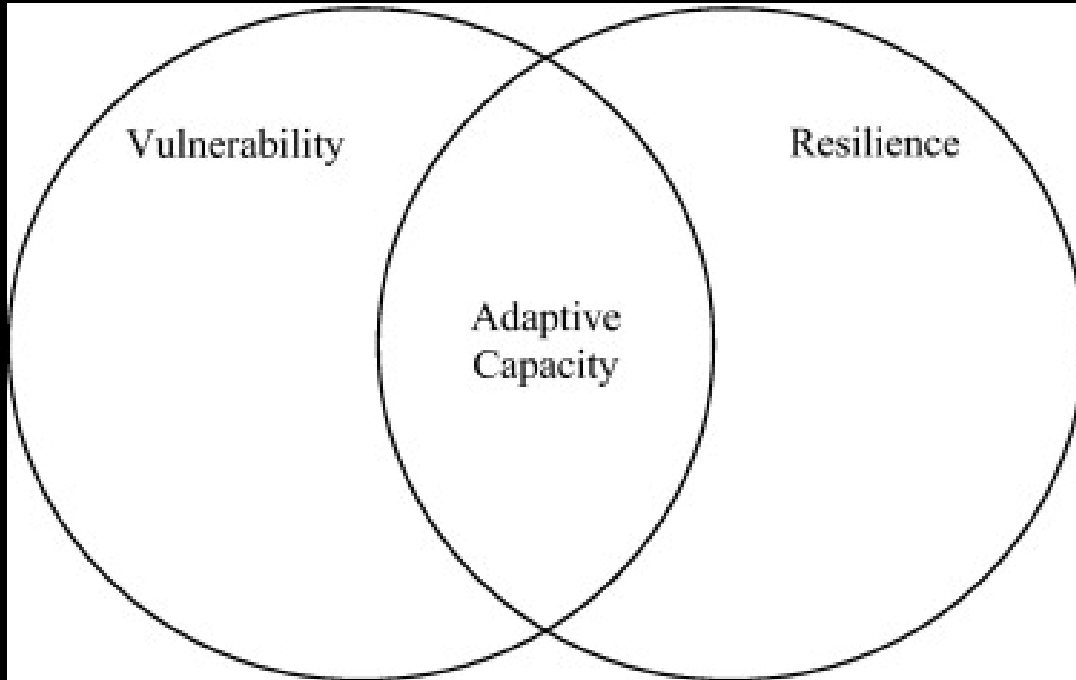
Vulnerability can be seen as the absence of wellbeing

- “A state of being with others, where human needs are met, where one can act meaningfully to pursue one’s goals and where one enjoys a satisfactory quality of life” (McGregor 2008: 1)
- Material
- Relational
- Subjective

Vulnerability
can be seen as
lack of access
to capital
assets

- Enable individuals to navigate their position when vulnerable
- Human
- Physical
- Natural
- Social
- Financial

