SUMMIT IMPLEMENTATION REVIEW GROUP (SIRG)

OEA/Ser.E
GRIC/INF.4/11
5 October 2011
Original: English

TECHNICAL SUPPORT DOCUMENT ON DISASTER RISK REDUCTION[1]
(Organization of American States – OAS)

[1] Prepared by the Section on Risk Management and Adaptation to Climate Change of the Department of Sustainable Development, DSD/RISK-MACC, of the Executive Secretariat for Integral Development (SEDI), in collaboration with the Department of Hemispheric Defense and Security (DHDS) of the Secretariat for Multidimensional Security (SSM).

Organization of
American States

TECHNICAL SUPPORT DOCUMENT ON DISASTER RISK REDUCTION[1]

Introduction –Context

The Americas have experienced a dramatic increase in disasters over the past two decades. Between 1991 and 2010, over 1,600 disasters were recorded - an increase of 30% in the last decade. Disaster-related losses of more than US$ 600 billion were recorded in 2001-2010, doubling the losses felt between 1991-2000. About 120 million people were affected in the decade of 2001-2010, more than twice the number of people affected in the previous decade.

At a first glance, this increase in number of disasters, economic losses and people affected might be attributed to the violence of certain events, such as the earthquakes of 2010 in Haiti and Chile, the 1998 Hurricanes Mitch and Georges in Central America and the Caribbean, and Hurricane Katrina, in 2005 in the US, and the intensive rains that triggered massive floods and landslides in Colombia and Venezuela. However, perhaps the single most outstanding multipliers of the effect of these events may be found in accelerated population and urbanization growth, the expansion of the agriculture frontier, and, generally, the economic growth experienced in many countries in the region.

Amidst these staggering figures, is the fact that disaster-related deaths are in decline. If one excludes the approximately 220,000 deaths registered in the January 12th 2010 earthquake in Haiti, the total number of deaths recorded between 2001-2010 was nearly 66% less than that recorded in the previous decade. This could be mainly attributed to improvements in disaster preparedness and response.

When looking at histograms representing affected people and economic losses, all the inflection points are caused by disasters in the most developed countries in the Americas. While the effects of Hurricanes Mitch and Georges in 1998 tend to be the most memorable, it was the droughts in Brazil that affected about 10 Million people that is most striking in the graph. In 2005, Hurricane Katrina resulted in a staggering US$125 billion in economic losses, and in 2008, the floods in the mid-western United

[1] Prepared by the Section on Risk Management and Adaptation to Climate Change of the Department of Sustainable Development, DSD/RISK-MACC, of the Executive Secretariat for Integral Development (SEDI), in collaboration with the Department of Hemispheric Defense and Security (DHDS) of the Secretariat for Multidimensional Security (SSM).

States generated US$ 10 billion in losses. Even the January 2010 earthquake in Haiti was over-shadowed in the statistics by the US$ 30 billion in losses attributed to the February 27th 2010 Chilean earthquake, and the more than 6 million combined people affected by the floods in Colombia and Mexico, and the earthquake in Chile.

Estimates of damage to structures—homes, businesses, public buildings—from the Haitian earthquake exceeded that country's annual GDP. Damage from Chile's earthquake was roughly twice that in dollar terms, although only about 10 to 15% of that country's much larger GDP: the Chilean earthquake caused 2.7 million victims, which represents 15.7% of the country's population. The earthquake ranked highest in terms of economic damages caused by natural disasters in 2010, with a total of US$ 30.0 billion of reported damages (24.2% of the global reported damages). Haiti had over 39.1% of its population – or a total of 3.9 million victims – affected by the January 12 earthquake. The Haiti earthquake was especially destructive in view of the already impoverished economy. The costs of this earthquake surpassed Haiti's GDP: the estimated US$ 8.0 billion damages equaled nearly 123.5% of the countries' GDP[2].

