BUILDING RESILIENCE FOR ADAPTATION TO CLIMATE CHANGE IN THE FISHERIES AND AQUACULTURE SECTOR

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What is at stake?

- Over 500 million people depend – directly or indirectly – on fisheries and aquaculture for their livelihoods
- Aquatic foods provide essential nutrition for 4 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
- Aquaculture among the fastest growing food production systems

Drivers of Change

Affecting biological processes

Pollution/Water quality

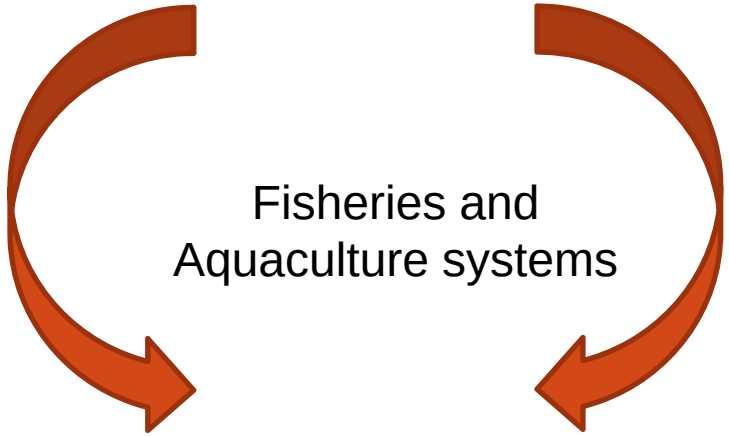
Climate

Acidification

Overfishing

Altered habitats

Etc…



Fisheries and
Aquaculture systems

Affecting human choices

Governance and politics

Legal systems

