25 Case Study On Public Private Partnership 2000 (PPP 2000)

BACKGROUND

The concept of Public Private Partnership 2000 (PPP 2000) was born in February 1997 when a senior scientific manager of the U.S. Geological Survey (USGS) and the CEO of the Institute for Business and Home Safety met to consider how government and the private sector, including, but not limited to, property and casualty insurers, might work together to reduce losses attributable to natural disasters. The meeting was triggered by recognition of the great disparity between the amount of technical knowledge available for improving public awareness, education, and disaster reduction, and the rising costs of disasters and the lack of universally accepted solutions for reducing their impacts. They concluded that a single public private partnership was feasible if it was limited in scope and focused on building public- private collaboration that would in turn foster/the generation of other partnerships, the more numerous and diverse, the better. They also concluded that if either the government or the property and casualty insurers attempted this task alone, it would fail, but, by creating and sustaining a joint government-industry venture, the resulting enterprise would be so unusual that it would inspire participation and have credibility. They agreed to seek new ways to build awareness of the national challenge at the highest possible levels of government and within the private sector. The outcome was PPP 2000, a public private partnership created on April 30, 1997 to be co-chaired by the Science and Disaster Reduction agencies comprising the Subcommittee on Natural Disaster Reduction (SNDR) and the Institute for Building and Home Safety. SNDR is a part of the President's Office of Science and Technology's Committee on the Environment and Natural Resources, whereas, IBHS serves national and international property and casualty insurers. Both the public and private sectors had a common interest in the proposed partnership because: 1) economic losses from hurricanes, winter storms, high winds, hail, floods, drought, earthquakes, landslides, and volcanic eruptions, solar storms, and tsunamis, were growing rapidly and reaching catastrophic levels in some disasters, 2) the magnitude of losses in the United States, which are highly variable from year to year, was beginning to average about one billion dollars a week (a little less than one percent of U S GDP), and 3) losses from business disruption was becoming a major fraction of overall economic losses in the nation.

OBJECTIVES

The SNDR and IBHS, and the twenty-five private-sector partners who voluntarily joined PPP 2000, agreed on six broad goals for PPP 2000 They are: 1) first and foremost, to make natural disaster reduction a public value, 2) to emphasize pre-event mitigation, focusing on structural and non-structural 3) to improve real-time warning systems, 4) to identify means for financing mitigation, 5) to improve information dissemination and access, and 6) to expand and improve international cooperation, communication, coordination, and collaboration. The objective was to bring topical experts as well as high-level policy officials together in PPP 2000 Forums for dialogue on a particular aspect of natural disaster reduction.

ACTIVITIES

The Public-Private-Partnership 2000 Forum, and its dedicated web site, were the basic tools developed by PPP 2000 during the period September 1997 to November 1999. Each Forum was a one-day meeting, organized by private sector members, in cooperation with f SNDR and IBHS, and held every other month on the average, in the Washington, D C. area to bring together topical experts as well as high-level policy officials for dialogue on a particular aspect of natural disaster reduction. Outcomes of each forum were posted on the PPP-2000 web site: http.//www.usgs gov/ppp2000. Leadership and support for PPP 2000 was provided by Harvey Ryland, IBHS, and the members of the SNDR.

ACHIEVEMENTS

Twelve forums involving over 1,200 participants were convened in the Washington, D. C area by SNDR, IBHS and non-government partners. Forum topics included: 1) Natural Disaster Reduction Initiatives of the Insurance Sector, 2) Managing Catastrophic Risks, 3) Cities and Megacities At Risk, 4) Role of International Broadcast Media in Natural Disaster Reduction, 5) Reduction of Earthquake Vulnerability in California 1998-2003, 6) Assisting Communities Reduce Vulnerabilities, 7) A Global Perspective on Natural Disasters, 8) Disaster Recovery Business Alliance, 9) Real- and Near Real-Time Monitoring and Warning for Natural Hazards, 10) Safety and Reliability of Utility Systems, 11) Grass Roots Education. Building Public-Private Support for Mitigation, and 12) National Risk Assessment. Membership in PPP 2000 included: 1) the Wharton Center at the University of Pennsylvania, 2) Stanford University, 3) American Society of Civil Engineers' Committee on Natural Disaster Reduction, 4) Disaster Recovery Business Alliance, 5) Electric Power Research Institute, 6) Association of Contingency Planners, 7) California Seismic Safety Commission, 8) Pacific Gas & Electric Company, 9) American Red Cross, 10) University of Virginia, 11) UNESCO, 12) World Meteorological Organization (WMO), 13) International Association of Broadcast Meteorologists. 15) Worldwide Seismic Safety Initiative (WSSI), 16) World Bank, and 17) World Federation of Engineering Organizations.