Vulnerability comes from a loss of resilience

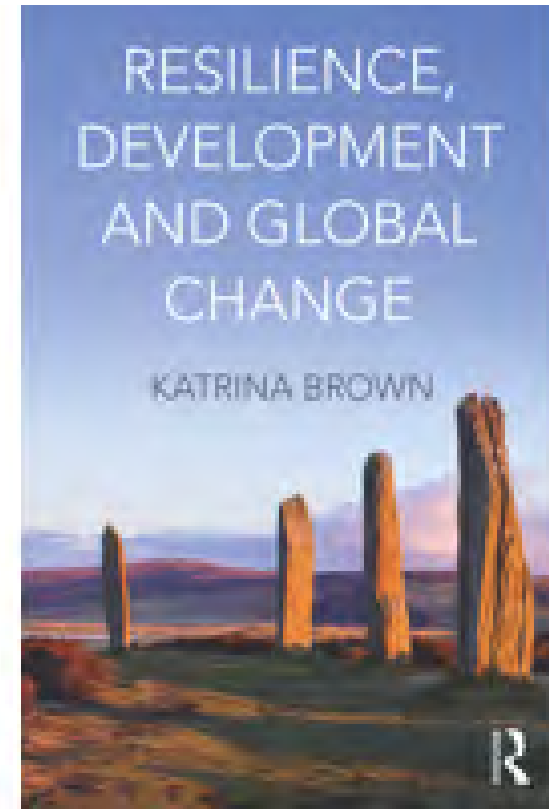


Engle 2011

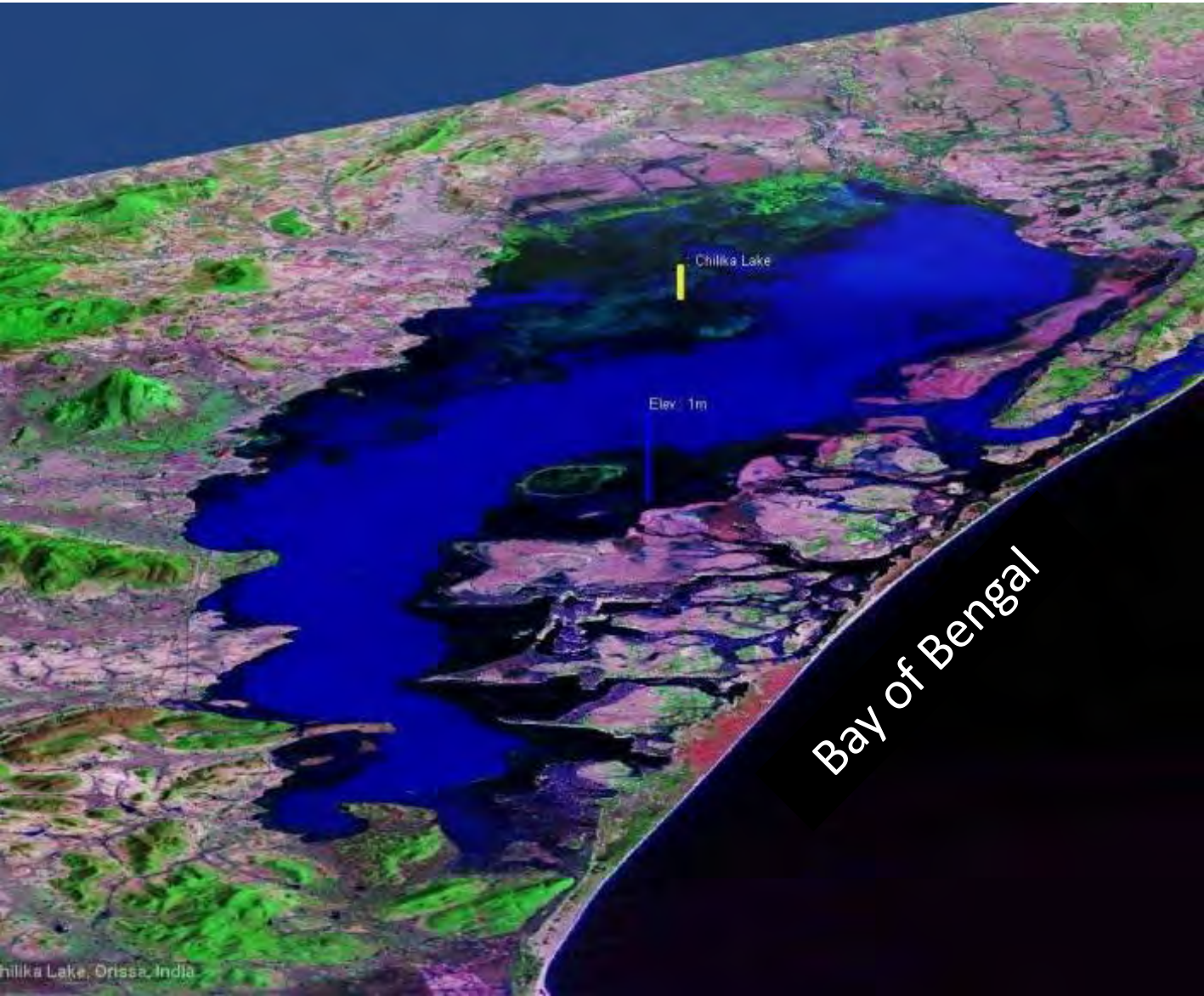
- Capacity to absorb disturbance and reorganize, while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks (Walker et al. 2004)
- Resilience is about maintaining or building options and flexibility
- It is about adaptive capacity

