

Preparing for the unexpected: An integrated approach to disaster risk management in the Philippines and Colombia

The frequency and severity of disasters resulting from natural hazards have been increasing. Losses from disasters amounted to \$3.5 trillion between 1980 and 2011, with one-third occurring in low- and middle-income countries. The complexity of problems posed by natural hazards cannot be addressed by single-sector development planning. Thus many countries are responding with multisectoral approaches and are moving quickly toward mainstreaming the management of risks from natural hazards into all aspects of development planning and in all sectors of the economy. Recognizing that the risks from natural hazards can never be completely eliminated, a balanced approach incorporates structural measures, as well as community-based prevention, emergency preparation, insurance, and other nonstructural measures, such as education and training or land use regulation. Two of the most effective systemic approaches to disaster risk management (DRM) have been developed in Colombia and in the Philippines.

An inclusive, innovative, and coordinated approach in the Philippines

Located along the western rim of the Pacific Ring of Fire and the Pacific typhoon belt, the Philippines is vulnerable to earthquakes, tsunamis, volcanic eruptions, landslides, floods, tropical cyclones, and drought. With 268 recorded disaster events over the past three decades and more than 40 million people affected between 2000 and 2010, the Philippines ranks eighth among countries most exposed to multiple hazards, according to the World Bank's Natural Disaster Hotspot list.

As early as 1941, the Philippines established the Civilian Emergency Administration to formulate and execute policies and plans to protect the population in emergencies. Since then, the institutional and disaster management systems have focused on emergency response, with important measures defined and implemented for short-term forecasting, early warning and evacuation, and postdisaster relief. More recently, the DRM system has been enhanced through a shift in the policy framework that focuses on prevention and mitigation, above and beyond emergency relief and response. The Disaster Risk Reduction and Management Act of 2010 adopted a comprehensive and integrated approach that promotes the involvement of all sectors and all stakeholders at all levels, especially the local community. A national risk financing strategy is being undertaken to establish appropriate risk transfer instruments to complement resources at the national and local levels, including a contingency credit line (the Catastrophe Deferred Drawdown Option, or CAT DDO).¹

The approach to DRM in the Philippines is distinguished by inclusiveness, innovation, and coordination. Overall policy and coordination comes through the National Disaster Risk Reduction and Management Council, which consists of 39 members from national government agencies, local governments, nongovernmental organiza-

tions, and the private sector, and is complemented by Regional and Local Councils. This multistakeholder composition is preserved even at the provincial and municipal levels, where Disaster Risk Reduction Councils operate in coordination with the national council. Local government units are in charge of disaster preparedness, prevention, mitigation, and response, and since the 1970s have been committed to working with communities to effectively promote resilience.

Innovation and inclusiveness also guide the approaches taken in risk assessment and communication. In 2006, five technical agencies, which traditionally had not worked together, started collaborating on multihazard mapping of the 27 provinces most vulnerable to disasters. The READY project marked the first attempt to approach disasters in a multihazard fashion. It included capacity-building activities in the provinces and established community-based early warning systems for tsunamis, floods, and landslides, which have been used extensively. Launched by the Department of Science and Technology in 2012, the Nationwide Operational Assessment of Hazards (NOAH) project aims to improve the disaster management capacity of local governments by spreading out risk assessment and hazard mapping that can trigger protective actions and early evacuation. By 2014 NOAH will provide high-resolution flood hazard maps and install automated rain gauges and water-level measuring stations for 18 major river basins of the Philippines. It provides not only information about weather conditions, the amount of rainfall, and potential flooding in a specific area but also timely warnings about severe weather, earthquakes, and floods, reaching out to a wide segment of the population.

Every year, a National Disaster Risk Reduction and Management Fund, formerly called the Calamity Fund, is appropriated in the national budget for disaster aid, relief, and rehabilitation services. A similar fund has been set up

at the local level. Before 2010, most of the fund was used for post-disaster activities. With the enactment of the Disaster Risk Reduction and Management Act, 70 percent of the fund can be allocated for pre-disaster preparedness activities. This shift indicates that the government is moving toward an agenda more geared to risk reduction.

Integrating disaster management into the development process in Colombia

Colombia has established itself as a leader in Latin America in developing a comprehensive vision for risk and disaster management. Colombia's advanced DRM system is anchored on investments in structural measures, risk assessments, early warning and emergency response, institutional support, and financial and fiscal measures at the national and municipal levels, as well as the organization of national and local entities for emergency response. As a result of these measures, mortality rates per natural phenomenon have dropped by almost half from the 1970s to the 2000s, from 4,025 to 2,180. Housing damages increased almost fivefold during that period, however, mainly because of unplanned urbanization, which brought almost 80 percent of the population into cities, and lack of enforcement of building codes in some areas of the country.

Colombia's long history in organizing and designing risk management measures started with instruments such as the National System for Disaster Prevention and Response (1985) and the National Plan for Disaster Prevention and Response (1998). Recently, Colombia approved a new national policy and a National System for Disaster Risk Management. Law 1523 (2012) reflects a paradigm shift in which disaster risk management is explicitly recognized as a part of the development process, and stronger incentives for local governments to invest in risk reduction and strengthen technical assistance are provided. It also recognizes that natural disasters are an implicit contingent liability of the state (see chapter 7), and it establishes a fiscal risk management strategy, which includes sophisticated risk transfer mechanisms, such as the CAT DDO.

Decentralization and a growing focus on prevention are guiding the approach to DRM in the country. Since 1997, Colombia has required that land use plans be developed at the municipal level; these plans must consider the location of critical hazards and risk areas for purposes of disaster prevention. One of Colombia's risk prevention strategies is to resettle the at-risk population in safe areas, when risk cannot be mitigated by other means or only by methods that are more costly than resettlement. Enforcement of building codes is weak, and retrofitting of existing buildings is costly and inefficient—to the point that resettlement policies have been preferred.

Some cities are well advanced in their ability to carry out effective disaster risk management plans and implement them well. Since the 1990s, Bogotá has conducted various studies to identify hazards and assess risks. Detailed maps of hazards related to floods, landslides, and forest fires, as well as a seismic microzoning, have been produced. As a consequence, unstable zones have been identified and buffer zones have been established. The district planning department designed an integrated rehabilitation, reconstruction, and sustainable development plan in 2005. A three-stage methodology was developed to support the resettlement process, which includes community engagement and awareness, support with preparation for the move (including a special housing subsidy), and monitoring and follow-up after resettlement. Once families turned over their original properties, the process of rehabilitation and restoration of those high-risk lots started. This successful methodology has been replicated in other cities in Colombia and elsewhere in Latin America.

The actions in Colombia and the Philippines represent significant steps toward a holistic and multistakeholder approach to DRM, but more is needed. An even greater focus on risk reduction is required, especially at the local level, along with a better definition of roles, responsibilities, and coordination among players, and additional investments in specific sectors that are not fully integrated into the DRM system, such as housing, finance, and agriculture.

Notes

1. The CAT DDO is a World Bank financial instrument that offers eligible middle-income countries immediate liquidity of up to \$500 million, or 0.25 percent of gross domestic product (whichever is less), in case of a natural disaster. The instrument was designed by the World Bank to provide affected countries with bridge financing while other sources of funding are mobilized.

Sources

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