Increasing resilience and adaptation to climate change in fisheries and aquaculture: Methodological advances for vulnerability assessments.

Cassandra De Young¹ and Cecile Brugere∗†²

¹Food and Agricultural Organization of the United Nations (FAO) – Viale delle Terme di Caracalla 00153 Rome, Italy
²Stockholm Environment Institute (SEI-York) – Grimston House University of York Heslington York YO10 5DX, United Kingdom

Abstract

Vulnerability and resilience are closely intertwined concepts. Using them to promote adaptation to climate change in the context of complex social-ecological systems is challenging. Various schools of thought have conditioned the methodological approaches that can be used to assess the different facets of vulnerability: be it from a climate change, political/ecological economy, resilience or livelihoods perspective, all offer valid and informative perspectives on the causes and consequences of vulnerability of people and ecosystems. Yet this multitude of vulnerability assessment approaches has caused confusion among practitioners who need to know who and/or what is vulnerable, and to what, where and why, in order to design development interventions that promote positive adaptation and resilience to change. At the initiative of the Global Partnership for Climate, Fisheries and Aquaculture (PACFA), a group of experts from the social and natural sciences recently met to discuss the relevance of available climate change vulnerability assessment methodologies for fisheries and aquaculture. We report here on the principles they proposed as underpinning a "good" vulnerability assessment and on a series of steps guiding the assessment of vulnerability in the sector. Both build on and link conceptual knowledge and experiences in the practical implementation of vulnerability assessments from around the globe, enabling the development of a new, systematic and robust approach to assessment that captures the specificities of fisheries and aquaculture systems. By doing this, the proposed approach ensures that assessment findings lead on to adaptation programmes and initiatives that reduce the vulnerability of the sector to climate and other changes. It also enables further enquiry into the characteristics of resilient fisheries and aquaculture-based social-ecological systems in the face of multiple drivers of change.

Keywords: Vulnerability, methodologies, principles, adaptation, climate change, fisheries, aquaculture

∗Speaker
†Corresponding author: cecile.brugere@sei-international.org