New approaches

- Coping responses
- Adapting responses
- Transforming responses



Bay of Bengal, Indian Ocean, India: 150 villages, over 400,000 fishers



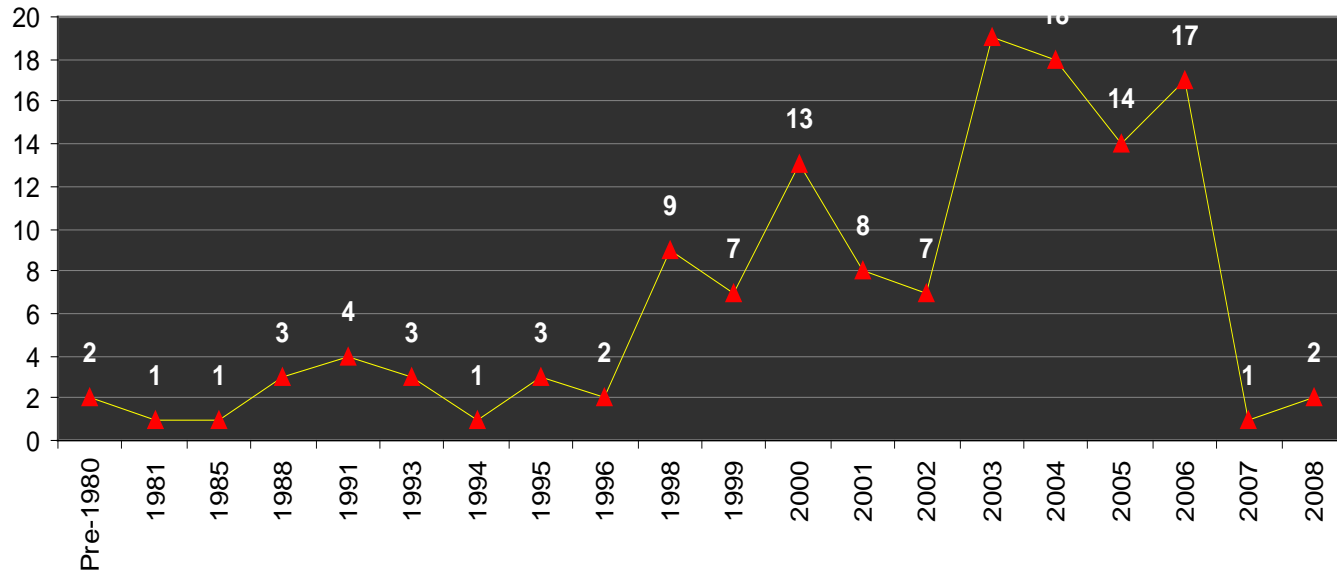
Climate and ecological Uncertainty, unpredictability and variability