LESSONS

Many stakeholders and some high-level policy officials, whether in federal, state, or local government, or a high level executive in private enterprise, have a blind spot with respect to the realities of natural disasters and effective ways to cope. Many know that disasters are a result of natural extremes, but believe that they cannot be forecast or anticipated, but only endured. Hence, public policies and education tend to emphasize emergency response and recovery to the exclusion of pre-event mitigation. Although natural disaster reduction should be achievable through effective policy formulation, implementation resists simple categorization, and formulae, cookbook approaches, and compartmentalization. Best practices are rarely at hand; instead, evolutionary, experimental approaches are common. Because the impacts of a disaster are woven throughout the fabric of society, reducing the threat and impacts of disasters requires modifications of just about every aspect of society.

FUTURE

The Decade on Education for Sustainable Development (2005-2014, and beyond), provides an unprecedented opportunity to realize the full potential of public private partnerships like PPP 2000. Tools such as the Public-Private-Partnership Forum and a dedicated web site can be linked with projects to continue the processes of enlightenment and empowerment that come from dialogue. They should be considered as basic tools for improving education of professionals and policy makers. Partnerships in educational activities on community, national, and regional scales can accelerate the process of becoming disaster resilient.

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26 Case Study On Post-Earthquake Investigations

BACKGROUND

A natural disaster provides an unprecedented opportunity for using the disaster itself as a laboratory to learn about the hazard, built, and policy environments of the stricken community and to evaluate vulnerabilities and disaster resilience New information, data, and lessons acquired from a disaster are a basis for new curricula and provide a window of opportunity for changing public policies and professional practices. Post-earthquake investigations, one of the first post-disaster audits to be organized as a research tool, have served as a model and been on the research agenda of many countries (e.g., USA and Japan). UN agencies (e.g , UNESCO), and property and casualty insurers (e.g., Munich Reinsurance Company) during the 20th century. Although implemented informally in the USA since 1933, they were not institutionalized until 1992 when a program of post-earthquake investigations was enacted into law as part of the National Earthquake Hazards Reduction Act This legislation provided a mandate for professionals and policymakers to improve national and international cooperation and to build a culture of earthquake resilience. On the basis of this mandate, Earthquake Engineering Research Institute, with support from the National Science foundation and other federal agencies, developed a long-term program to send scientists, social scientists, and engineers to stricken communities to assist local professionals in performing post-earthquake studies in the USA, and throughout the world. when requested by the government of the stricken nation

OBJECTIVES

The goal was to capture perishable data in the USA and abroad, to learn, to disseminate the lessons, and to recommend new directions for research, public policies, and professional practices. The objective was to foster implementation of loss reduction measures based on these lessons in earthquake prone communities and nations throughout the world

ACTIVITIES

Post-earthquake investigations have been organized and implemented in the USA and, in cooperation with other nations (e.g., Japan, France, and Turkey) UNESCO has served as a cooperating and coordinating organization and a catalyst for change for many of them.

ACHIEVEMENTS

Three of the many "earthquake laboratories" of the 20th century illustrate the range and commonality of the lessons learned They are:

■**January 17, 1995 Great Hyogo-Ken Nambu, Japan (Kobe) Earthquake (Earthquake Engineering Research Institute, 1995) :** This M 6.9 earthquake, which occurred at 5:46 a. m. 20 km from Kobe on a right-lateral-strike-slip fault is representative of urban earthquake disasters The lessons included:

- the extent of the damage of the elevated Hanshin expressway,
- the nature and extent of the damage to the port facilities,
- the collapse of many single family dwellings,
- damage to welded steel frame buildings, and
- the long duration acceleration pulse in the ground motion The economic losses reached $200 billion, deaths reached 5,600, injuries reached 26, 000, and the homeless toll reached 250,000. The disaster led to a renewed effort by the Japanese Government to implement improved earthquake loss prevention and mitigation measures and to strengthen earthquake preparedness, emergency response, and recovery.

■**January 17, 1994 Northridge, California Earthquake (State of California, 1995):** This M 6.7 earthquake, which occurred at 4:31 a m., illustrates what can happen in the epicentral area of an urban earthquake generated on a "blind" thrust fault The earthquake, which did not rupture the surface, produced the following lessons:

- verification of the web of "blind thrust faults" beneath Los Angeles.
- the exceptionally strong horizontal and

vertical ground accelerations in a 20 x 20 square kilometer epicentral area, which approached 2 g, a factor of 2 greater than the actual design value prescribed in the building code,

- ground motion characterized by a long duration acceleration pulse (i.e., the "killer" pulse),
- damage to elevated highway systems, and
- damage to welded moment steel frame buildings. Economic losses reached $ 40 billion with over $ 12 billion in insured losses, mortality reached 61, injuries reached 15,000, and the homeless toll reached 50,000

■**September 19, 1985 Michiocan (Mexico) Earthquake (Earthquake Engineering Research Institute, 1989):** This M 8.1 earthquake, which occurred at 7:18 a. m in one of the World's most populous urban centers, is representative of great subduction zone earthquakes. The earthquake provided lessons on the well known vulnerability to ground shaking of 5-20 story un-reinforced masonry, non-ductile concrete, and reinforced concrete buildings (including hospitals, schools, and government buildings) located in the old lake bed zone of central Mexico City An estimated 10,000 people were killed, 25,000 were injured, 200,000 were left homeless, and economic losses reached $5 billion Design norms in effect at the time of the earthquake were significantly changed to increase earthquake resilience of new construction.

