Disaster Risk Reduction Project Case Studies

Several members of UNISDR ARISE have completed case studies of disaster risk reduction projects. These are examples of ARISE members around the world bringing the best of the private sector to disaster risk reduction.

For questions about the series, please contact Kiki Lawal, UNISDR Private Sector Focal Point (lawalk@un.org) or series coordinator Rick Astray-Caneda (ricyaciii@gmail.com). For questions about individual case studies, see corporate contacts at the bottom of each.

Title	Industry	Link and Description
MASA Synergy	Cross-Industry	http://www.preventionweb.net/publications/view/53316 MASA Synergy is a crisis simulation tool applying artificial intelligence. Read about an application of the system with the government of the greater Paris region.
Development of a Crisis Management Plan for the Okinawa Tourism Sector	Travel & Tourism	http://www.preventionweb.net/publications/view/53209 The Japan Tourism Bureau used a collaborative process to develop a risk reduction and crisis plan for the tourism sector in the Okinawa Prefecture in Japan.
100 Resilient Cities: Building Resilience Globally	Public Sector	http://www.preventionweb.net/publications/view/49458 AECOM is a strategy partner to 100 Resilient Cities. Working concert with the 100RC initiative, AECOM provides technical and management support to support cities in resilience-building.
Mitigating Climate Change at Australian Defence Sites	Defense Infrastructure Construction	http://www.preventionweb.net/publications/view/49459 AECOM led a two-stage process of risk identification and then detailed risk assessment for Australian Department of Defence locations. Hazards including climate change-induced sea level rise, storm surge, and coastal erosion were considered. Findings will inform mitigation projects.
Climate Change and Extreme Weather Adaptation Options for Transportation Assets	Infrastructure Travel & Tourism Public Sector	http://www.preventionweb.net/publications/view/49460 AECOM partnered with multiple governments and agencies in the US San Francisco Bay area to study potential impacts to transportation systems given sea-level rise. Multiple scenarios were created to aid resilience planning.

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Flood Reduction and Water Sustainability Design for a New Mixed Use Development	Construction	http://www.preventionweb.net/publications/view/49464 AECOM partnered with the University of Cambridge, Innovate UK, and Cambridge, UK, to design water management infrastructure and strategy for a new mixed use development. This includes a "grey water" system that utilizes runoff water and other sources for non-potable applications.
Adapting English Schools Sites to Reduce Predicted Overheating Impacts Resulting from Climate Change	Education Construction	http://www.preventionweb.net/publications/view/49465 AECOM with Rex Proctor and Edward Cullinan Architects undertook this study. Through the modelling of different types of climate mitigation measures, under different climate scenarios, the project developed costed design, operation and management guidance for different types of schools.
Disaster Planning and Recovery for Tasmanian Businesses - Delivery of Materials and Training	Cross-Industry	http://www.preventionweb.net/publications/view/49463 AECOM was engaged by the Tasmanian Department of Premier and Cabinet Climate Change Office (TCCO) to develop a suite of online and printable resources to help Tasmanian businesses across a range of sectors develop practical and implementable strategies to prepare their business for disasters. The resources, when combined, can form a comprehensive emergency management plan for the business, and can be used as individual resources, depending on the business' needs.
Development of Losses Avoided Studies for Building Code Policymaking	Public Sector Construction	http://www.preventionweb.net/publications/view/49431 To demonstrate risk reduction from disaster-resistant building codes, AECOM developed practical losses avoided studies (LAS) using HAZUS, FEMA's popular GIS-based community loss modeling platform. The engineering basis of HAZUS allows simulation of improved disaster performance from strengthened hazard provisions in the International Building Codes (I-Codes) launched in 2000. Particular structure types and features are modeled for residential, commercial and industrial.

