

Ishiwatari, Mikio

Working Paper

Disaster risk management at the national level

ADB Working Paper, No. 448

Provided in Cooperation with:

Asian Development Bank Institute (ADBI), Tokyo

Suggested Citation: Ishiwatari, Mikio (2013) : Disaster risk management at the national level, ADB Working Paper, No. 448, Asian Development Bank Institute (ADBI), Tokyo

This Version is available at:

<https://hdl.handle.net/10419/101213>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



ADB Working Paper Series

**Disaster Risk Management at the
National Level**

Mikio Ishiwatari

No. 448
November 2013

Asian Development Bank Institute

Mikio Ishiwatari is Visiting Senior Advisor, Japan International Cooperation Agency.

The views expressed in this paper are the views of the author and do not necessarily reflect the views or policies of ADBI, the ADB, its Board of Directors, or the governments they represent. ADBI does not guarantee the accuracy of the data included in this paper and accepts no responsibility for any consequences of their use. Terminology used may not necessarily be consistent with ADB official terms.

The Working Paper series is a continuation of the formerly named Discussion Paper series; the numbering of the papers continued without interruption or change. ADBI's working papers reflect initial ideas on a topic and are posted online for discussion. ADBI encourages readers to post their comments on the main page for each working paper (given in the citation below). Some working papers may develop into other forms of publication.

Suggested citation:

Ishiwatari, M. 2013. Disaster Risk Management at the National Level. ADBI Working Paper 448. Tokyo: Asian Development Bank Institute. Available: <http://www.adbi.org/working-paper/2013/11/26/6014.disaster.risk.management.national/>

Please contact the author for information about this paper.

Email: mishiwatari@worldbank.org

Asian Development Bank Institute
Kasumigaseki Building 8F
3-2-5 Kasumigaseki, Chiyoda-ku
Tokyo 100-6008, Japan

Tel: +81-3-3593-5500

Fax: +81-3-3593-5571

URL: www.adbi.org

E-mail: info@adbi.org

© 2013 Asian Development Bank Institute

Abstract

National governments are supposed to play a pivotal role in disaster risk management (DRM). This paper reviews trends and patterns in developing governance and institutions in DRM in the Asia and the Pacific region. The paper then derives recommendations on how to establish disaster risk governance for developing countries, including mainstreaming DRM into development plans and policies. A four-pronged approach is presented: First, strengthen the DRM coordination role of the national government. Second, develop an enhanced legal framework. Third, establish a DRM focal point agency. Fourth, build a flexible cooperation system among concerned organizations and all levels of government.

JEL Classification: Q54, H84

Contents

1.	Introduction.....	3
2.	What Disaster Risk Management Institutions and Policies Do Developing Countries Need?.....	3
3.	How Have Countries Improved Disaster Risk Management Institutions and Policies?6	
3.1	How Should Focal Point Agencies Be Positioned within Governments?	7
3.2	How Can Focal Point Agencies Coordinate Other Organizations?	12
3.3	How Can National and Local Governments Establish Coordinating Relationships?	14
4.	Conclusions	15
	Appendix: Disaster Risk Management Guidance for Developing Countries.....	16
	References	17

1. INTRODUCTION

National governments are expected to play a pivotal role in disaster risk management (DRM). The governments in the Asia and the Pacific region have developed a wide range of innovative solutions at the national level. This paper reviews trends and patterns in developing governance and institutions in DRM, and recommends necessary actions to establish disaster risk governance for developing countries, including mainstreaming DRM into development plans and policies.

Building DRM into national development strategies, programs, and projects is needed to protect these developments and make certain that new developments do not exacerbate disaster risks. Thus, each developing country should (i) place DRM as a core element within the structure of its government; (ii) legally define its mandate, status, and coordination role with line ministries and a focal point agency; and (iii) establish mechanisms for coordinating with and supporting local governments.

The paper examines models of the focal point agency of DRM at the national level in the region. There is no “one-size-fits-all” model for the agency because of the intrinsic variety of disaster scales and types, socio-economic conditions, and geography. Three models of the agency are in place: (i) the focal point for DRM is designated as a coordination agency without any implementation role; (ii) it is located in parallel with other line ministries in the government; and (iii) it is developed from already existing implementing organizations.

The paper examines practical mechanisms of coordinating government organizations and relationships between national and local governments. While local governments should have the primary responsibility in DRM, the national government should support local governments by providing technical and financial assistance in normal times, and by coordinating organizations concerned and deploying specialized teams to respond to disasters.