Social subsystem vulnerabilities



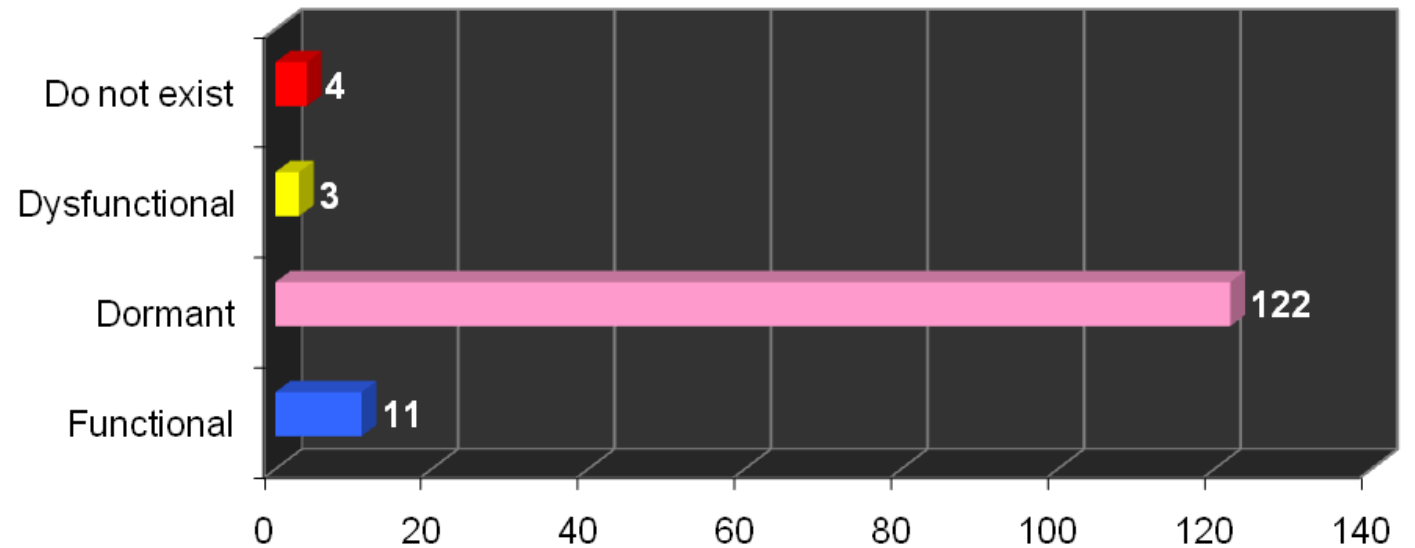
First instance of visible migration from fishing villages



Occupational displacement through migration

Loss of institutional capacity

Status of village fisheries institution





Size of the fish represents the power of fisher women

Building strength – Adaptive Capacity



Building and strengthening local institutions



Experimenting new ways of fishing technologies



Fishing is a lifelong “movement”
and “protest” is our birth right

Key dimensions of SSF vulnerability to global change

Absence of wellbeing	Lack of access to capitals	Loss of resilience	Areas of vulnerability in SSF
Material	Natural Financial Physical	Lack capacity to absorb disturbance and reorganize while undergoing change	Ecological Problems Economic crisis Physical resources
	Human Social		Social crisis Economic dependence Political issues
Subjective		Human Social	Lack capability for self-organization, learning and adaptation



