**Annex 1**

**Critical Infrastructure in the SDGs and in the Sendai Framework**

**SUSTAINABLE DEVELOPMENT GOAL 9**

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

GOAL 9 TARGETS

**9.1**

Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

**9.2**

Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry’s share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

**9.3**

Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets

**9.4**

By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

**9.5**

Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

**9.a**

Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States

**9.b**

Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities

**9.c**

Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

**SUSTAINABLE DEVELOPMENT GOAL 11**

Make cities and human settlements inclusive, safe, resilient and sustainable

GOAL 11 TARGETS

**11.1**

By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums

**11.2**

By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

**11.3**

By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

**11.4**

Strengthen efforts to protect and safeguard the world’s cultural and natural heritage

**11.5**

By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

**11.6**

By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

**11.7**

By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

**11.a**

Support positive economic, social and environmental links between urban, per-urban and rural areas by strengthening national and regional development planning

**11.b**

By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels

**11.c**

Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials

**SENDAI FRAMEWORK**

**The seven global targets are:**

…

(d) Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030.

**Priority 2. Strengthening disaster risk governance to manage disaster risk**

**National and local levels**

27. To achieve this, it is important to:

(a) Mainstream and integrate disaster risk reduction within and across all sectors. Review and promote the coherence and further development, as appropriate, of national and local frameworks of laws, regulations and public policies, which, by defining roles and responsibilities, guide the public and private sectors to: (i) address disaster risk in publically owned, managed or regulated services and infrastructures;

**Priority 3. Investing in disaster risk reduction for resilience**

**…..**

**National and local levels**

30. To achieve this, it is important to:

(c) Strengthen, as appropriate, disaster resilient public and private investments, particularly through: structural, non-structural and functional disaster risk prevention and reduction measures in critical facilities, in particular schools and hospitals and physical infrastructures; building better from the start to withstand hazards through proper design and construction, including the use of the principles of universal design and the standardization of building materials; retrofitting and rebuilding; nurturing a culture of maintenance; and taking into account economic, social, structural, technological and environmental impact assessments;

**Priority 4. Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction**

**National and local levels**

33. To achieve this, it is important to:

(c) Promote the resilience of new and existing critical infrastructure, including water, transportation and telecommunications infrastructure, educational facilities, hospitals and other health facilities, to ensure that they remain safe, effective and operational during and after disasters in order to provide live-saving and essential services;

….

(l) Consider the relocation of public facilities and infrastructures to areas outside the risk range, wherever possible, in the post-disaster reconstruction process, in consultation with the people concerned, as appropriate;

 **Annex 2: Further Reading (Cases)**

**a) Financial Incentives**

The Northridge Earthquake struck Southern California in the United States in 1994, causing significant damage to infrastructure, most notably that of its vast transportation network. The earthquake resulted in 480 damage locations to federal, state, and local roads throughout the Los Angeles area and forced the closure of four major highway corridors that, together, carried over 780,000 vehicles per day before the earthquake. This caused significant disruption to commuting patterns as well as the transportation of freight. The city placed priority status on the replacement and restoration of its highway infrastructure in order to quickly restore the freedom of movement and likewise, ensure the protection of economic operations and recovery. In the earliest phases of response and recovery, city officials established a system of alternative highway routing relying upon calculated detours. To expedite the completion of highway rebuilding projects, the California Department of Transportation (CalTrans) included financial incentives in its contracts for each major restoration or repair contract. Under this approach, bonuses were available to each contractor who completed projects early. CalTrans calculated bonuses based on an analysis of the economic cost incurred to the region as a result of the disruption to traffic and associated delays. As a result of this approach, bonuses were awarded to 9 out of the 10 eligible contractors. According to a CalTrans official, these incentives allowed the city to restore these freeways within a few months after the earthquake. The Federal Highway Administration also granted other measures of flexibility within its regulations to facilitate infrastructure recovery. For example, the agency granted exemptions from certain regulations, such as allowing the California Department of Transportation to proceed without conducting environmental impact statements as required under the National Environmental Policy Act.1