Comparing these losses with those in the typical business-cycle downturn, which eliminates only a few percent of GDP, makes it clear that all but the deepest recessions are mere tremors relative to the massive destruction of productive capacity caused by the greatest natural disasters[3].

The cited figures reflect the tight linkage between development and disasters. And while development usually results in more resilient societies - as seen in the case of Chile where the application of building codes in housing developments saved many lives - it also exposes more assets to extreme natural events. The extension of the agriculture frontier over the last decade turned natural dry seasons into droughts and rainy seasons into floods with their consequent social and economic impacts. Inequitable economic growth has also increased the exposure and risk of most vulnerable communities, especially those living in international border areas and indigenous people.

Furthermore, in the Americas, regional and sub-regional economic integration processes have extended disaster impacts across international borders, as national economies have become increasingly interdependent. Hurricane Katrina, for instance, impacted three of the poorest states in the US, but also affected 95% of the refining capacity of Louisiana, resulting in a 30% reduction in the US' refining capacity. And with only 1% of the US work force, Hurricane Katrina also accounted for about US$ 150 billion of the country's external trade in oil, steel, grain, etc. It had significant impacts in the fiscal accounts of the US, and impacted the GDP growth in Latin America as exports to the US

[2] ReliefWeb- Briefing Kit for Haiti: Earthquakes - Jan 2010 + Chile +. Centre for Research on the Epidemiology of Disasters. Compiled on 08 Jul 2011
[3] Ideas for Development in the Americas. May – Aug., 2010, IADB

were reduced[4]. The floods in the South of Brazil, in May of 2009, are another example of the transboundary impacts of disaster, where floods and mudslides displaced nearly 200,000 people and cut off shipments from a huge Amazon iron mine, thus impacting the economy of the whole region.

The connection between population growth and urbanization and the increased vulnerability of many countries to extreme natural events is not always readily apparent from the statistics of disaster impacts. Many extreme events that may not have been classified as disasters –as they did not exceed the local and/or national capacities to cope with them - nonetheless depleted disaster preparedness and response capacities in these countries. The cumulative impact of these events, over time, weakens national disaster preparedness and emergency response systems, making disaster emergencies increasingly more complex, regardless their magnitude.

Vulnerability Reduction: Making a case for investing in disaster prevention and mitigation

The above-cited figures leave no doubt about the need to increase investment in building the resilience of people and of social and economic infrastructure. The UNISDR 2011 Global Assessment Report (GAR11) reveals how in spite of 'the magnitude of disaster costs, reducing disaster risks is often perceived as less of a priority than fiscal stability, unemployment or inflation.' As discussed previously, the higher economic development of a nation, the more assets and Gross Domestic Product (GDP) that is exposed to natural hazards. The UNISDR 2009 GAR illustrated this using the example of Japan, where more people and GDP are exposed to earthquakes and tropical cyclones than any other country in the world. The 2009 report further explains that 'only a minority of risk-prone households have participated in a government-sponsored earthquake retrofitting program despite government cost-sharing, subsidized loans and tax breaks.' And the March 11th 2011 earthquake and subsequent Tsunami are evidence of the manifested high risk of one of the better prepared nations in the world, where loss estimate range between US$ 200 billion and US$ 300 billion, equivalent to 4% to 5% of Japan GDP.

It has been demonstrated that for every one US Dollar invested in prevention –including land use planning and building codes, four US Dollars in potential economic losses can be saved. Investments in relocation show a 1 1/2:1 ratio, while retrofitting and mitigation measures a 1:1 ratio. Yet, the decision to retain, reduce or transfer risk seems to be more politically driven than economically. Consequently, persuading policy and decision makers to invest in disaster prevention and mitigation can be challenging in countries where there is not a deep understanding of the economic and financial aspects of disasters, and where is it may not be enough to persuade them.

[4] ECLAC, 2005.