2. WHAT DISASTER RISK MANAGEMENT INSTITUTIONS AND POLICIES DO DEVELOPING COUNTRIES NEED?

Developing countries need to place DRM as a core element within the structure of the government to mainstream DRM into development policies and operations. The structure and quality of governance need to be improved at all levels from national to local governments by legally defining mandates and status. Also, public involvement is critical in all aspects of DRM.

Governance is widely regarded as the key to reducing disaster risks (Ahrens and Rudolph 2006; Castanos and Lomnitz 2008; UNISDR 2011a; Wisner et al. 2004). Many developing countries need responsive, accountable, transparent, and efficient governance structures in DRM (Davis 2011 and UNDP 2010). Governance is defined as an exercise of political, economic, and administrative authority in the management of a country's affairs. Governance influences how income and assets are distributed to the people; and determines how the people protect themselves from hazards, and how they access support in recovery (Turnbull et al. 2013). Since many developing countries lack the administrative, organizational, financial, and political capacity to effectively cope with disasters, the poor become particularly vulnerable. Low-income

countries have suffered only 9% of worldwide disasters since 1980, but suffered 48% of the fatalities (World Bank 2012c).

The developing countries need to place DRM as a core element within the structure of the government. Countries with well-established institutions can decrease the number of affected people and economic losses from natural disasters, while mortality is increasing in countries with weak governance capacities (Cannon 2008; Raschky 2008). The Hyogo Framework for Action (HFA), which was adopted at the World Conference on Disaster Reduction at Kobe in 2005, defines “development, and strengthening of institutions, mechanisms and capacities to build resilience to hazards” as one of the strategic goals, and emphasizes the action of ensuring DRM as a national and a local priority with a strong institutional basis for implementation (UNISDR, 2005). In Japan, the Disaster Countermeasures Basic Act, which was legislated in 1961, stipulates the DRM framework. The framework covers: (i) the roles and responsibilities of national and local governments and communities; (ii) the details of disaster management plans, institutions, and countermeasures; and (iii) platforms at national and local levels.

Each country should mainstream DRM into policy, planning, and management in all relevant sectors. Mainstreaming DRM has important implications for a country’s growth and development agenda, since disasters can pose serious obstacles to socio-economic development. The principal strategic goal of the HFA is to effectively integrate disaster risk considerations into sustainable development policies, planning, programming and financing at all levels of government. As recommended in Section 3.2, governments should develop a range of innovative programs to prevent increasing vulnerability in the course of the economic development process. For example, Bangladesh’s Outline Perspective Plan, produced by the Planning Commission, integrates DRM and climate change adaptation into national development strategies (UNESCAP and UNISDR 2012). In Japan, the government is reviewing DRM approaches by learning lessons from the Great East Japan Earthquake (GEJE) in 2011, and will mainstream DRM further in all relevant sectors by assessing risks and vulnerabilities, and allocating necessary resources to prepare for disasters (Committee on Promoting Disaster Management of Central Disaster Management Council 2012).

A wide range of stakeholders must be coordinated, since DRM concerns everyone. DRM requires a multi-sectoral approach, which covers urban development, infrastructure, water, education, health, and many other sectors. Single-sector development planning cannot address the complexity of problems caused by disasters, nor can such planning build resilient societies (World Bank 2012b). For example, DRM plans should be linked with urban planning and DRM education at school, which are effective measures to decrease disaster casualties and damage. Since no single organization can have the ultimate responsibility for managing disaster risks, various stakeholders should share the responsibility. In addition to governmental organizations, the private sector and civil society play crucial roles in DRM (IRP 2009). The private sector can contribute to mitigating disaster damage in a wide range of areas, such as the logistics of providing relief goods, payment of insurance claims, restoration of damaged infrastructure, and the continuation of banking services. Civil society organizations (CSOs) can respond to the various needs of affected people at the grassroots level. As discussed in Section 3.1, the government and CSOs can play strategic roles in creating safety net systems to protect vulnerable groups from disasters.

Each country should create a platform to coordinate various organizations at different levels. Inter-sector coordinating mechanisms are needed to properly design and implement DRM strategies. UNISDR defines the national platform as a nationally-

owned and led forum or a committee of multiple stakeholders. The national platform requires a number of elements—(i) political, (ii) technical, (iii) participatory, and (iv) resource mobilizing components—to promote DRM (UNISDR 2007; Gopalakrishnan and Okada 2007). As the complexity of society increases, different institutions and formal or informal groups can be effectively involved in DRM. As Section 3.3 emphasizes, national governments should strengthen linkages with local governments to guide and support local governments to promote DRM on the ground. Also, local governments should create coordination mechanisms at the local level in line with national policies.