Source: GAO. 2009. Disaster Recovery: Experiences from Past Disasters Offer Insights for Effective Collaboration After Catastrophic Events. GAO Report 09-811. <http://www.gao.gov/products/GAO-09-811>

**b) Hurricanes Katrina and Rita, Gulf Coast, USA, 2005**

Hurricane Katrina had a devastating impact on much of the transportation infrastructure of extreme southern Mississippi and Louisiana and Alabama. The most significant impacts were to the numerous bay and river crossings throughout the region. The worst damage was to crossings in the area along and to the south of the I-10/I-12 corridor, including crossing on U.S. 90, LA 1, and I-110 in Mississippi and the Lake Ponchartrain Causeway. While the effects were limited in some locations and damage was repaired within days, in some coastal sections prominent elements of the transportation network remained closed many months after the storm. Almost a year later, in fact, three important spans remained impassable despite tens millions of dollars of aid invested in the reconstruction effort. By contrast, and with the exception of U.S. 90, which in many locations is a beachfront highway, damage to highway road surfaces in the region was light. The region struck hardest by Hurricane Rita was southern Cameron Parish in the southwestern corner of Louisiana. The area, a wide swath of ranches, bayous, and wilderness preserves was almost entirely swept away by the catastrophic storm surge. In Cameron, the regional headquarters, the district courthouse was one of the few structures left intact. In Holly Beach, only a water tower was left standing. Almost all of the major river and bay bridges destroyed by the hurricane surge waters were rebuilt at higher elevations, and the design of the connections between the bridge decks and the bridge piers was strengthened. The unprecedented amount of damage to the bridges triggered a discussion among bridge designers and engineers about appropriate bridge design standards. At the time, bridge design standards assumed a riverine environment and a 50-year storm event; bridges are designed for a storm surge, but not wave action. It was subsequently recommended that a 100-year storm event be considered for Interstate Highway System bridges, major structures, and critical bridges, and that design standards consider a combination of surge and wave effects. Consideration of a 500-year storm event super-flood surge and wave action was also suggested. Much of the land and sea transportation infrastructure in the area is privately owned, and efforts were made by companies to reduce risk in the systems they operate and maintain. For instance, Estimated reconstruction costs of rail bridges ranged from $250 million to $300 million, or about one-quarter of CSX’s (the firm that owns much of the rail infrastructure in the area) annual operating revenues available for capital investment. CSX reported that the Bay St. Louis Bridge would reinforced as was done to the Biloxi Bay Bridge, and the timber trestle supports on the Gautier Bridge near Pascagoula, Mississippi would replaced with concrete supports. CSX was also planning to upgrade its drainage and spillway channels, and eliminate of all line-side signal and communication wires, moving them out of the way future surge waters. There was discussion of alternative routes utilizing existing rail corridors and alternative Mississippi River crossings such as those at Baton Rouge and Vicksburg. Finally, the feasibility of constructing a new rail corridor further inland was explored by CSX and Mississippi, but the costs of locating a new rail right-of-way, acquiring property rights, and financing and constructing the line made this a long-term option. The Port of New Orleans is considering relocating companies and facilities from the Mississippi River-Gulf Outlet, a deep-water channel connecting the Port of New Orleans’ Inner Harbor Navigation Canal to the Gulf, to the main port area on the Mississippi riverfront. The cost of this work was estimated at more than $350 million.

