



# Adapting Fisheries to Climate Change: to what and where?

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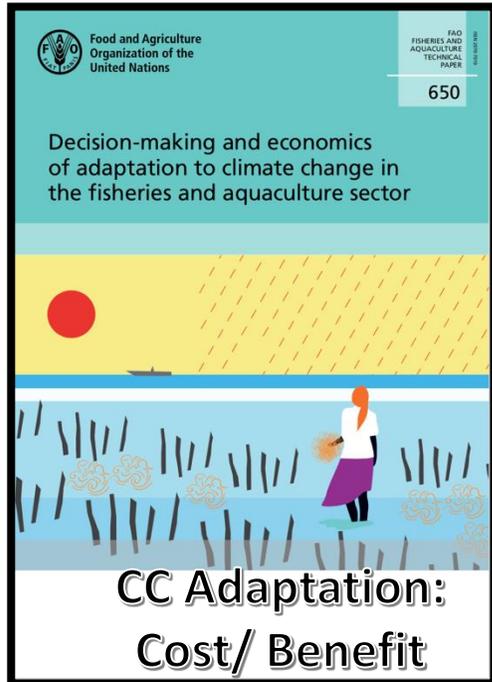
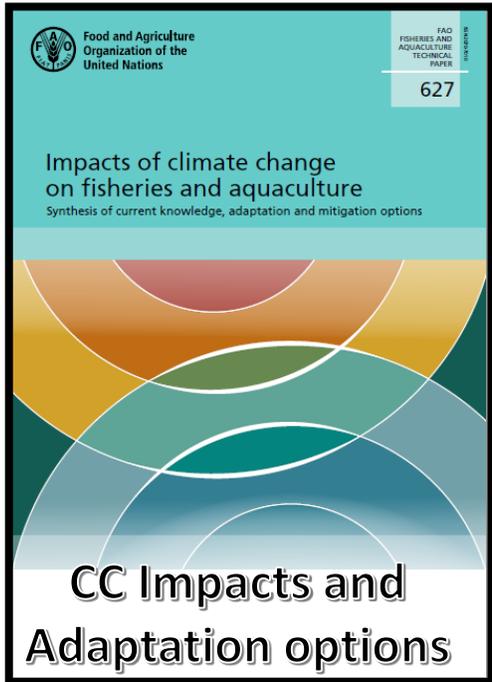
**COP25**  
**CHILE**  
MADRID 2019



PARIS2015  
UN CLIMATE CHANGE CONFERENCE  
COP21·CMP11

©2015 Paris Agreement includes a long-term adaptation goal, *in a manner that does not threaten food production*, alongside mitigation goals





# FAO Adaptation Toolbox

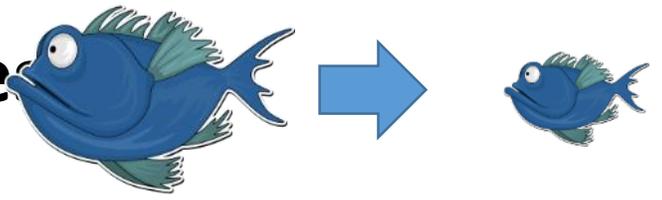


- Adaptation is placed and context based
- On-going and iterative
- Adapt to the possible rather than the probable
- Adaptation is not a zero-sum game: it can have very positive results
- Coordinated adaptation essential
- Political commitment + Societal support + Industry leadership

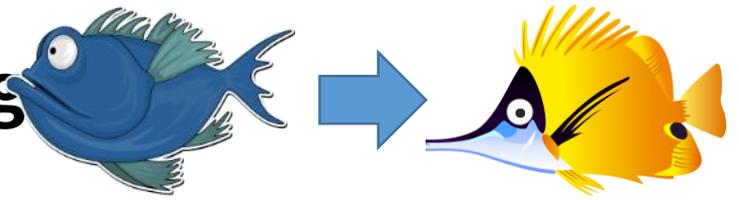
# ADAPTATION to WHAT?



