

Policy actions needed to support Adaptation to Climate Change in Caribbean Fisheries

Mesures politiques nécessaires pour soutenir l'adaptation au changement climatique dans les pêcheries des Caraïbes

Acciones de política necesarias para apoyar la adaptación al cambio climático en las pesquerías del Caribe

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EXTENDED ABSTRACT

Climate change is significantly disrupting fisheries and aquaculture across the globe (Barange et al. 2018). Negative impacts of climate variability and change are already evident in the Caribbean (Oxenford and Monnerneau 2018). Coastal communities and fisherfolk, in particular, are on the frontline in the battle against climate change. At stake are the region's food security, fishing heritage, the well-being of coastal communities and important contributions to the emerging blue economy.

Negative impacts from climate change that are already happening in this region include: coral bleaching; increasing frequency of high intensity storms; increased sea level; ocean acidification; and sargassum influxes (Nurse 2011, Monnerneau et al. 2015). These are damaging critical fish habitats, disrupting fishing operations, affecting fish landings and threatening fisherfolk livelihoods (Monnerneau and Oxenford 2018).

Climate change is affecting capture fisheries and aquaculture through multiple pathways (Cox et al. 2020). These pathways include changes in biological productivity of fishery resources through deterioration of habitat quality, disruption of food webs, and reduction in growth and reproductive success of fishery species. Capture fisheries and aquaculture are directly impacted by: lower yields; changes in available species for capture or suitable species for aquaculture; loss and damage to gear and infrastructure; increased operating costs; and decreased safety-at-sea. Fisherfolk communities are suffering from: loss of income and livelihood opportunities; damage to homes, other physical assets and community infrastructure; reduced health and wellbeing; and threats to their cultural identity. Climate change impacts also have implications for fisheries governance requiring changes to geographic scales of governance, such as for shared stocks with changing distributions, and marine protected area networks with changing connectivity. There is a need for greater emphasis on incorporating fisherfolk and scientific knowledge for timely adaptation, and on adopting an ecosystem-based management approach. Finally, impacts on the wider society and economy will likely include: increased poverty and reliance on social services; reduced food security and nutrition; loss of Gross Domestic Product (GDP) and foreign exchange (exports); disruption of fish supply and value chain; and greater adaptation and mitigation costs.

Fortunately, there are many initiatives across the region that are supporting ongoing adaptation measures (Cox et al. 2020). These include improved ocean and climate forecasting and developments and training in early warning apps; improvements in fisher safety-at-sea through better communication, training and provision of safety equipment; and training in business skills, product development, sea moss farming etc. to build capacity and improve climate resilience of fisherfolk and aquaculturists. There have also been efforts to improve awareness and understanding of climate change vulnerabilities and adaptation pathways in the fisheries sector in general. Other initiatives include implementation of fishery improvement programmes that support access to higher priced markets through product certification and traceability, and sustainable fishery practices. There have been efforts to diversify markets through the harvesting and processing of non-traditional, newly available species, using existing value chains. There are also ongoing efforts to improve access to affordable insurance and to climate-proof infrastructure, especially following major hurricane damage, and to increase energy efficiency within the fisheries sector to reduce costs and environmental footprints.

Despite these ongoing efforts, there are a number of policy actions that could be implemented to enhance existing efforts and to ensure long-term adaptation of the fisheries sector to climate change (Cox et al. 2020). Key among these are: (1) making a greater effort to mainstream disaster risk management into the fisheries sector; (2) improving governance flexibility to respond in a timely manner to rapid changes occurring in fishery resources; (3) improving stakeholder engagement to ensure implementation of locally appropriate adaptation measures; (4) supporting innovative public-private partnerships to secure investment and innovation in the fisheries sector to facilitate additional livelihood opportunities; and (5) facilitating better participation of fisherfolk in social protection schemes to provide a social safety net for the fisheries

sector.

The small-scale fisheries of the Caribbean, especially those targeting coral reef associated resources are one of the most vulnerable sectors to climate variability and change. The key policy actions outlined here are urgently needed to support ongoing actions at reducing the current vulnerabilities and increasing the resilience of the fisheries sector in the region to climate risks.

KEYWORDS: climate change, fisheries, disaster risk management, blue economy, policy

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