The focal point agency is expected to play a leading role in promoting DRM at the national level. The agency should have authority to formulate a vision, develop national policies, allocate budgets for government organizations, demand compliance, and define actions for the organizations. For example, the agency can function as the secretariat of a DRM committee, which usually consists of ministers of concerned agencies and is chaired by the prime minister or president, and formulates national strategies and DRM plans through coordinating with line ministries and other organizations concerned. South Africa's experience shows the importance of involving various stakeholders of governments, the private sector, and CSOs in developing and implementing national DRM policies (see Box 1).

Box 1: Disaster Risk Management Legal Framework in South Africa

The Disaster Management Act in South Africa, which was enacted in 2003, is regarded as the best international practice in Disaster Risk Management (DRM) legislation. The act was developed by close examination of existing international laws in order to devise a comprehensive legal framework. Broad stakeholder consultation and policy configuration were conducted during the 1990s. This included government organizations, the private sector, civil society organizations, community-based organizations, research institutions, and academia, and all these bodies are participating in the National Disaster Management Advisory Forum. Cross-party political leadership and international organizations were needed to support the reform process. The Act establishes the Forum as a consulting and coordinating body and institutions were developed based on widely accepted theories. The Inter-governmental Committee on Disaster Management was established as the national platform, and the National Disaster Management Centre (NDMC) was established as the focal point agency. An implementation plan was developed during the development of legislation. The National Disaster Management Framework outlines appropriate policy for the country, and guides the development and implementation of disaster management concept.

While the disaster management center should have been positioned in a strong ministry, it was actually placed in the Department for Co-operative Governance and Traditional Affairs, which is perceived as having a low political profile and status. Also, it has been pointed out that links between the NDMC and local governments should be strengthened.

Sources:

Niekerk, D. V. 2006. Disaster Risk Management in South Africa: The Function and the Activity — Towards an Integrated Approach. *Politeia* 25(2) 96–116.

Pelling, M., and A. Holloway. 2006. *Legislation for Mainstreaming Disaster Risk Reduction*. Middlesex: Tearfund.

United Nations International Strategy for Disaster Reduction. 2011. *Global Assessment Report on Disaster Reduction*. Geneva.

The focal point agency must strengthen its coordinating functions, but this is a complicated and challenging task. Concerned organizations do not necessarily have a common interest or background. A further complication comes where there are

horizontal disconnects between various government plans and policies at the national level (ADB 2013). Also, there are often wide gaps between policy and institutional arrangements at the national level, and community needs at the local level (Pasteur 2011). The case of the GEJE shows the importance of coordination between structural and nonstructural measures. In this disaster the tsunami waves exceeded all expectations and predictions, and destroyed over half of the tsunami dikes in the Tohoku Region (Central Disaster Management Council 2011 and Ishiwatari 2012b). This disaster graphically demonstrated that exclusive reliance on structural measures will ultimately prove inadequate and ineffective, and must be supplemented with nonstructural measures under close coordination among concerned organizations.

An important role of the international development agencies is to help developing countries to strengthen the capacity of in-country institutions mandated to lead disaster preparedness and response (IEG World Bank 2011). The long-term strategic framework of the Asian Development Bank (ADB), called 'Strategy 2020', calls for mainstreaming DRM and supporting disaster recovery (ADB 2012). The World Bank and the Japanese Government jointly organized the Sendai Dialogue as a special session during the Annual Meetings of the World Bank and International Monetary Fund in 2012. Finance, national planning and disaster management ministers and heads of international financial organizations attended to discuss how to mainstream DRM. The Joint Statement of the dialogue requests international development agencies and national governments to mainstream DRM into development policies and investment programs (Ministry of Finance, Japan 2012). The main mission of the Global Facility of Disaster Reduction and Recovery (GFDRR) is to mainstream disaster reduction and climate change adaptation in country development strategies (GFDRR 2010). The Japan International Cooperation Agency (JICA) has supported developing countries, such as Nepal and Indonesia, to create organizations and specific budget lines for DRM, and to strengthen organizational capacity. The scale of annual DRM budgets can be regarded as an indicator of the commitment of governments to mainstream DRM. For example, JICA evaluates the progress of mainstreaming DRM in Indonesia in the context of its overall budgetary allocation (JICA 2010). The Regional Consultative Committee of the Asian Disaster Preparedness Center (2006) identifies agriculture, infrastructure, housing, education, health, and financial services as priority sectors.