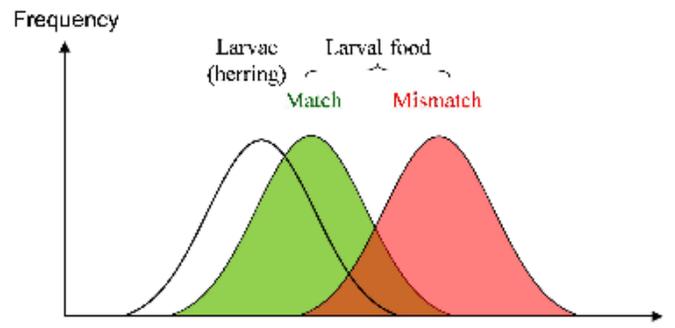
• Productivity changes



• Distributional change



• Seasonality changes

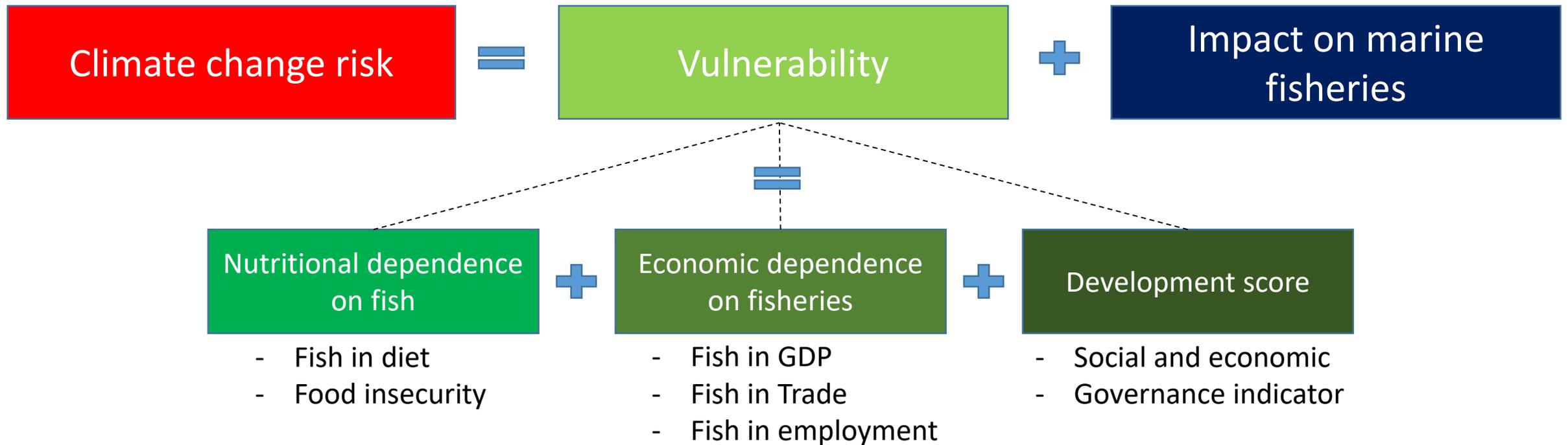


## Country climate change indicators

**Aim:**

Approach

For the set of countries for which catch potential projections are available, construct an indicator that indicates **each country's relative risk of being negatively impacted by the effect of climate change on its marine fisheries**