Technological change

Markets

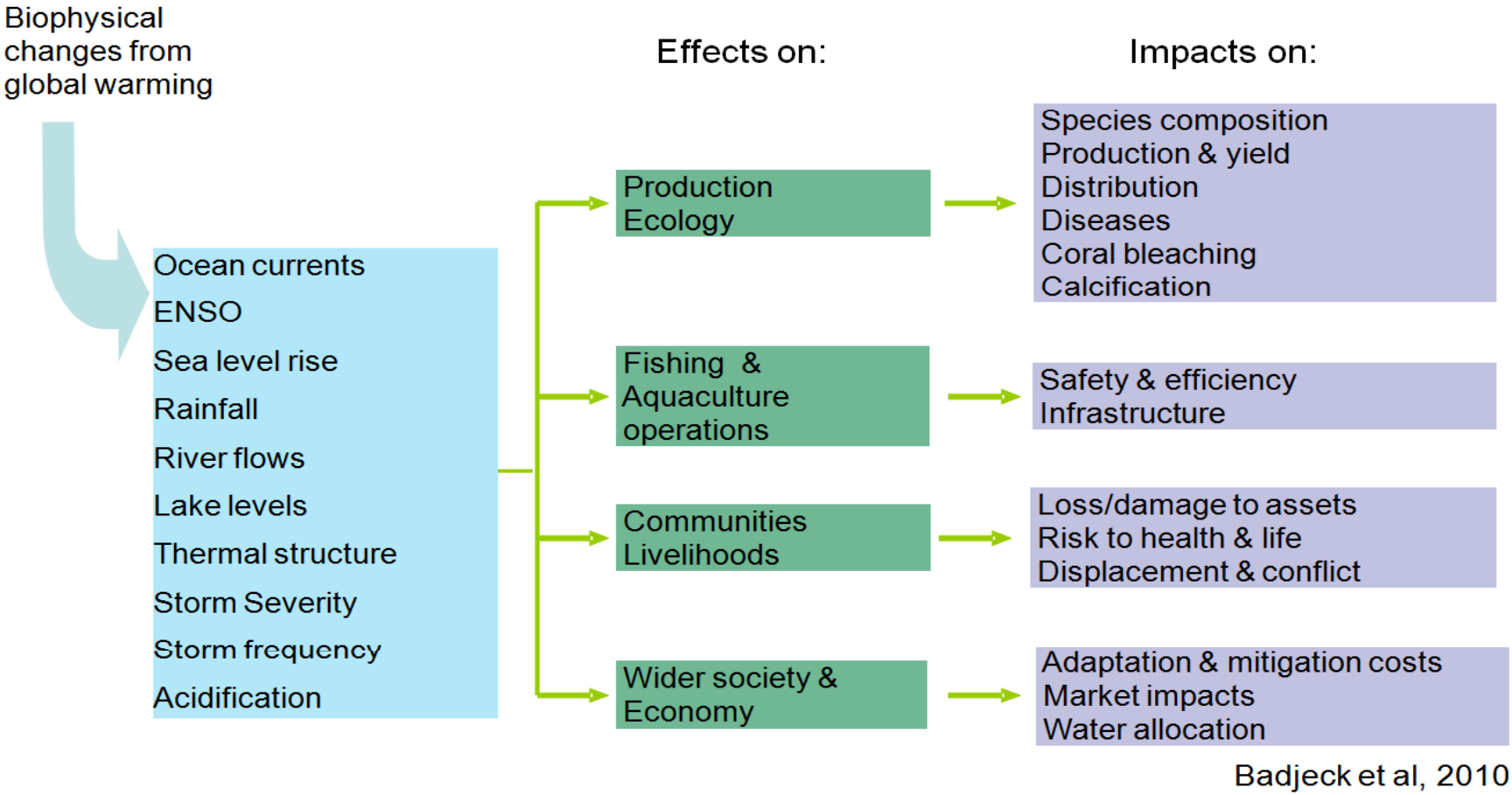
Capital/labor flows

Demographics

Culture

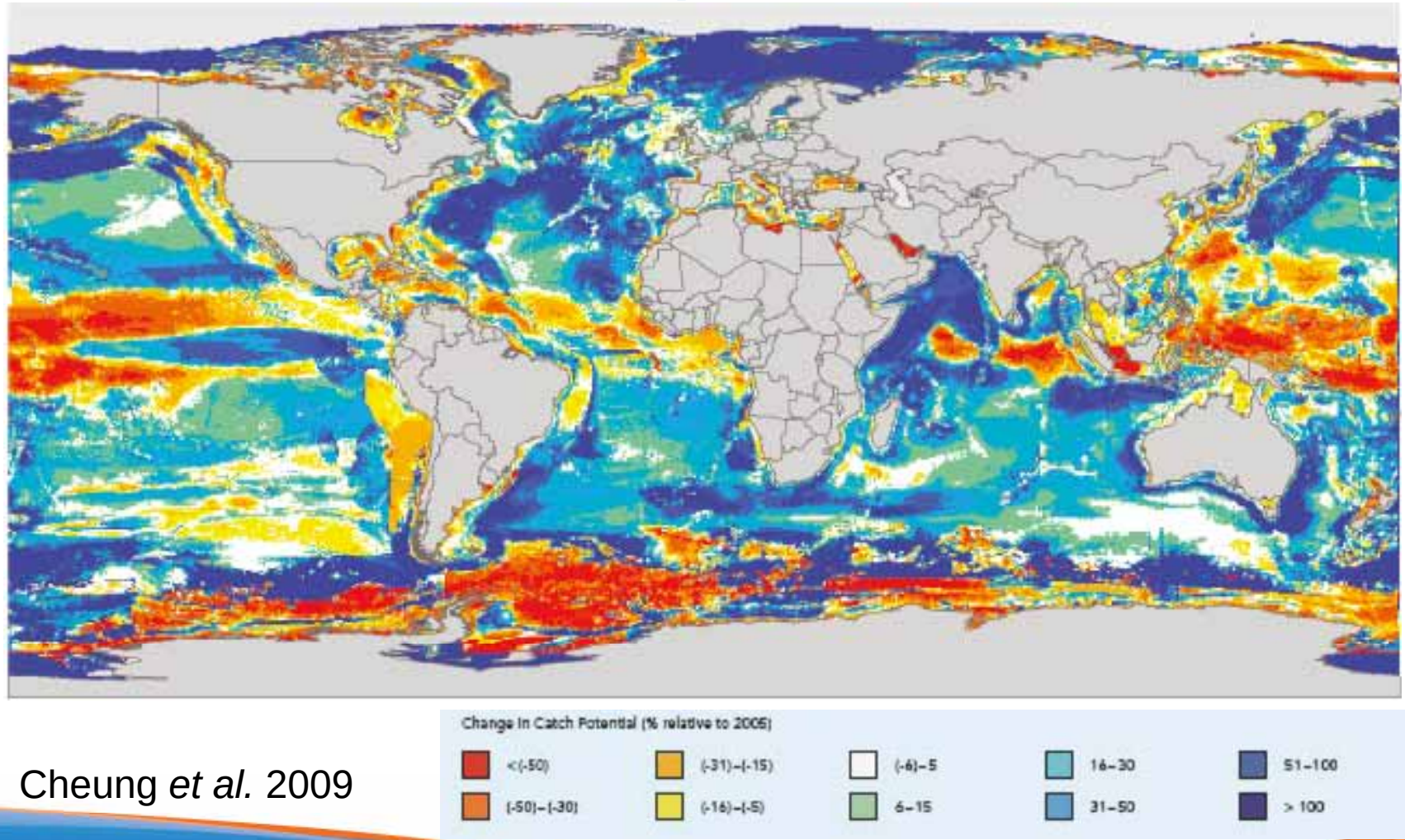
Etc…

Climate change impacts on fisheries and aquaculture



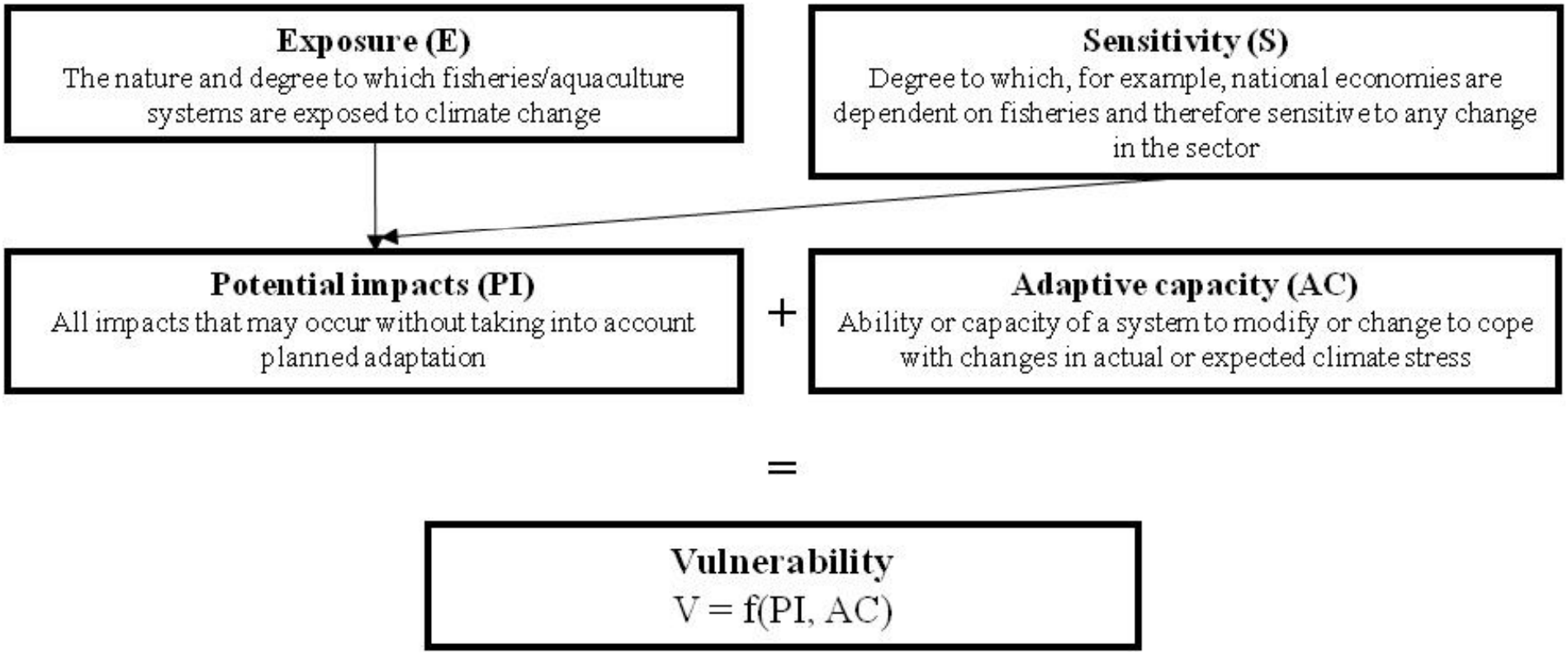
Badjeck et al, 2010

Predicted effects on fisheries' catch potential



Cheung *et al.* 2009

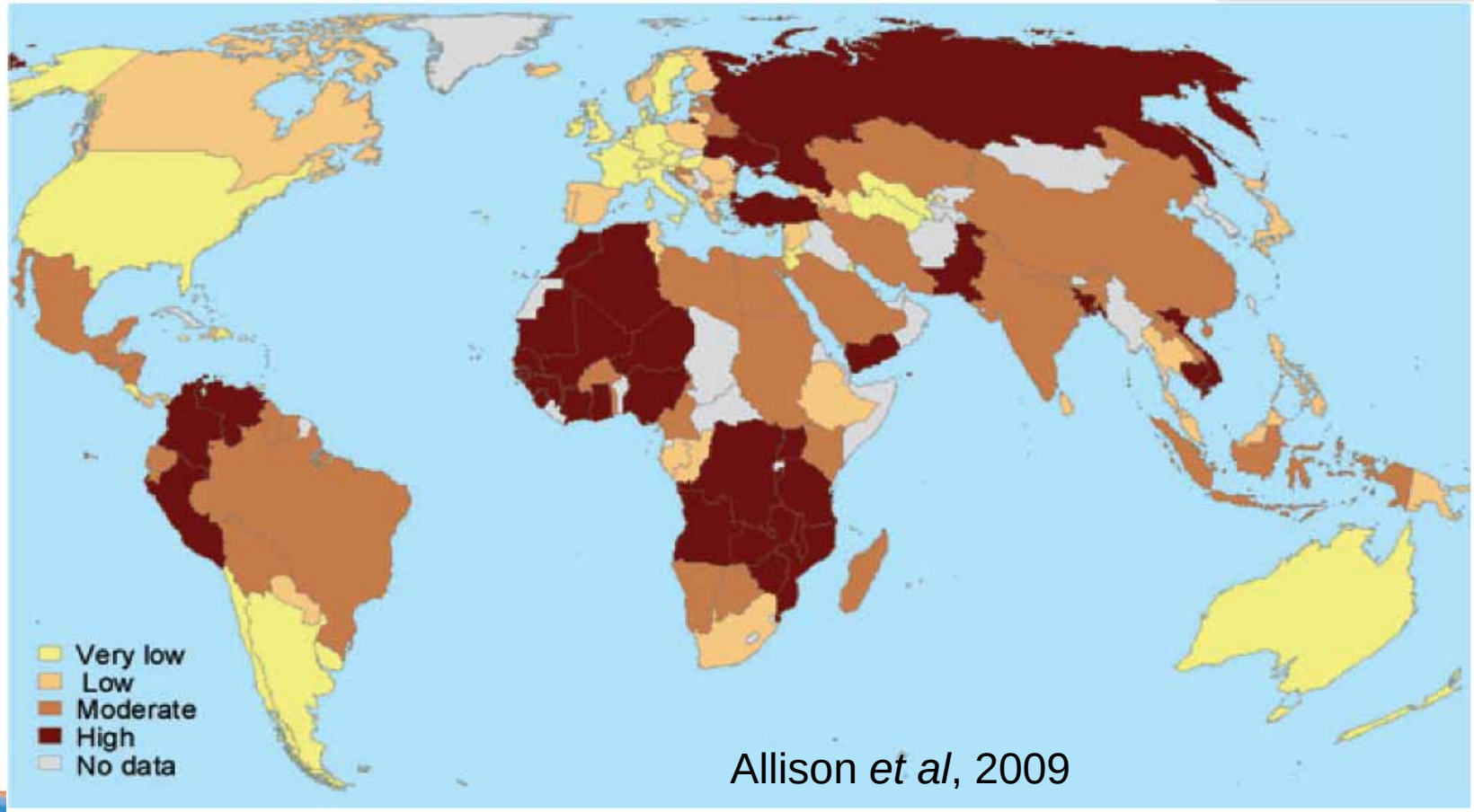
Understanding Vulnerabilities: IPCC model applied to FI&AQ



Adapted from FAO (2006)

Understanding vulnerabilities: applied fisheries example

Global mapping of national economies' vulnerability to climate change impacts on fisheries



Allison *et al*, 2009

Preparing and responding to the impacts: adaptation to climate change through broader vulnerability reduction

- 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 (e.g water, agriculture, forestry, coastal zone management)
- Disaster preparedness and response

Key features of the Ecosystem Approach to Fisheries and Aquaculture (EAF/EAA): Basic Objectives

- Maintaining ecosystem integrity / ecological well being
- Improving human well-being and equity
- Promoting/enabling good governance

Key features of the EAF/EAA: Principles in Practice

- Apply the precautionary approach
- Use best available knowledge
- Acknowledge multiple objectives and values of ecosystem services
- Embrace adaptive management
- Broaden stakeholder participation
- Understand and use full suite of management measures
- Promote sectoral integration and interdisciplinarity

Using EAF/EAA to increase climate change resilience

- Creating resilient communities (ecosystem, human, governance)/decreasing vulnerability (impacts, adaptive capacity, sensitivity)
- Enhancing inter-sectoral collaboration (e.g. integrating FI&AQ into system/national/regional adaptation and DRM strategies)
- Promoting context specific and community-based adaptation strategies
- Allowing for quick adaptation to change
- Promoting natural barriers and defenses
- Safeguarding the aquatic environment and its resources against adverse impacts of mitigation strategies and measures from other sectors
- Avoiding “mal-adaptation”


Thank you!