LESSONS

The lessons learned in terms of the hazard, built, and policy environments of the stricken community and nation are universally relevant Programs to disseminate these lessons and to integrate them into formal and informal educational programs have benefited many communities throughout the world facing similar threats, but their potential is unfilled.

FUTURE

The Decade on Education for Sustainable Development (2005-2014, and beyond) provides an unprecedented opportunity to realize the full potential of post-earthquake investigations and to organize the full spectrum of post-disaster investigations. Post-disaster investigations are the best way to improve curricula for formal and informal education and training needed to empower communities to move more rapidly towards effective disaster reduction and enhanced human security

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27 The Disaster Center As A Public Information Source In The USA

BACKGROUND

The Disaster Center web site: www.disastercenter.com was established in 1996 and active until 2001. Its original purpose was to provide links to information useful to the U.S.A. public in a disaster. It became a vehicle through which I would study the use of the Internet in disaster situations, a tool through which I would develop and test theory, and led to a number of diverse efforts to provide information to the public.

OBJECTIVES

In the digital age the communication of the "disaster message" will bring about a reduction in the loss of lives and capital by methods and means that have never existed before in the history of the human race. Disaster messages are communications in which the value of risk/threat reduction can be measured against the costs of the system, while retaining a measure of the residual risk.

ACTIVITIES

The activities included:

- Links to media, emergency management, natural, technical, and man caused disaster related web sites,
- Statistics, and Educational materials,
- A Daily USA Disaster Situation Report
- Message Boards/ Chat room
- Coverage of ongoing disasters

ACHIEVEMENTS

The links to media, emergency management, natural, technical, and man caused disaster related web sites were useful to a large number of people and organizations. Among the greatest users during disasters was FEMA and other emergency management related organizations.

Notable among these efforts was the compilation of disaster events into databases, and links to information sources, through maps that would return statistics and links by clicking any location on the maps. Another effort involved the analysis of the number of deaths/injuries and cost of tornadoes on a per square mile basis and by population per square mile. The educational materials available at the site were authored by me or available for use without copyright restrictions.

The Daily USA Disaster Situation Report consisted of a set of daily features, active weather warnings, severe weather probability forecasts, and flood, fire, earthquake, and severe weather reports. It included a guest column and links to articles of interest to the emergency management community. The format of the report has been adopted by several emergency management agencies in the United States.

Individuals could post any type of message on the Message Boards. They were used to link people to relevant information before, during, and after disasters. For example, it was possible to collect situation reports issued by multiple jurisdictions related to a single disaster in one location and make them available on the message boards, which offered a search engine function. The Chat Room was useful during disasters for groups of people collecting and comparing reports.

The coverage of ongoing disasters involved the collection of publicly available information from sources not under copyright and processing that information. In some cases satellite images were collected every hour, reduced in size and made available for play in animation. Another effort involved the creation of maps using digital elevation models to display of areas subject to flooding in a storm surge, and the creation of animations showing flooded areas given a projected sea water level.

LESSONS

While the work on the site has been virtually stopped for almost four years, the author has continued to develop theories related to the uses of information to mitigate disasters. The "disaster message" can be proactive and reactive. Reactive systems operate where information can be determined and some unifying structure is in place. Examples of reactive systems are information integration "centers and command centers. Proactive

systems operate at the level of the individual. To a great extent the successful operation of proactive systems depends upon information gathered and lessons learned from the operation of reactive systems. To alter the determinant outcome of similar events proactive systems need to be in place, and operate simultaneously at the determinant level.

We are moving towards a point in time in which it will be possible to know the probability of the individuals risks and threats depending upon who and where they are, from this information we may be able to chart the best path for each of us. The way to alter the determinant nature of our lives is for each of us to be able to access information specific to ourselves. One of the founders of the United States put it in words to this effect, the first object of government is to protect the right of the individual to seek and find their own potential

FUTURE

The author would like to see the creation of a non-profit disaster center. The purpose would be for collecting and distributing disaster related information to and from officials and the public, and would be required to justify its work by being required to demonstrate a level of risk/threat reduction at a factor to its costs, as well as tracking residual risk/threat

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