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### Approach

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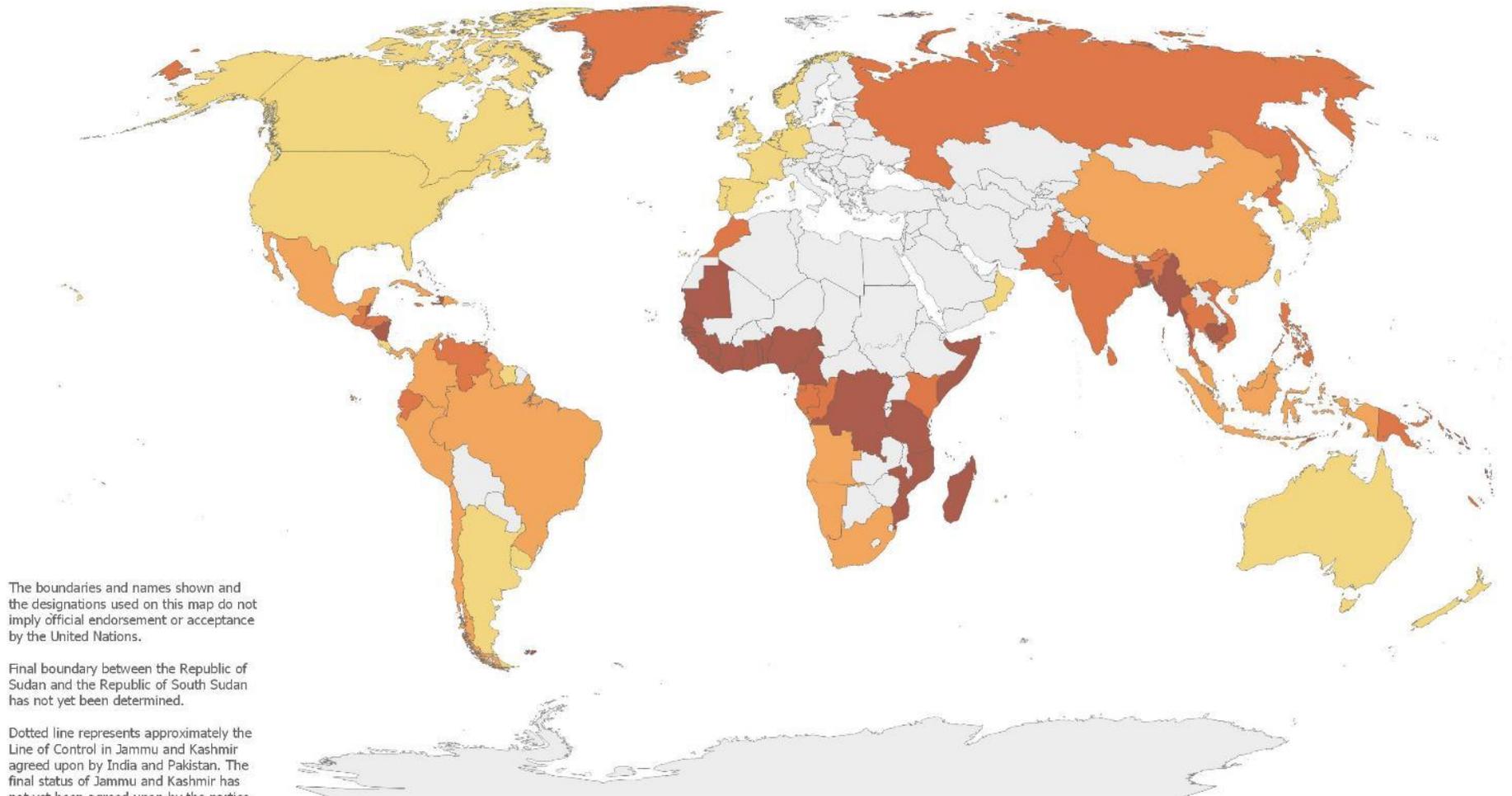


Impact on fisheries score is equivalent to the average estimate for % change in catch potential under the projection scenarios outlined in *Impacts of climate change on fisheries and aquaculture* (FAO 2018)