Source: Grenzeback, Lance R. 2006. Case Study of the Transportation Sector’s Response To and Recovery From Hurricanes Katrina and Rita. Cambridge Systematics, Inc. <http://www.aiche.org/uploadedFiles/FSCarbonMgmt/Resources/Case_Study_-_Katrina.pdf>

<http://www.recoveryplatform.org/assets/Guidance_Notes/Guidance%20Note%20on%20Recovery-Infrastructure.pdf>

**c) Infrastructure climate-proofing project in Kosrae, Micronesia**

Climate change will most often appear in the form of changes in the frequency and consequences of extreme events and inter-annual and similar variations, rather than as long-term trends in average conditions. At a practical level, adaptation should thus focus on reducing both present and future risks related to climate variability and extremes. In many instances, current levels of climate risk are already high due to increases in risk over the past few decades. Moreover, adapting to current climate extremes and variability prevents precious financial and other resources from being squandered on disaster recovery and rehabilitation and is an essential step to being able to withstand the pending changes in climate. Adaptation has many dimensions and must also be viewed as a process. The Cook Islands Ports Authority was in the process of developing the Western Basin of Avatiu Harbor in Rarotonga to accommodate an increasing number of fishing vessels, to provide sufficient wharf to minimize delays in offloading fresh fish, and to allow the fishing vessels to use the harbor in most maritime conditions other than those associated with cyclones. The first stage, involving an expenditure of NZ$1 million sourced through a government grant, overseas aid grant, cash reserves, and a loan, involved the construction of a wharf facility, but with no added protection against storms beyond what is provided by an existing breakwater. The design brief for the Western Basin states that the breakwater and quay walls should have a nominal design life of 60 years. Fixtures should be robust enough to withstand a cyclone with a 10-year recurrence interval. The brief acknowledges that severe damage will be sustained by fixtures in a cyclone with a 50-year recurrence interval. It goes on to say that the main quay should be designed to withstand wave forces associated with a cyclone with a 50-year recurrence interval with only minimal damage. Cyclone wave heights should be based on a 50-year recurrence interval, and a calculated significant wave height of 10.75 m (10 percentile wave heights of 13.65 m). The relationship between maximum wind speed and significant wave height for a given recurrence interval was determined using past studies of tropical cyclone risks for the study area. It thus represents the “current” climate. However, both the historical record and some global climate models (GCMs) suggest that the frequency and intensity of cyclones in the vicinity of Rarotonga are increasing and may continue to increase, asymptotically. Consideration was given to the impacts of global warming on changes in cyclone intensity and, hence, significant wave heights. In light of these findings, a 2.5–10% increase in cyclone intensity per degree of warming was used. Under current climate conditions, the 50-year significant wave height is estimated to be about 10.8 m. Under the climate projected for the year 2060, the 50-year significant wave height increases to about 12.0 m. The sea-level projections incorporated both a regional component based on GCM results and a local component based on trends in mean sea level as estimated from tide gauge data. After accounting for the climaterelated rise, the local trend appears to be about 1.7 mm/yr, most likely related to vertical land movement. By the year 2060, the mean sea level is projected to rise by 50 to 80 cm over current levels. The final concise report for the development of the Western Basin indicates that the breakwater should have a nominal design life of 60 years. Given this specified design life, and the preceding projections regarding recurrence intervals for extreme winds and hence significant wave heights, and of sea-level rise, the breakwater design should be based on a significant wave height of at least 12 m and allow for a sea-level rise of at least 0.5 m.

Source: <http://www.recoveryplatform.org/assets/Guidance_Notes/Guidance%20Note%20on%20Recovery-Climate%20Change.pdf>

**d)**

**Source: An Integrated Approach to Managing Extreme Events and Climate Risks**

<https://www.genevaassociation.org/media/952146/20160908_ecoben20_final.pdf>

**e)** **The Caribbean Catastrophe Risk Insurance Facility**

The World Bank assisted CARICOM in establishing the Caribbean Catastrophe Risk Insurance Facility (CCRIF), a joint reserve facility that offers liquidity coverage, akin to business interruption insurance, to 16 Caribbean Countries exposed to earthquakes and hurricanes. The CCRIF was capitalized with support from participating countries and donor partners.  It combines the benefits of pooled reserves with the capacity of the international financial markets.    To do so, it retains the first loss through its own reserves while transferring the excess risk to the international capital markets. The Facility became operational on June 1, 2007, and can count on its own reserves of over US$90 million and reinsurance of US$110 million. This provides the Facility with US$200 million of risk capital at very competitive rates.  The reinsurance strategy of the CCRIF is designed to sustain a series of major natural disaster events (each with a probability of occurrence lower than 0.1 percent), achieving a higher level of resilience than international standards. Drawing on the lessons of the CCRIF, the Pacific island states created the Pacific Catastrophe Risk Assessment and Financing Initiative

(PCRAFI).