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Scorecard for City Disaster Resilience	Public Sector	http://www.preventionweb.net/publications/view/49447 Three cities held workshops with multiple stakeholders to complete the UN City Disaster Resilience Scorecard. The workshops were held over one or two days and were facilitated by IBM and, in the case of Stamford, by the engineering company AECOM. The workshops were notable in identifying issues that could have led to a compromised disaster response, or to development and other activity that would have weakened resilience in the longer term.
Design of a Mall that Works with Floods Instead of Against	Construction Retail	http://www.preventionweb.net/publications/view/49457 SM Prime built the SM Cabanatuan mall with design to allow overflowing creek floodwater during extreme floods into the mall property. The lower ground structure also serves as a temporary flood catchment which minimized the level of flood in the community.
Construction of a Flood Resistant Mall	Construciton Retail	http://www.preventionweb.net/publications/view/49454 SM City Marikina is an elevated mall built on top of stilts. It is a 6-hectare mall property located within the Marikina River Watershed, a known flood-prone area.
An Evacuation Shelter for the People of Tanauan, Philippines	Public Sector	http://www.preventionweb.net/publications/view/49466 In the aftermath of Typhoon Haiyan in 2013, a majority of the designated evacuation centers were severely damaged. In the drive to build back better and safer, the Philippine Disaster Resilience Foundation and its partners aimed to build safer and more structurally sound, dual-purpose evacuation centers that are hazard-adaptive and sensitive to the needs of Persons with Disabilities, women, and children.
A Public-Private Partnership for a Livelihood Seeding Program in a Post-Disaster Context	Public Sector	http://www.preventionweb.net/publications/view/49442 Working in a post- disaster scenario in the Province of Leyte, the Philippine Disaster Resilience Foundation (PDRF) designed an early recovery program with national government agencies, local government units, and international NGOs—leveraging the capabilities of each organization in support of micro and small enterprises and the normalization of the local supply chain.

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Humus Technology for Preventive and Post-Disaster Land Conservation in Disaster	Construction Infrastructure	http://www.preventionweb.net/publications/view/53123 Due to abundance of precipitous slopes, Japan historically has faced the risks of landslides and slope related disasters. Artificially manufactured humus materials, a humic substance that forms in soil after plant matter decays in nature, are beneficial to managing slopes and preventing disasters in public infrastructure projects. Recently, humus technology was used in national roadside slope stabilization works in Kagoshima prefecture and Kyoto prefecture. Furthermore, this technology was used to improve the water environment of enclosed coastal seas in Mie prefecture.
Energy Infrastructure Investments Build Electric Grid Reliability in Italy	Power & Utilities Infrastructure	http://www.preventionweb.net/publications/view/53208 These projects were designed to improve electric services in a defined area by introducing innovative technologies, and increasing network efficiency. Due to the synergy with the different institutional territorial stakeholders, activities have been carried out promptly and with particular attention to local needs and positive environmental impact.
Training Courses on Resilience – Understanding Disaster Risk	Cross-Industry	http://www.preventionweb.net/publications/view/53207 The Enel Foundation offered training courses during 2016 to more than 200 students from several prestigious academic institutions. The project aims to raise the interest and sensitiveness on resilience across sectors with specific focus on strategic and operational issues. The training opportunity is designed for MBA and PhD Programs and will be replicated in 2017.
Modeling Losses for Insurance Policies in Hazard-Prone Areas	Insurance	http://www.preventionweb.net/publications/view/53134 The Florida Public Hurricane Loss Model (FPHLM) provides the state with a fair, open, and transparent tool for reviewing insurance company rate requests. The model must meet rigorous standards set by the state and is certified biannually by the Florida Commission on Hurricane Loss Projection Methodology - the U.S. gold standard for such models. Experts from six universities and research institutions comprise the team.

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Teaching Best Preparedness Practices to Turkish Small Businesses	Cross-Industry	http://www.preventionweb.net/publications/view/53139 Sağlam Kobi is a model program between UPS, the World Economic Forum (WEF), the U.S. Chamber of Commerce, and the Corporate Social Responsibility Association of Turkey (CSR-Turkey). This project was launched in 2013 and the name translates to "strong small and medium businesses." Through this strategic public-private partnership, these businesses in Turkey are learning best practices to help them be better prepared in the event of a disaster.
The Value of Crisis Management Promotion for Tourism and Meetings Industry	Travel & Tourism	http://www.preventionweb.net/publications/view/53142 2017 is designated by the United Nations as International Year of Sustainable Tourism Development. In real terms the global tourism industry generates over $7.6 trillion (USD) annually of revenue. MICE related tourism (Meetings, Incentive Groups, Conferences and Events) generates over $700 billion, and is a major industry to be impacted adversely when disaster strikes. This case study demonstrates how Crisis Management Planning promotion creates increased initiative and resilience.
The Wall of Wind: Testing Building Materials and Methods at Category 5	Construction	http://www.preventionweb.net/publications/view/53136 The FIU 12-fan Wall of Wind (WOW) Research and Testing Facility was inaugurated on August 24, 2012, the 20th anniversary of Hurricane Andrew's devastating landfall in South Florida. The WOW facility is capable of controlled testing in flows that replicate hurricane winds up to Category 5, accompanied by wind-driven rain.