# Results – DBEM 2050 2.6



The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

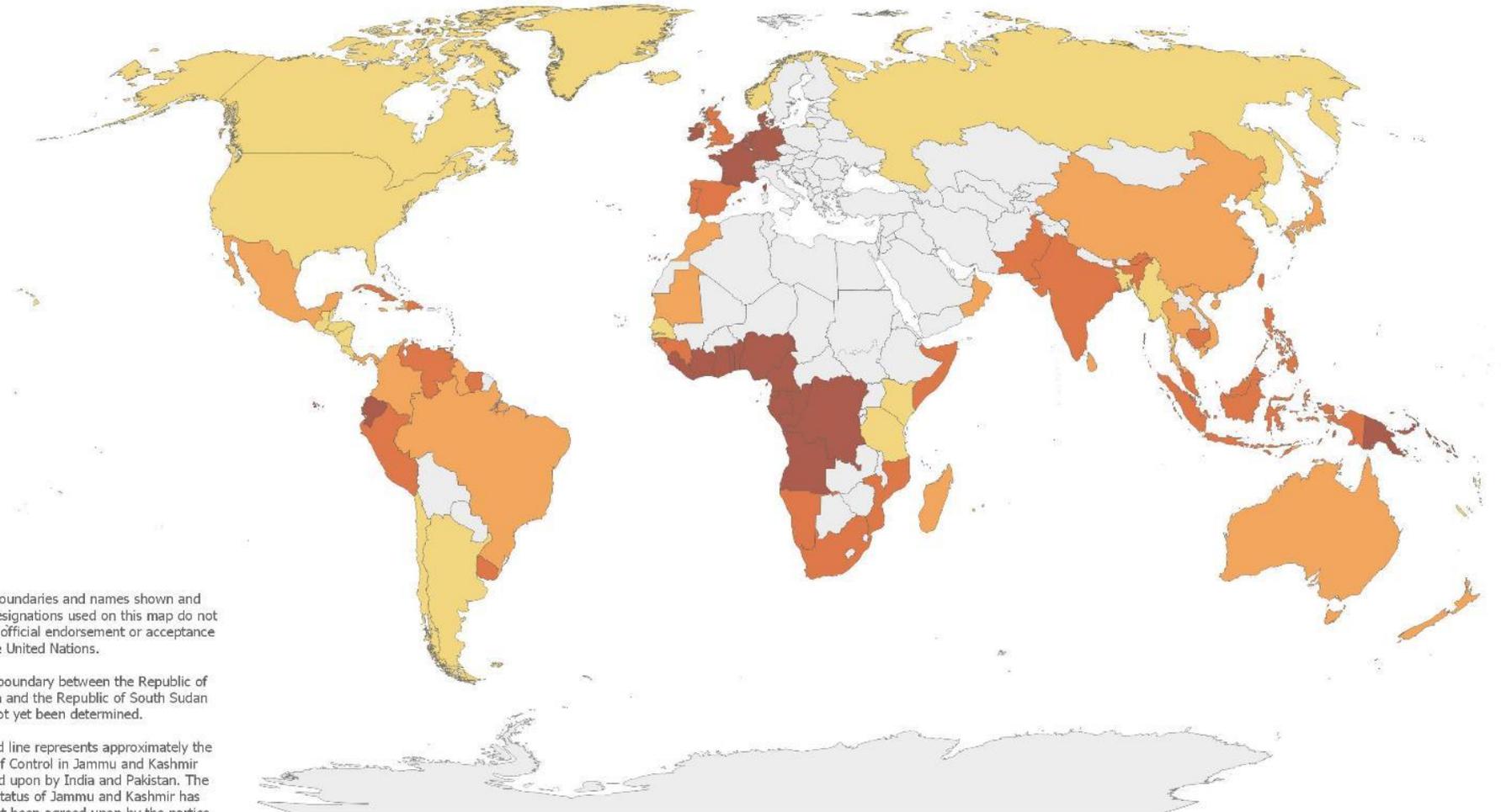
## Economic and Nutritional Vulnerability

Scenario: DBEM 2050 2.6