3. HOW HAVE COUNTRIES IMPROVED DISASTER RISK MANAGEMENT INSTITUTIONS AND POLICIES?

Countries in Asia and the Pacific have substantially improved institutions and policies in DRM. Mega-disasters, such as the Indian Ocean Tsunami, Cyclone Nargis and the GEJE, became opportunities to strengthen risk governance in affected countries.

Various countries have developed risk governance by creating focal point agencies, establishing national platforms, and promoting legislation. These steps have been taken in line with the HFA. The number of national platforms is increasing globally, and rose from 38 in 2007, to 73 in 2011. An increasing number of countries have been adopting or updating existing DRM legislation (UNISDR, 2011b). Legislation can establish new agencies or empower existing agencies with new responsibilities as well as create budget lines and policy responsibilities (Pelling and Holloway 2006).

There are various reasons for changing DRM institutions and policies. Changes in governance, such as globalization and devolution, pose substantial challenges for DRM institutions. The Federal Emergency Management Agency in the US moved from

a limited form of direct service delivery to a complex, network-based approach in the 1990s that stretched from the federal government into state and local governments and the private sector (Kettl 2000).

Mega-scale incidents can profoundly change DRM institutions. Many countries have been continuously strengthening national DRM systems based on lessons learned from disasters in and outside the countries (Amini-Hosseini and Hosseinioon 2012; Ikeda 2012; Nishikawa 2010). The terrorist attacks of September 11 2001 in the US generated a major governmental reorganization there and led to the creation of the Department of Homeland Security. Further changes in emergency management in the US followed the catastrophic hurricanes of 2004 and 2005. In Taipei, China, Typhoon Morakat initiated a change in national institutions. The National Fire Agency was transformed to the National Disaster Prevention and Protection Agency through the Disaster Prevention and Protection Act to expand the agencies' functions to include comprehensive countermeasures. Japan enacted the Disaster Countermeasure Basic Act in 1961 after a high tide disaster in Nagoya in 1959, which caused over 5,000 deaths. The main driver of the latest version of Japan's DRM plan after the GEJE is the need to account for low-probability, high-impact compound hazards. The governments need to develop mechanisms to collect disaster data to put in place more evidence based policies in DRM as recommended in Section 3.3.

Countries in Asia and the Pacific have taken legislative actions to establish focal point agencies within their central government structures and national platforms. Of the 61 countries and areas in the region, 30 have enacted national or central legislation that specifically deals with DRM (UNESCAP and UNISDR 2012). Following the Indian Ocean Tsunami in 2004, affected countries have strengthened their focal point agencies. Sri Lanka established the Disaster Management Ministry by newly creating a disaster management center and merging it with the meteorological agency. Thailand has strengthened the coordination roles of the Disaster Management Department in its government. Indonesia has created a national disaster management agency, and also local agencies throughout the country. Myanmar is planning to establish a new agency and to enact a national disaster management law reflecting lessons from the Cyclone Nargis disaster in 2008. Viet Nam and the Philippines, which are major disaster-prone countries in Asia, have strengthened existing legislation and institutions. Most countries in the Pacific have created national disaster management offices as standalone agencies (Hay 2009).

3.1 How Should Focal Point Agencies Be Positioned within Governments?

One of the most crucial issues is how the focal point agency should be positioned within the government to coordinate and lead various organizations. There is no sole model for institutions, since each country has developed its institutions according to the disaster scale and type, socio-economic conditions, and geography.

The agencies vary considerably across Asian countries in terms of their positions within the government, their mandates, and roles (see Table 1). For example, floods are historically a major disaster and have often threatened national security in China, Japan, and Viet Nam. These countries have accumulated experience in flood management, and established strong institutions and developed countermeasures to mitigate flood damages (Ishiwatari 2010). Communities have prepared mainly for floods as major disasters. The experts in flood management have led policies and countermeasures in DRM including other disasters. In other Asian countries that have conducted relief activities following disasters as main activities, relief organizations

have become leading agencies within the governments. In Singapore, the focal point agency, the Civil Defense Force, has the main mandate of managing fire disasters and other urban disasters, and would probably not need drastic institutional reform to change it into a body for coordinating all organizations. This is because this island city-state has rarely suffered from natural megadisasters, such as floods from major rivers and earthquakes, and has prepared mainly for man-made disasters in urban areas.