Source: Financial Protection of the State against Natural Disasters A Primer

Francis Ghesquiere & Olivier Mahul

<http://documents.worldbank.org/curated/en/227011468175734792/pdf/WPS5429.pdf>

**f)**  **The Turkish Catastrophe Insurance Program**

The Turkish Catastrophe Insurance Pool, TCIP, was established in the aftermath of the Marmara earthquake in 2000. Traditionally, Turkey’s private insurance market was unable to provide adequate capacity for catastrophe property insurance against earthquake risk, and   the Government of Turkey faced major financial exposure in the post‐disaster reconstruction of private property. Consequently, the Government of Turkey’s objectives for TCIP were to:

♣ Ensure that all property tax‐paying dwellings have earthquake insurance cover;

♣ Reduce government fiscal exposure to the impact of earthquakes;

♣ Transfer catastrophe risk to the international reinsurance market;

♣ Encourage physical risk mitigation through insurance.

TCIP was established in 2000 as a public sector insurance company, managed on sound technical and commercial insurance principles. The company’s initial capital was supplemented by a World Bank contingent loan. TCIP purchases commercial reinsurance and the Government of Turkey acts as a catastrophe reinsurer of last resort for claims arising out of an earthquake with a return period of greater than 300 years. The TCIP Policy was designed as a stand‐alone property earthquake policy with a maximum sum insured per policy of US$65,000 and an average yearly premium of US$46 and a 2% deductible. Premium rates are based on the construction type (two types are possible) and property location (five earthquake risk zones were identified) and vary from less than 0.05% for a concrete reinforced house in a low risk zone to 0.60% for a house located in the highest risk zone.   The policy is distributed by about thirty existing Turkish insurance companies, which receive a commission. The government invested heavily in insurance awareness campaigns and made earthquake insurance compulsory for home‐owners on registered land in urban areas. Cover is voluntary for homeowners in rural areas. The program is reinsured by international reinsurers.  Since its inception in 2000, TCIP has achieved an average penetration rate of about 20% of domestic dwellings (about three million dwellings).

Source: Financial Protection of the State against Natural Disasters A Primer

Francis Ghesquiere & Olivier Mahul

<http://documents.worldbank.org/curated/en/227011468175734792/pdf/WPS5429.pdf>

**g)** **Safer Schools, Resilient Communities**

A Comparative Assessment of School Safety after the 2015 Nepal Earthquakes

Rebekah Paci-Green, Bishnu Pandey, Robert Friedman

<http://www.preventionweb.net/publications/view/45421>

**h)** **Making Schools Resilient at Scale: the Case of Japan**

<http://www.preventionweb.net/publications/view/50979>

**i) Resilience of telecom sector**

<https://www.meridianprocess.org>

<https://www.nist.gov/cyberframework>

<http://csrc.nist.gov/cyberframework/rfi_comments/040813_national_grid.pd>

**j) Building National Resilience - Creating a Strong and Flexible Country**

<http://www.cas.go.jp/jp/seisaku/kokudo_kyoujinka/en/e01_panf.pdf>

Basic Act for National Resilience Contributing to Preventing and Mitigating Disasters for Developing Resilience in the Lives of the Citizenry

<http://www.cas.go.jp/jp/seisaku/kokudo_kyoujinka/pdf/khou1-1.pdf>

<http://www.cas.go.jp/jp/seisaku/kokudo_kyoujinka/pdf/khou1-2.pdf>

**k)** UNESCO International Programme for Assessing Safe School Facilities

Disasters caused by natural hazards have a major impact on youth and education systems, and the need to invest in school safety has been recognized in the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction 2015-2030. To support countries in designing concrete action plans for safer schools, UNESCO has joined the Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector (GADRRRES), which promotes a holistic approach to disaster risk reduction education through a Comprehensive School Safety (CSS) Framework based on three overlapping pillars: 1) Safe Learning Facilities; 2) School Disaster Management; and 3) Risk Reduction and Resilience Education, under the umbrella of the Worldwide Initiative for Safe Schools (WISS).