Low Medium High Very high No data



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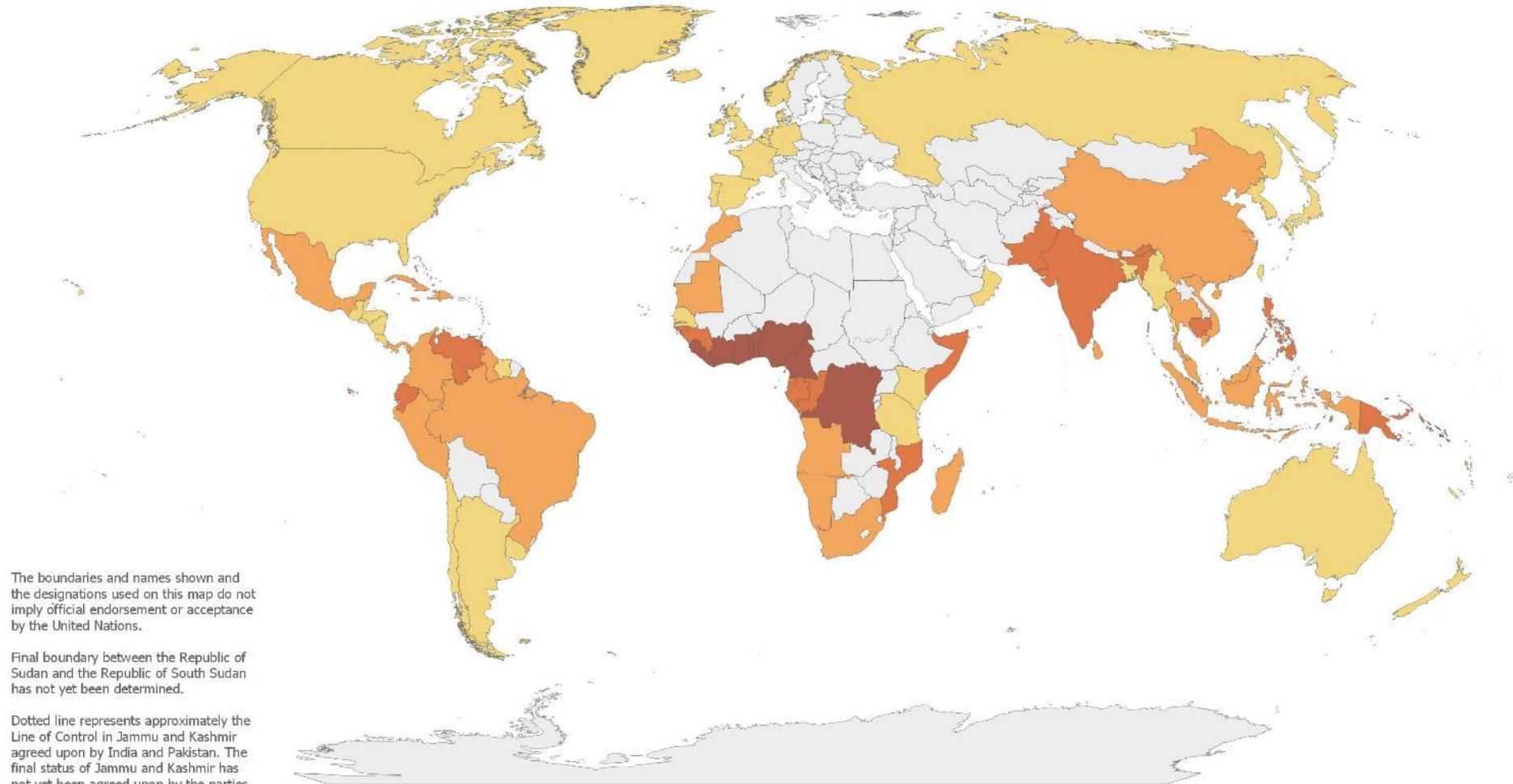
## Potential Maximum Catch Change