In the Americas, some progress has been made in efforts to reduce the economic and financial impact of disasters. For instance, Colombia and Mexico have established catastrophic reserve funds to cope with the economic losses of intensive disasters[5], such as earthquakes and hurricanes as well as disaster mitigation funds to encourage investments in disaster mitigation measures. Lines of credit and insurance and reinsurance facilities are also being increasingly established to face the financial burden of disasters.

However, insurance coverage in the Americas is still very low. In Chile, for example, such coverage is equivalent to only 4.2% of the GDP compared to the global average of 6.2%; yet this coverage is almost twice the average for Latin America at 2.5%. Only 23.8% of the 4 million homes in the regions affected by the earthquake and Tsunami of February 2010 were covered for earthquake, although 90% of them carried mortgages. Public infrastructure, on the other hand, such as hospitals, schools, and roads and bridges, had no insurance at all. This shows again that sound economies and sound financial systems –particularly in the housing sector, are a prerequisite for successful risk transfer mechanisms. Yet, while free markets seem to show higher levels of insurance of the housing sector, they do not show the same results in public infrastructure, and governments continue to struggle with the dilemma of how much risk they can retain and how much they can transfer.

In the Caribbean, given the high exposure to natural hazards and the high individual cost of insurance and reinsurance, the Caribbean Island Development States, with the support of the World Bank, have established the Caribbean Catastrophic Risk Insurance Facility (CCRIF), through which they share part of their risk while benefitting from reducing insurance premiums and access to financial resources quickly to cope with the economic losses of catastrophic events.

Hence, one of the outstanding issues to be addressed as a prerequisite to increase insurance coverage is to reduce the risk below acceptable transferable levels. In primary economic sectors in the Americas, such as agriculture and tourism, risk assessments must first be made available as a prerequisite. The total risk profile of a country must be first known and measured before rational decisions can me made about what proportion of that risk can be it can be transferred. Thus, much needs to be done in this respect.

And while the political dimension of the problem makes the case for increasing investments in vulnerability reduction a difficult one, there is not yet enough data to make the case, as the Hyogo Framework for Action (HFA) Progress Review shows that

[5] According to the UNISDR Terminology, intensive risk or disasters refers to those 'associated with the exposure of large concentrations of people and economic activities to intense hazard events,… involving high mortality and asset loss.'

few countries systematically account for their losses, and 'invisible impacts do not generate incentives to invest.' Furthermore, business interruption and set-backs in development processes are much far from being measured.

New studies are required in order to establish baselines and criteria for measuring the true impact of disasters. Systematic gathering of economic losses, including losses due to business interruption and development set-backs must be mainstreamed in all government sector ministries and in all private enterprises as a business-as-usual practice. Case studies that draw from existing data and post-disaster evaluations undertaken by the UN Economic Commission for Latin America and the Caribbean, ECLAC, may be a good start point for such an exercise.

Disaster Prevention and Disaster Management: International Relief and Response, and Humanitarian Assistance

Offers for international relief and response, as well as humanitarian assistance in the Americas have been on the rise. Today, more than 15 countries within the region offer international assistance in cases of disasters. And while this is an encouraging development, since theoretically more collective capacity is available to respond to disasters, in practice, emergency response measures can become more complicated when international assistance take place in a context of weak national systems incapable of assessing their own needs and manage their own crisis, and when there is a lack of clear rules of engagement for the international community and a lack of awareness of national laws and regulations.

OAS Member States, concerned about this situation, have been working diligently since 2009 on an exhaustive review of the existing mechanisms and instruments to jointly and in a coordinated fashion respond to disasters, and provide relief and humanitarian assistance. In 2009, the OAS Member States established a Joint Working Group (JWG) of the Permanent Council and the Permanent Executive Committee of the Inter-American Council for Integral Development (CEPCIDI) concerning "Existing Mechanisms for Disaster Prevention and Response and Humanitarian Assistance among the Member States".