As part of its mandate and in line with pillar 1 of the CSS, UNESCO promotes a multi-hazard school safety assessment methodology, namely VISUS (Visual Inspection for defining Safety Upgrading Strategies), to provide local authorities with standard tools to make science-based decisions on where and how to invest for enhancing the safety of educational facilities. The methodology was developed by the SPRINT-Lab of the University of Udine, Italy and has been piloted in 1022 schools in Italy, 100 schools in El Salvador, 10 schools in Laos, 160 schools in Indonesia, 60 schools in Peru and 100 schools in Haiti so far.

Website:

<http://www.unesco.org/new/en/natural-sciences/special-themes/disaster-risk-reduction/school-safety/safety-assessment-method-visus/>

Videos:

Indonesia: <https://www.youtube.com/watch?v=-qEiYJ0ACmU>

El Salvador: <https://www.youtube.com/watch?v=Lardz-3oRuM>

(Source: UNESCO)

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| **Title** | **Link** |
| Safer schools, resilient communities: a comparative assessment of school safety after the 2015 Nepal (Gorkha) earthquakes | <http://media.wix.com/ugd/310a66_547fa556c3784d409a066e0a21a4b5a1.pdf> |
| Protecting school infrastructure against earthquake risks in Peru | <https://www.gfdrr.org/sites/gfdrr/files/publication/Peru.pdf> |
| Model school designs for construction in various seismic zones of India | <http://www.preventionweb.net/files/11714_ModelSchoolDesignGuideline.pdf> |
| 25 April 2015 Nepal earthquake disaster risk reduction situation report: focus on risk and impact | <http://www.preventionweb.net/files/44592_gorkhaearthquakedisasterriskreducti.pdf> |
| Haiti from tragedyto opportunity | <http://www.preventionweb.net/files/12813_192600HaitireportEN1.pdf> |
| Earthquake-8/10Learning from Pakistan’s Experience | <http://www.preventionweb.net/files/2627_EarthquakeLearning.pdf> |
| Climate risk study for telecommunications and data center services: report prepared for the general services administration | <http://www.acclimatise.uk.com/login/uploaded/resources/GSA%20Climate%20Risks%20Study%20for%20Telecommunications%20and%20Data%20Center%20Services%20-%20FINAL%20October%202014.pdf> |
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**Annex 3: Networks for the platform**

