

MITIGATING IMPACTS OF NATURAL HAZARDS ON FISHERY ECOSYSTEMS. *Based on a symposium held in San Francisco, California, 5–6 September 2007. American Fisheries Society Symposium, Volume 64.*

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Stuff happens, even to fishery ecosystems. Not only must many fish populations withstand overfishing and habitat degradation, but these nearly steady stresses may be punctuated by forceful natural hazards of varied duration. The list is worrying, and includes tsunamis, volcanic eruptions, hurricanes and other coastal storms, stormwater runoff, harmful algal blooms, and hypoxia, as well as these (and other) events in multiple forms.

Because of their episodic nature, these events do not receive the sustained research and management attention as do the chronic forces that compromise fisheries. This volume is based on a 2007 symposium designed to place these rare but inevitable dangers within a broader framework. Its skeleton is logical—within each section (by hazard) comes pre-hazard planning and ecosystem-response forecasting, the immediate response to the events, the planning of recovery actions and, finally, the implementation of those actions.

The authors stress the inclusion of humans in fishery ecosystems. Fishers have huge influence on these ecosystems prior to disaster, but they may suffer enormous consequences afterward, even more than the ecosystem itself. When Hurricane Katrina and its sister, Rita, together ravaged 200 miles of Gulf coastline in 2005, 85% of the fishing fleet was disabled, nearly the entire fishery support system—supply, purchase, and processing—collapsed, and some fishers lost homes and family members. However, the less-than-effective governmental response caused many victims to give up the fishery lives that their families had followed for three or four generations.

Because it is largely based on papers that cover case histories, this volume does not represent an exhaustive view of all the potential impacts of every natural hazard possible. But it does provide a set of interesting real-world examples. And from these are offered a distillation for improvements to society's responses: calls for better monitoring systems, improved communications, the need to rectify vulnerable preexisting conditions and to encourage ecosystem resilience, and to use those disasters that do occur to leverage change so that the impacts of future events are sharply reduced.

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