Between September 2009 and December 2010, the JWG held five technical meetings with the participation of more than 35 experts, among them policy and decision makers, and produced a Diagnostic and a set of recommendations to move towards improving joint action in cases of disasters. Among the main conclusions and recommendations that have emerged from the technical meetings and discussions, the following deserve special consideration within the context of the Sixth Summit of the Americas:

1. It is necessary to increase cooperation to build and/or strengthen national capacity for self-needs assessments and disaster management. More particularly, cooperation should be geared towards the formulation of public policy, and legislation and regulations for disaster preparedness, and response and relief in cases of disasters and complex emergencies;
2. Special emphasis must be given to the development and implementation of Multi-country Early Warning Systems, capable of meeting the requirements that the typology of the different hazards demand in order to save lives and livelihoods;
3. Existing tools, such as the Inter-American Network for Disaster Mitigation (INDM), must be utilized at their full potential for the sharing and exchange of information and knowledge. Particularly, good practices and country profiles so as to provide assisting countries with a better understanding of the legislation and regulations in effect in assisted countries;
4. The Inter-American Committee for Natural Disasters Reduction (IACNDR) must be strengthened by developing action plans for a coordinated action among their members, and by activating it in cases of disasters;
5. Foreign Affairs Manuals and Operational Guides for Response must be developed, and sub regional intergovernmental organizations and mechanisms must be strengthened and better integrated within the Inter-American System;
6. A registry of NGOs, along with profiles that describe their scope of work and capabilities must be created, on the basis of the Directives for the Participation of Civil Society Organizations in OAS Activities, as per CP/RES. 759; and
7. DRM and Disaster Risk Reduction (DRR)[6] can reduce the number of deaths caused by disasters and the negative socio-economic effects they can have on societies and communities. The challenge then is to disseminate DRM (including the use of financial tools such as insurance and reinsurance facilities), and DRR practices in countries and regions in need of policies, knowledge and tools. Awareness of the potential benefits of DRM and DRR is still limited to specialized circles and has not yet been successfully communicated to all sectors of society, and in particular, to policy makers and the general public[7].

Disaster Response and Hemispheric Security: A multidimensional Approach

The increasing complexity of disasters demands the strengthening of response capability, both nationally and internationally. Traditional resources for disaster response and relief, including military and civilian first response entities and organizations engaged in humanitarian assistance have often been unable to cope with these events, leading

[6] According to the UNISDR Terminology, DRR refers to 'the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.'
[7] UNISDR. *Yokohama Strategy and Plan of Action for a Safer World.* On line. http://www.unisdr.org/eng/about_isdr/bd-yokohama-strat-eng.htm#basis

many governments to issue new mandates to their military and civil defense forces, capitalizing on their logistical and response capabilities, to assist in disaster response and relief missions.

The increase in frequency and impact of catastrophic events has led to the establishment of disaster risk reduction as a high priority in the hemispheric security agenda. So, if the new conception of multidimensional security –as established in the Declaration on the Security in the Americas adopted at the Special Conference on Security, in Mexico City, on October 28 of 2003, has now evolved to include new threats to human security, such as disasters and complex emergencies, it is also important to assess whether our military and security forces have also achieved this development to expand their range of action within their new mandate, and consequently, if there are effective mechanisms for regional and hemispheric integration of these forces in disaster relief and humanitarian assistance missions.

Strengthening collaboration between Defense Armed Forces, Civil Security Forces, defense and civil protection agencies, within comprehensive national systems for disaster preparedness and response become then a priority. This, in turn, demands the knowledge and understanding of the capabilities –in terms of logistics, specialized human resources and equipment, available at the military and security corps. Training and education at all levels and sectors of the government, utilizing existing facilities, such as military schools and graduate and post-graduate programs available at universities and specialized institutions, must be well articulated so as to support civil-military association within national systems.

Information systems for the sharing and exchange of information on capabilities, skills, resources and equipment available at military and security forces can also improve coordination among states in the Americas.