Scenario: DBEM 2050 2.6

Low Medium High Very high No data



# Results – DBEM 2050 2.6



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## Overall Climate Change Risk (on Fisheries)

This indicator combines vulnerability and potential catch change. Scenario: DBEM 2050 2.6

Low Medium High Very high No data



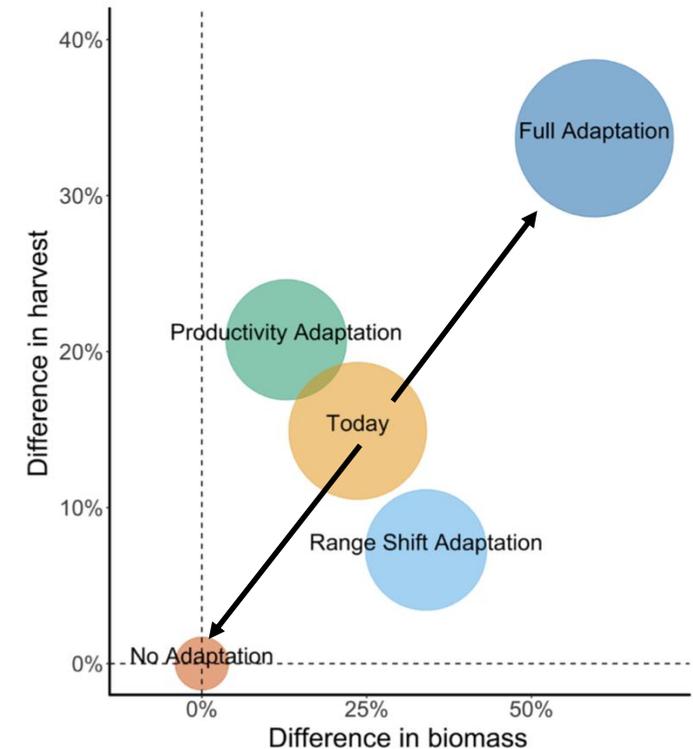
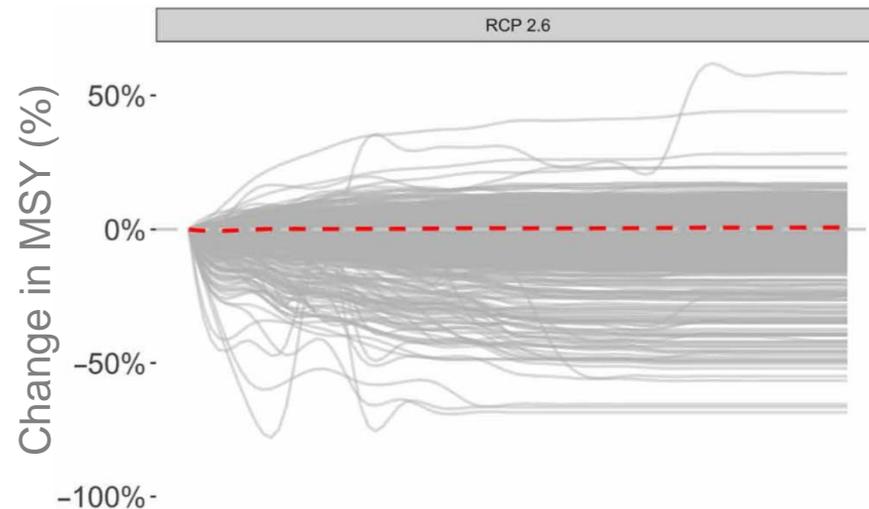
# Climate change risk Priority Countries for Adaptation