**Vulnerabilities
in SSF**

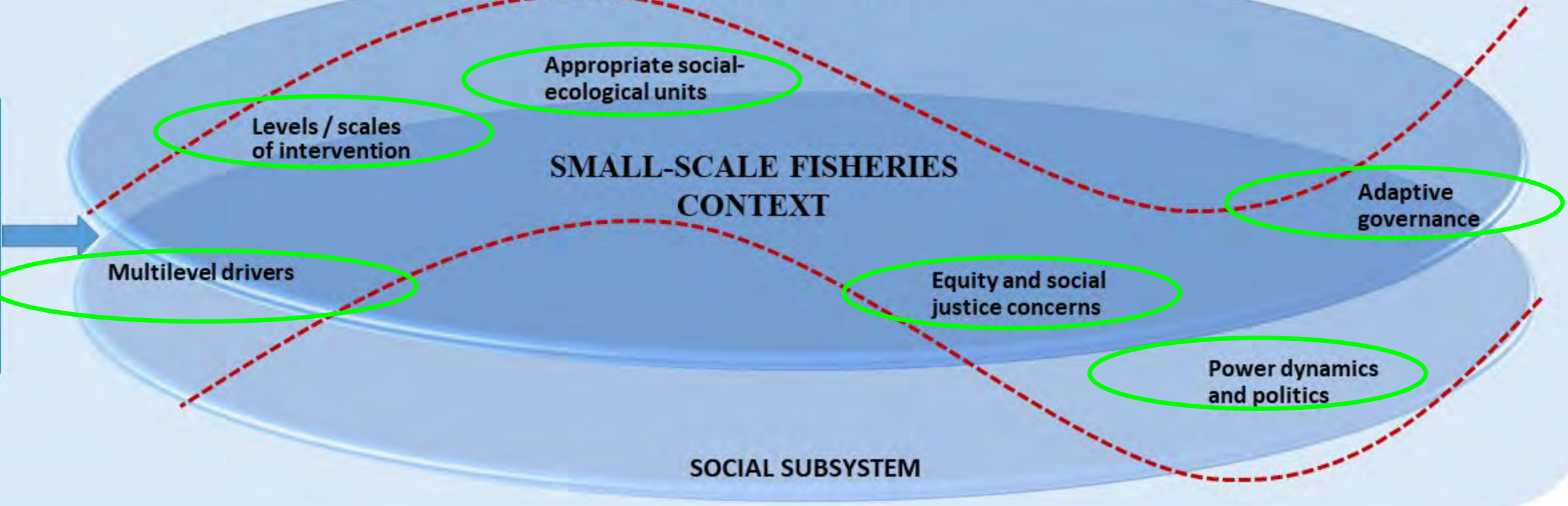
Key dimensions of strength of SSF in response to global change

Increase in wellbeing	Better access to capitals	Building resilience	Areas of strength in SSF
Material	Natural Financial Physical	Capacity to absorb disturbance and reorganize while undergoing change Capability for self-organization, learning and adaptation	Coastal habitat conservation Economic development Mobilizing physical resources
Relational	Human Social		Social cohesion Greater economic independence Increasing political voice
Subjective	Human Social		Individual and community level



