Local to global consequences of environmental shocks

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Resilience describes a system’s ability to respond and adapt in the face of potential disruptions. Within the context of food systems, resilience of food supplies and access to those supplies is key to ensuring food security. Studying the response of food systems to sudden environmental disturbance (shock) events provides insight into the systems resilience, as well as potential food security risks. Within the increasingly globalized food system, the effects of shock events can span from the local level where the shock is felt directly to the global level when the shock is transmitted through the global trade network. This talk will overview research on two environmental shock events occurring within fisheries. The first case evaluates the impact and recovery of small-scale fisheries in Madagascar following Cyclone Enawo in March 2016. This work leverages detailed fishery, economic, and health time series data from before and after the cyclone to evaluate multiple dimensions of impact and recovery and identify variables that confer resilience. The second case estimates the distant trade network impacts of a harmful algal bloom that disrupted Chilean salmon production. This work utilizes global trade data and emerging network-wide methods to causally identify and track the propagation of shock event through a network. Together, these studies aim to improve understanding of resilience of seafood production and trade to environmental shocks.

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