

The Natural Hazard Mitigation Saves Project Team

Resilience Incentivization Pilot Project

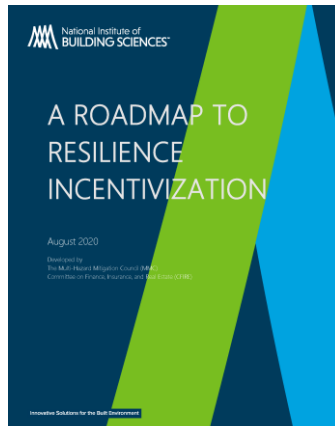
From 2015 through 2019, the U.S. averaged 14 floods, wildfires, and other disasters annually that each cost over \$1 billion. Total average annual catastrophe losses now exceed \$100 billion, and reached \$300 billion in 2017, equivalent to one quarter of all new U.S. construction put in place that year. Losses now grow 6% annually, 10 times faster than the U.S. population. To reverse this trend, the U.S. can incentivize retrofit and resilient construction. SPA Risk LLC and other volunteers from the National Institute of Building Sciences' (NIBS) Multi-Hazard Mitigation Council (MMC) created a roadmap to accomplish this.

	ADAPT CODE	ABOVE CODE	BUILDING RETROFIT	LIFELINE RETROFIT	FEDERAL GRANTS
Overall Benefit-Cost Ratio	11:1	4:1	4:1	4:1	6:1
Cost (\$ billion)	\$1^{year}	\$4^{year}	\$20	\$0.6	\$27
Benefit (\$ billion)	\$13^{year}	\$16^{year}	\$220	\$2.5	\$160
Riverine Flood	6:1	5:1	6:1	8:1	7:1
Hurricane Surge	not applicable	7:1	not applicable	not applicable	not applicable
Wind	10:1	5:1	6:1	7:1	5:1
Earthquake	12:1	4:1	13:1	3:1	3:1
Wildland-Urban Interface Fire	not applicable	4:1	2:1	not applicable	3:1

Natural hazard mitigation saves up to \$13 per \$1 invested. Learn more at <https://www.nibs.org/node/741>

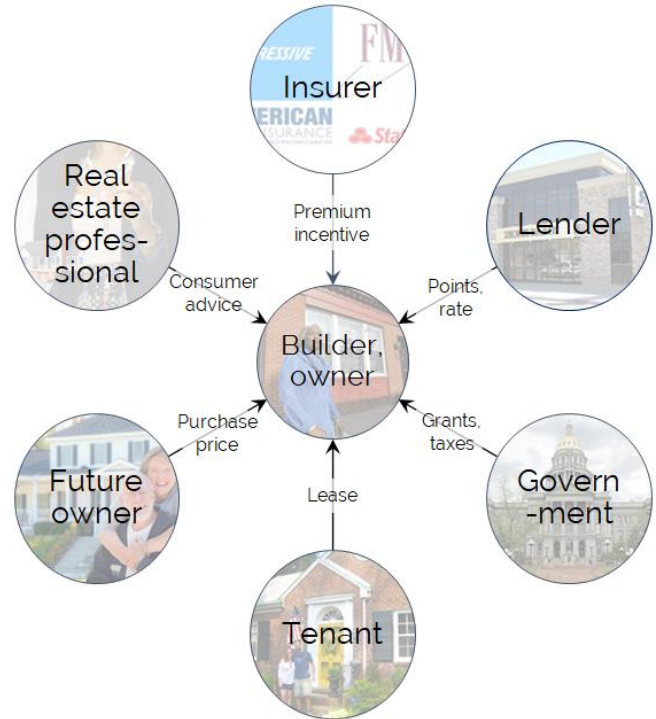
NIBS' *Natural Hazard Mitigation Saves* studies show that many pre-disaster mitigation activities save much more than they cost. But the U.S. invests far less in mitigation than seems warranted. Why? We attribute the shortcoming at least partly to misaligned interests in the supply chain. Owners or developers pay to make a building resilient, while lenders, insurers, taxing authorities, and other stakeholders enjoy free co-benefits. It should surprise no one that misaligned market forces fail to produce resilient buildings.

MMC's initiative *A Roadmap to Resilience Incentivization* describes a cost-effective path to achieve resilience through an integrated set of private, public, and hybrid incentives that includes riders on mortgages, insurance, and leases, combined with tax incentives and grants. The incentives help the owner or developer pay for resilience projects by



Find the Roadmap at <https://www.nibs.org/node/758>

reducing their cost, increasing consumer demand, or both. Lower costs and partnership among all risk stakeholders should increase mitigation investment. Contributors to the roadmap included experts from finance, insurance, building practice, risk research, and government.



Incentives in various forms can add up, making it easier for developers and owners to pay for better buildings.

The *Natural Hazard Mitigation Saves* project team now seeks in-kind support and funding to draft the contract riders and ordinances the roadmap proposes, and to apply them in a regional pilot project. Doing so will require collaboration among small teams of national and local experts in each of the stakeholder groups shown above. The *Natural Hazard Mitigation Saves* project team wants to collaborate with existing programs in your organization. Together, we can create an unprecedented private-sector incentivization program that creates a partnership among the people who share the risk. Our goal is to reduce risk for everyone.

For details, please contact Dr. Keith Porter, Principal Investigator of the NIBS *Natural Hazard Mitigation Saves* projects, at kporter@sparisk.com or 626-233-9758. The project team does not represent NIBS or MMC.