Strengths / Adaptive Capacity in SSF

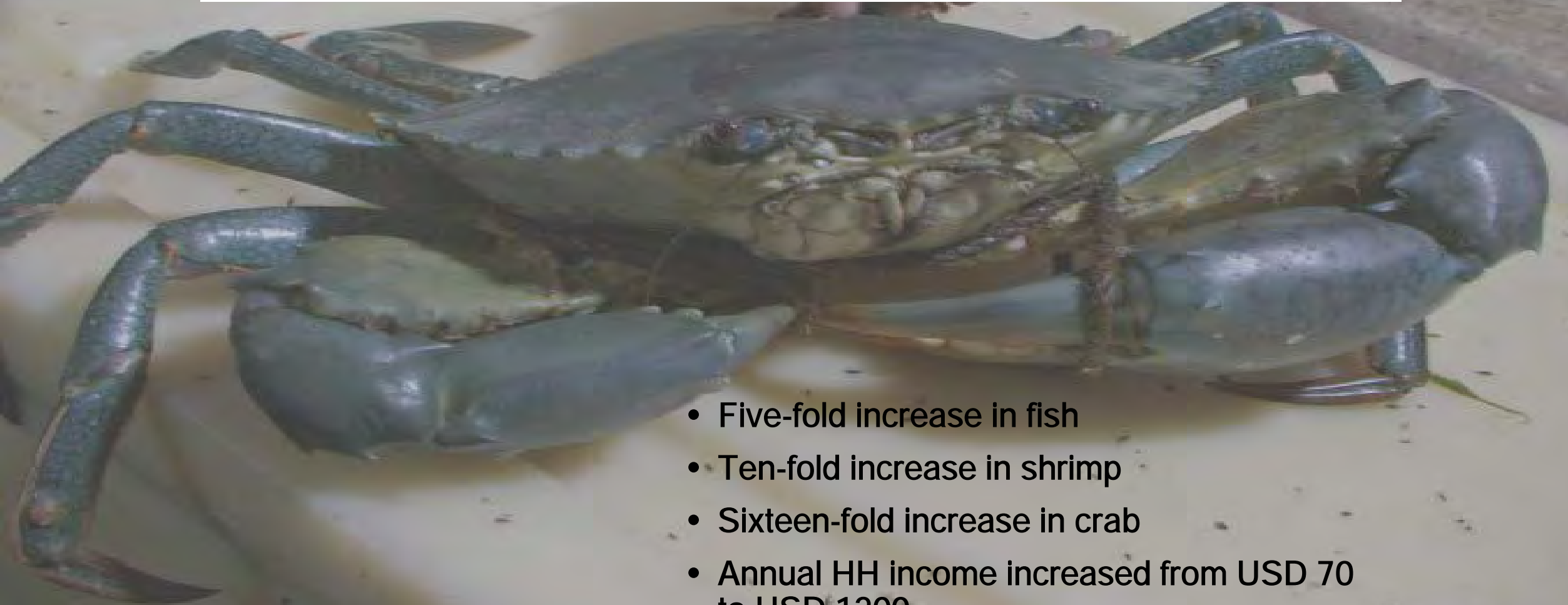
Dimensions of viability



Modified from Nayak and Armitage 2018

POWER AND POLITICS

Alternate narrative: Claims of increasing yields and income between 1996 to 2002



- Five-fold increase in fish
- Ten-fold increase in shrimp
- Sixteen-fold increase in crab
- Annual HH income increased from USD 70 to USD 1200

Who defines the narrative / discourse



How change is 'framed' by certain groups as significant or not



Change can create new opportunities and upward social and economic mobility for some but exclude others

- To what extent that framing is used to ignore or facilitate change processes

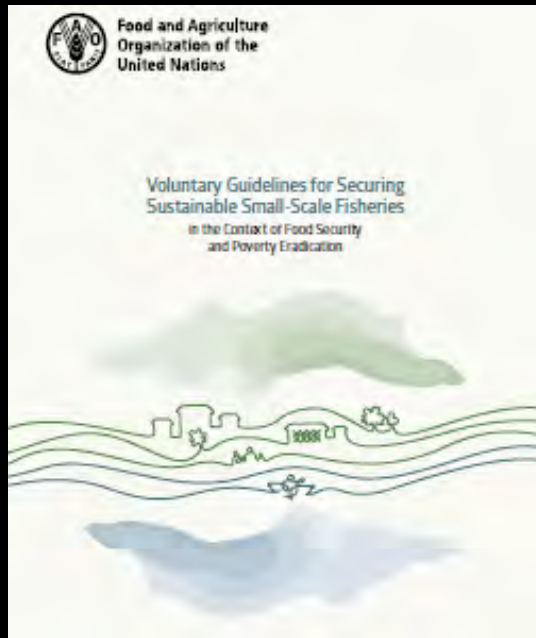
- Who benefits and who loses
- Uneven distribution of benefits and impacts
- Disproportionately impact poor, disempowered and other marginalized groups

Power and politics at the core of global change responses

Equity and social justice concerns

When



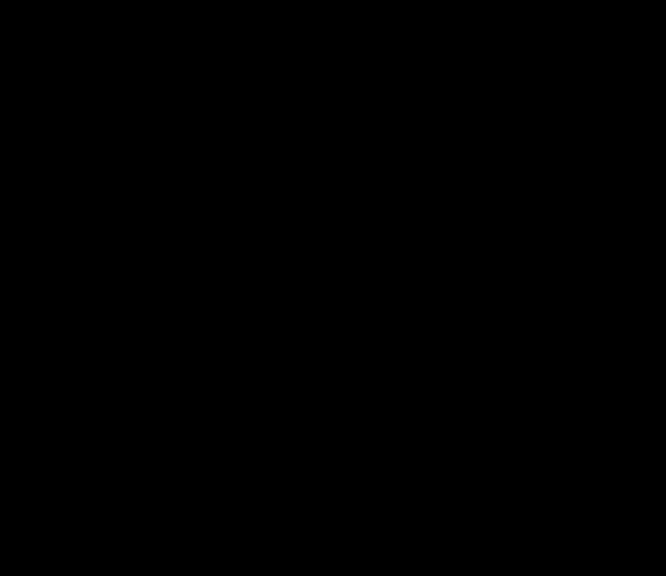


Key provisions

- Responsible governance of tenure
- Sustainable resource management
- Social development, employment and decent work
- Value chains, postharvest and trade
- Gender equality
- Disaster risk and climate change

