



In collaboration with:



## CLIMATE CHANGE AND AQUATIC FOOD SYSTEMS

Small-scale fishers, fish workers and fish farmers are some of the most exposed and vulnerable to hazard



Highly exposed because of where they live and operate



Dependence on climate-sensitive resources



Low adaptive capacity

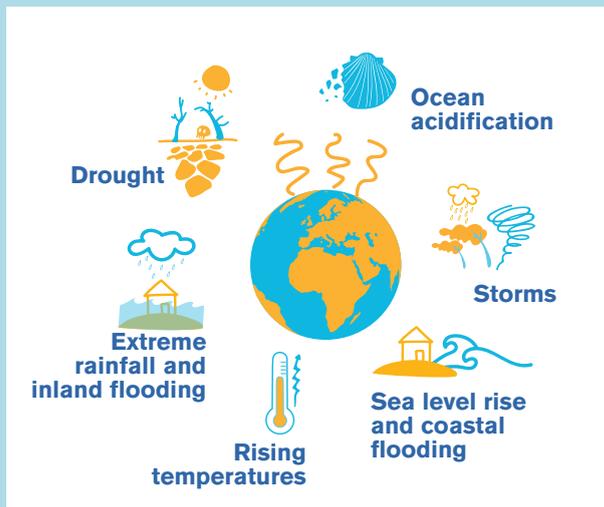


- Limited access to assets, including finance, technology, and services
- Limited flexibility to change livelihood strategies
- Limited ability to organise and act collectively due to constraints like unequal power relations and non-participatory management
- Limited ability to learn to recognise and respond to change
- Lack of agency to decide whether and how to respond, for example due to insecure tenure rights

## Climate change is reshaping and increasing risk in aquatic food systems

Climate change is modifying the frequency, intensity, and duration of natural hazards...

...with significant impacts on fisheries and aquaculture systems



Migration, displacement and conflict



Loss/damage to assets



Safety and infrastructure



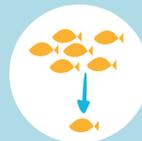
Floodplain and coastal defences



Diseases



Species composition and distribution

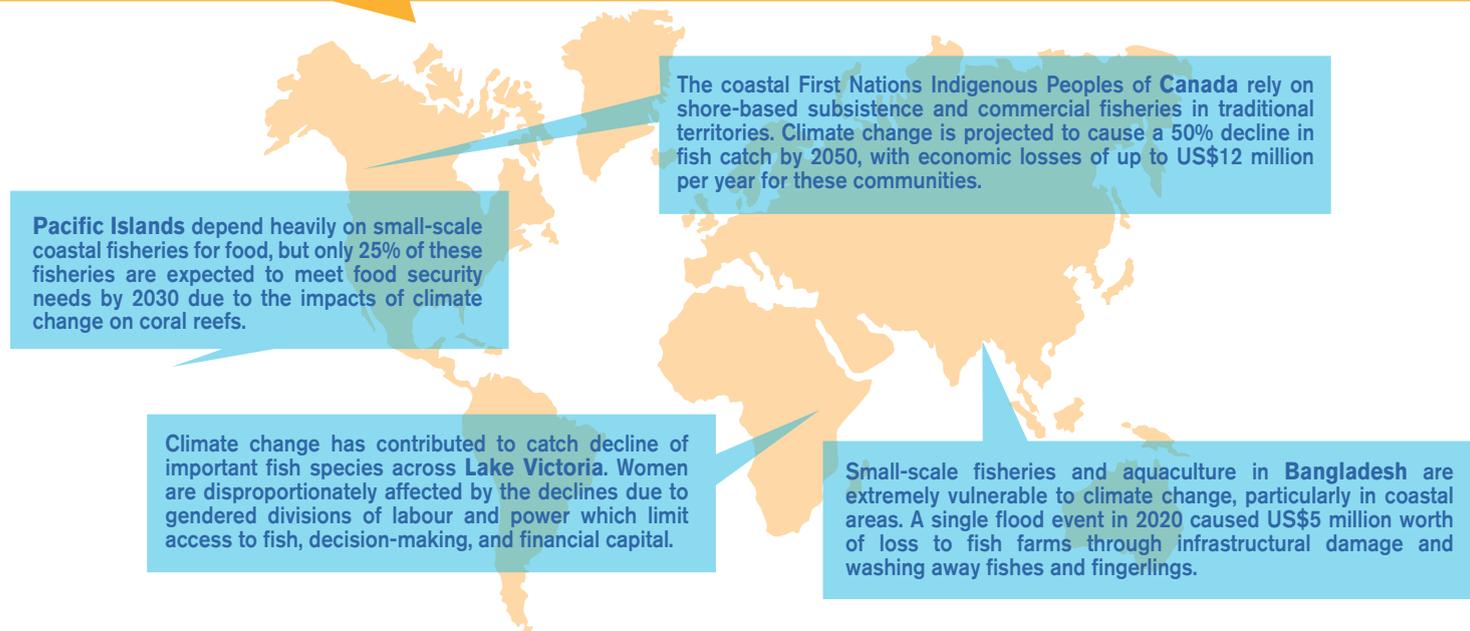


Production and yield



Efficiency, costs and income

# Examples of climate change impacts on small-scale fisheries and aquaculture



## Some priority interventions for climate adaptation in small-scale fisheries and aquaculture

### Enhance anticipation of climate hazards



- Early warning systems
- Extreme weather and flow forecasting
- Environmental monitoring

### Reduce human vulnerability



- Gender equity
- Financial inclusion
- Social protection and safety nets

**The most efficient and sustainable solutions to climate change involve transformative adaptation, which fundamentally changes systems and addresses root causes of vulnerability**

- Restoration of aquatic ecosystems
- Sustainable fisheries management
- Climate-resilient infrastructure

- Diversification of fishing activities
  - Access to diverse markets
- Livelihood diversification and fishery exit



### Reduce sensitivity of production systems

### Enable flexible and diverse livelihoods

**Effective implementation of these solutions requires institutional adaptation, including equitable governance and increased public and private investment in building adaptive capacity, particularly at the community level.**

For more information: [www.iied.org/IYAFA-2022](http://www.iied.org/IYAFA-2022)  
Contact: [Cristina.Pita@iied.org](mailto:Cristina.Pita@iied.org)

**Sources:**  
• Barange, M., Bahri, T., Beveridge, M., Cochrane, K., Funge-Smith, S. and Poulain, F. (2018) Impacts of climate change on fisheries and aquaculture: synthesis of current knowledge, adaptation and mitigation options. FAO, Rome. [www.fao.org/3/9705en/9705en.pdf](http://www.fao.org/3/9705en/9705en.pdf)  
• Cinner, J., Adger, W., Allison, E., Barnes, M., Brown, K., Cohen, P., Gelcich, S., Hicks, C., Hughes, T. and Lau, J.A.M.N. (2018) Building adaptive capacity to climate change in tropical coastal communities. *Nature Climate Change* 8 (2), 117-123. <https://www.nature.com/articles/s41558-017-0065-x>  
• Fedele, G. et al. (2019). Transformative adaptation to climate change for sustainable social-ecological systems. *Environmental Science & Policy* 101, 116-125. <https://doi.org/10.1016/j.envsci.2019.07.001>

@IIED [www.iied.org/](http://www.iied.org/)

Project funded by: Sida