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| --- | --- | --- | --- |
| **Name** | **Sector** | **Details** | **Link** |
| Geohazards Community of Practice | Insurance & Risk Transfer | -Brings together groups and individuals involved in various aspects of geohazards, including research, monitoring and risk assessments, mitigation, and adaptation.-Provides a communication and coordinating platform for high level policy makers and the broader geohazards community. | <http://www.earthobservations.org> |
| The Lighthill Risk Network |  | -An international initiative linking business with other communities interested in risk.-To facilitate and enhance knowledge transfer into business, initially insurance, from academic, government, professional and commercial experts at the forefront of risk-related research | <http://www.lighthillrisknetwork.org/index.html> |
| ANDROID | Education & School Safety | Promoting co-operation and innovation among European Higher Education Institutes (HEI) to increase society's resilience to disasters of human and natural origin | <http://www.disaster-resilience.net> |
| Edu4DRR Teachers Network |  | - By and for teachers and educators who want to make a difference in disaster prevention | <http://edu4drr.ning.com/> |
| Coalition for Global School Safety and Disaster Prevention Education |  |  | <http://cogssdpe.ning.com> |
| Extension Disaster Education Network (EDEN) |  | To share education resources to reduce the impact of natural and man-made disasters | <http://eden.lsu.edu> |
| PARSQUAKE: Earthquake education in the global Persian community (Teachers Without Borders) |  | Collaborate on creating and collecting earthquake education resources that can be used by the global Persian-speaking community | <http://www.parsquake.org/> |
| Periperi U |  | - A platform for university partnership to reduce disaster risks in Africa | <http://riskreductionafrica.org/en/rra-ddr-per/rra-whatisperiperi> |
| Global Alliance for DRR and Resilience in the Education Sector |  | To strengthen global coordination, knowledge sharing, and advocacy on disaster risk reduction (DRR) and education |  |
| Confined Masonry Network | Structural Safety/ Building Codes | - Improving the design and construction quality of confined masonry in areas where it is currently used;- Introducing confined masonry construction in regions where it can reduce seismic risks. | <http://www.confinedmasonry.org/> |
| Green Recovery and Reconstruction Toolkit (GRRT) CoP |  | A training program designed to increase awareness and knowledge of environmentally sustainable disaster response approaches | <http://green-recovery.org> |
| Earthquake Engineering Research Institute (EERI) |  | A national, non-profit, technical society of engineers, geoscientists, architects, planners, public officials, and social scientists, including researchers, practicing professionals, educators, government officials, and building code regulators. EERI aims to reduce earthquake risk by advancing the science and practice of earthquake engineering. | <http://www.eeri.org> |
| Japan International Cooperation Agency (JICA) |  | An implementation agency for technical cooperation of Japan's official development assistance (ODA). Its aim is to contribute to the socioeconomic development or the reconstruction of developing countries.  | <http://www.jica.go.jp/english/> |
| LinkedIn group on Landscape Architects for Disaster Reduction and Response (LADRR) |  | An open special interest group created for LinkedIn to promote the position of landscape architects and other green professionals in disaster (risk) management. | <https://www.linkedin.com/groups/Landscape-Architects-Disaster-Reduction-Response-4079228> |
| Making Cities Resilient: World disaster reduction campaign  |  |  | <https://www.unisdr.org/we/campaign/cities> |
| Smart Growth Network (USA) |  | A forum for:- Raising public awareness of how growth can improve community quality of life;- Promoting smart growth best practices;- Developing and sharing information, innovative policies, tools and ideas;- Cultivating strategies to address barriers to and advance opportunities for smart growth. | <http://www.smartgrowth.org> |
| Towards a Safer World (TASW) |  | A multi-stakeholder network of practitioners on whole of society preparedness for pandemics and comparable threats. | <http://www.towardsasaferworld.org> |
| Italian Banking, Insurance and Finance Federation (FeBAF) | Insurance | -As Italian Banking, Insurance and Finance Federation, FeBAF intends to promote the role of the financial sector in all its components, including the insurance industry, in the area of disaster risk reduction.-FeBAF will be active particularly at the European Union level, pushing onwards the EU agenda on disaster risk reduction, after the 2013 green paper of the European Commission on the topic. | <http://www.febaf.it> |
| Zurich Insurance Group Limited |  | One of the world’s largest insurance groups, and one of the few to operate on a truly global basis. Zurich's mission is to help customers understand and protect themselves from risk.  | <http://www.zurich.com> |
| Insurance Institute for Business and Home Safety (IBHS) |  | A nonprofit association that engages in communication, education, engineering and research. Its mission is to conduct objective, scientific research to identify and promote effective actions that strengthen homes, businesses, and communities against natural disasters and other causes of loss. | <http://www.disastersafety.org/> |
| CRO Forum |  | A professional risk management group that focuses on developing and promoting industry best practices in risk management.  | <http://www.thecroforum.org> |
| International Telecommunication Union (ITU) | Telecommunication | -The leading United Nations agency for information and communication technologies.ITU’s goal in disaster reduction is to strengthen emergency communications for disaster prevention and mitigation. | <http://www.itu.int> |
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