Main objectives

- Global food security, nutrition, right to adequate food
- Equitable development of small-scale fishing communities and poverty eradication
- Sustainable utilization, prudent and responsible management and conservation
- Economically, socially and environmentally sustainable future
- Ecosystem friendly / participatory policies, strategies and legal frameworks
- Public awareness and advancement of knowledge



Different kinds of rights related to vulnerability and strengths in SSF

- Right to demarcation of fishing areas
- Right to manage the fishery

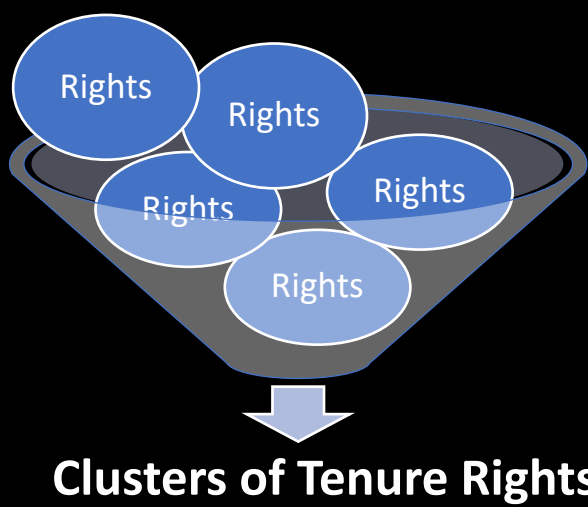
- Right to speech / speak
- Right to information
- Right to decide occupation
- Right to make decisions

**Rights for responsible
governance of Tenure**

- Right to livelihoods
- Right to fair price
- Right to fishing related loans

- Right to the rule of law

- Right to institution



1. Rights that ensure the **physical integrity of the resource**
2. Rights that **safeguard the economic aspects of fishers' engagement**
3. Rights that **build and strengthen the institutional foundation**
4. Rights that strengthen the **voices of the fishers**, and **strengthen their political standing and decision-making capacity**
5. Rights that provide a **stronger legal basis and policy recognition**

Case Study Database

The Equator Initiative's online best practice database

Welcome to the Equator Initiative Case Study Database. Here you will find detailed case studies on Equator Prize winners – a growing network of local sustainable development solutions for people, nature and resilient communities.

- Case Studies (378)
- Marine and Coastal Resource Management (78)
- Community-Based Adaptation to Climate Change (130)

- **Equator Initiative Prize criteria:** Impact, Innovation, Scalability / replicability, Resilience, Adaptability and Self-sufficiency, Social Inclusion, Gender Equality



Nature-Based Solutions Database

Connecting communities around the world to share local solutions that work!

EQUATOR INITIATIVE



Empowered lives.
Resilient nations.

- Total Solutions: 721
- Coasts: 110
- Oceans: 72
- Wetlands 170
- SDG 14 (Life Below Water): 74





COMMUNITY STORIES

- How communities can take collective action, through home-grown environmental stewardship, to improve local ecosystem and community well-being.