- Bangladesh
- Benin
- Cambodia
- Cameroon
- Gambia
- Guinea
- Guinea Bissau
- Haiti
- Kiribati
- Liberia
- Madagascar
- Marshall Is.
- Mauritania
- Mozambique
- Salomon Is.
- Sao Tome and Principe
- Senegal
- Sierra Leone
- Timor Leste
- Togo
- Vanuatu

## ECOLOGY

# Improved fisheries management could offset many negative effects of climate change

Steven D. Gaines<sup>1\*</sup>, Christopher Costello<sup>1</sup>, Brandon Owashi<sup>1†</sup>, Tracey Mangin<sup>1†</sup>, Jennifer Bone<sup>1†</sup>, Jorge García Molinos<sup>2,3,4</sup>, Merrick Burden<sup>5</sup>, Heather Dennis<sup>6</sup>, Benjamin S. Halpern<sup>1,7,8</sup>, Carrie V. Kappel<sup>7</sup>, Kristin M. Kleisner<sup>5</sup>, Daniel Ovando<sup>1</sup>





Food and Agriculture Organization  
of the United Nations

# FAO Fisheries and Aquaculture – Climate Change Adaptation Portfolio

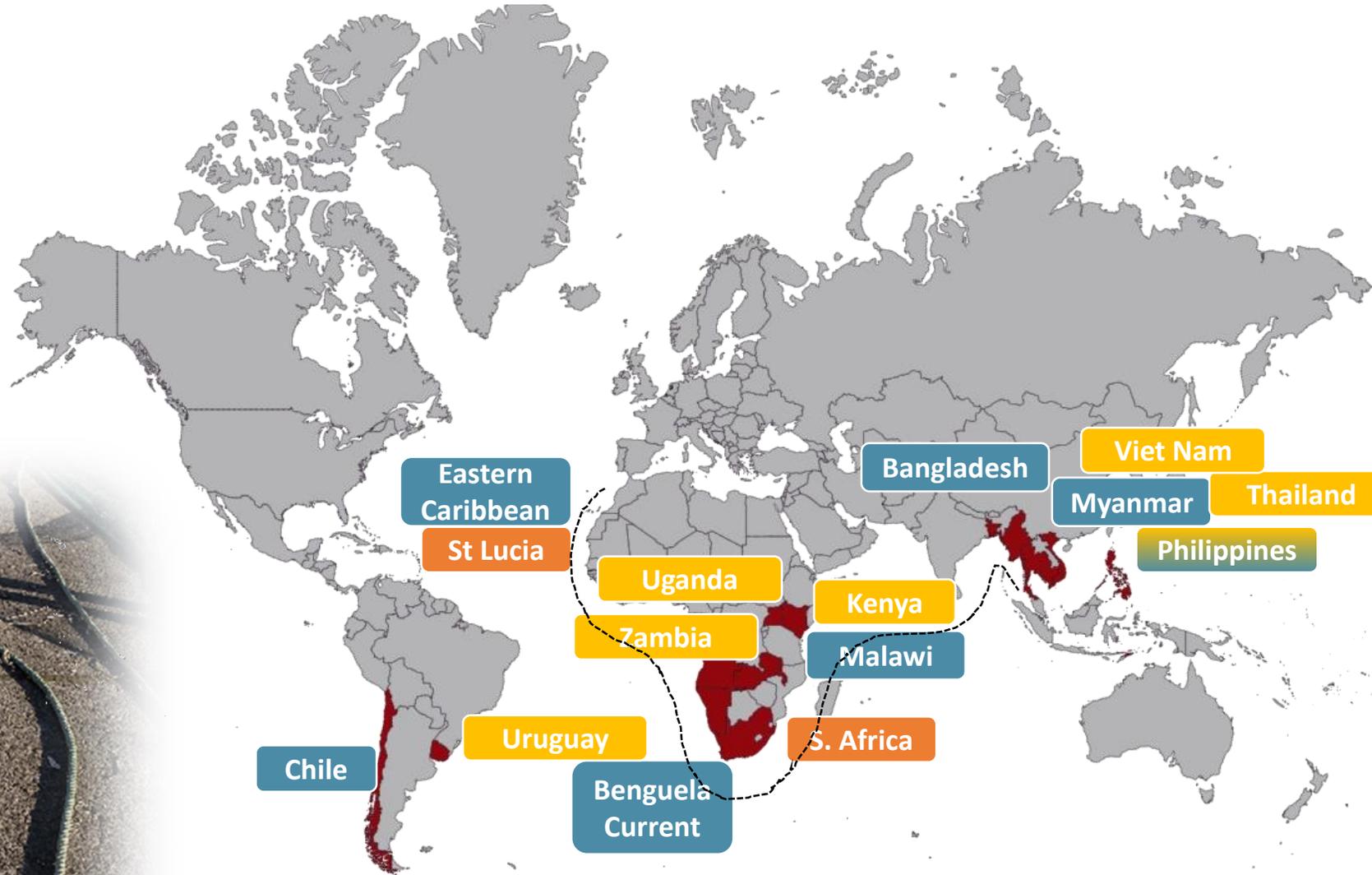
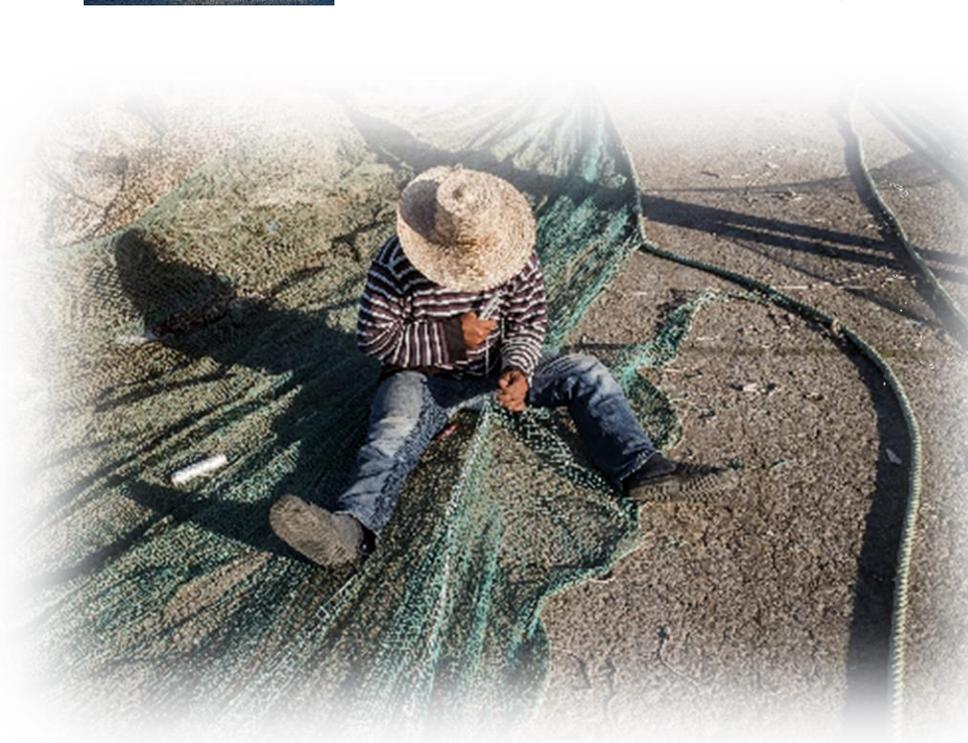
GEF-funded Adaptation

FAO and partners Adaptation

NAP support



EAF Nansen  
Programme





# Ready to work with positive partners to climate-proof fisheries

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