Communities in Action

A World of Communities, Conservation & Livelihoods

Communities
Conservation
Livelihoods



A tool for local communities and others to share experiences, and to seek out the ingredients of success in community conservation and sustainable livelihoods

Map

Table



Search

Search

Export Data

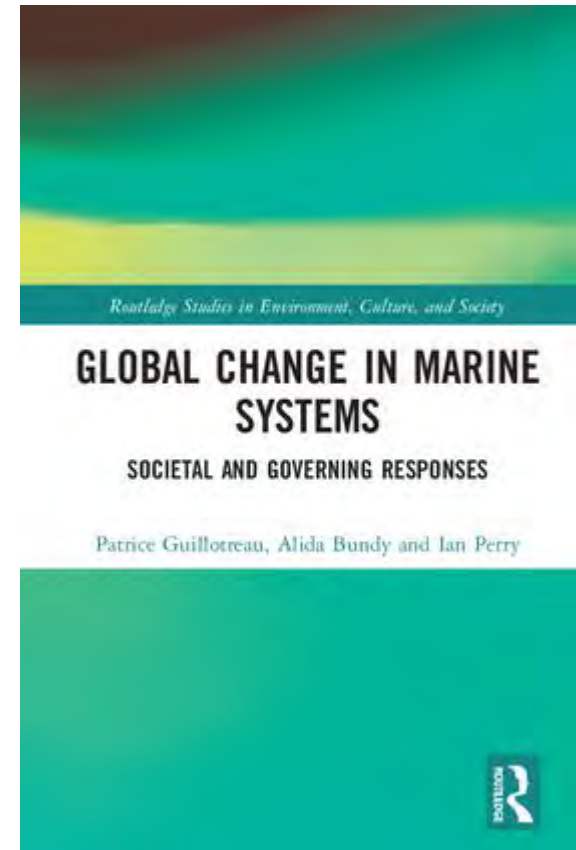
Current Search Terms: None (showing all 2907 records)

Advanced Search

Too Big to Ignore (TBTI): Global Partnership for Small-Scale Fisheries Research

ISSF is a global collaborative online database providing information on SSF to help enhance knowledge about this sector and their overall contributions

- I-ADApT (Assessment based on Description and responses, and Appraisal for a Typology)
- Our longer term intention is to develop a database of global case studies as an open-access web site to help decision makers, researchers and stakeholders decide how to respond when faced with difficult choices and trade-offs.



COMBINING NATURAL AND SOCIAL SCIENCES



Eastern
Boundary
Upwelling
Systems
(EBUS)



SOLAS/IMBeR
Carbon (SIC)



Continental
Margins
(CMWG)



Data
Management
(DM)



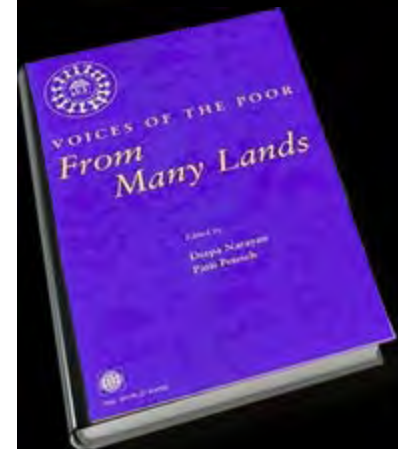
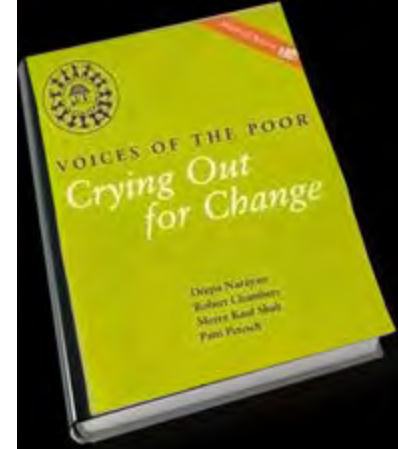
Human
Dimensions
(HDWG)

Fishers, Dolphins and Seagull



Voices of Poor approach (Narayan et al. 2000)

- “There are 2.8 billion poverty experts, the poor themselves. Yet the development discourse about poverty has been dominated by the perspectives and expertise of those who are not poor...”
- How people express their own perspectives and experiences of poverty, its causes and how it can be reduced.”



THANK YOU



Acknowledgements

Work in Bay of Bengal has been supported by funding from Social Science and Humanities Research Council of Canada