Table 1: National Platform and Focal Point Agencies in Selected Asian Countries

	National Platform (Chair)	Focal Point Agency	Related Act	Model, Original Mandate
Southeast Asia				
Brunei Darussalam	-	Nat. DM Centre, Min. of Home Affairs	-	(i)
Cambodia	Nat. Com. for DM (PM)	Nat. Com. DM General Secretariat	Sub-decree No.35 ANK	(i)
Indonesia	-	Nat. DM Agency	DM Law	(i)
Lao PDR	Nat. DM Com.	Nat. DM Office, Min. Labor & Social Welfare		(iii) relief
Malaysia	DM & Relief Com. (Deputy PM)	National Security Division, PM Dep.	Nat. Security Council Directive No. 20, 1997	(i)
Myanmar	Central Com, on Nat. Dis. Prevention (PM)	Relief and Resettlement Dep. Min. of Social Welfare,	Rehabilitation Board Act.1950, DM Law (draft)	(iii) relief
Philippines	Nat. Dis, Coordination Council (Defense Minister)	Office of Civil Defense, Dep. of Nat. Defense	Dis. Risk Reduction, Man. & Recovery Act	(i)
Singapore	-	Civil Defense Force, Min. of Home Affairs	Civil Defense Act1986	(iii) S&R, fire
Thailand	Nat. Dis. Prevention & Mitigation Com. (PM or Deputy PM)	Dep. of Disaster Prevention & Mitigation, Min. of Interior	Dis. Prevention and Mitigation Act, 2007	(iii) S&R, fire
Viet Nam	Central Com. for Flood & Storm Control (PM)	DM Center, Dep. Dike Man. &Flood & Storm Control, Min. Agriculture Rural Development	Decree No 168, 1990	(iii) flood man.
South Asia				
Bangladesh	Nat. DM Council (PM)	DM Bureau, & Directorate of Relief and Rehabilitation, Min. of Food & DM	DM Act, 2008	(iii) relief
Bhutan	Nat. Com. for DM (Cabinet Minister)	DM Division, Min. of Home & Cultural Affairs	Nat. DM Act	(i)
India	Nat.DM Authority(PM)	Nat. Institute of DM, Min. Home Affairs	DM Act 2005	(i)
Maldives	-	DM Center, Min. of Defense	(Draft)	(i)
Nepal	Central Nat. Dis. Relief Com. (Home Minister)	DM Section & Nat. Emergency Operation Centre, Min. of Home Affairs	Dis. Relief Act 1982	(iii) relief
Pakistan	Nat. DM Commission (PM)	Nat. DM Authority	Nat. DM Ordinance 2006	(i)

Sri Lanka	Nat. Council for DM (President and PM)	DM Centre, Min. of DM	DM Act 2005	(ii)
East Asia				
Japan	Central DM Council (PM)	DM Office, Cabinet Office	Dis. Countermeasures Basic Act	(i)
Mongolia	State Emergency Commission (Deputy PM)	Nat. Emergency Man. Agency	Law on Dis. Protection 2003	(iii) S&R, fire
People's Republic of China	Nat. Commission for Dis. Reduction (Vice Premier of State Council)	Nat. Dis. Reduction Center, Min. of Civil Affairs	More than 30 laws and regulations	(iii) relief
Republic of Korea	Central Safety Man. Council (PM)	Nat. Emergency Man. Agency, Min. of Public Administration & Safety	Act on Dis. Risk Man. and Reduction	(iii) S&R, fire

Notes: Com.: Committee, Dis.: Disaster, Dep.: Department, DM: Disaster Management, Man.: Management, Min: Ministry, Nat.: National, PM: Prime Minister, S & R: search and rescue.
 (i): Designation as a coordination agency without implementation role; (ii): located in parallel with other line ministries in the government; (iii): developed from implementation organizations.
 Source: Author's research.

Three models of focal point agencies are in place in Asia and the Pacific (Figure 1): (i) designated as a coordination agency without implementation role; (ii) located in parallel with other line ministries in the government; and (iii) developed from existing implementation organizations. Characteristics of these models are summarized in Table 2.

Table 2. Characteristics of Focal Point Agencies

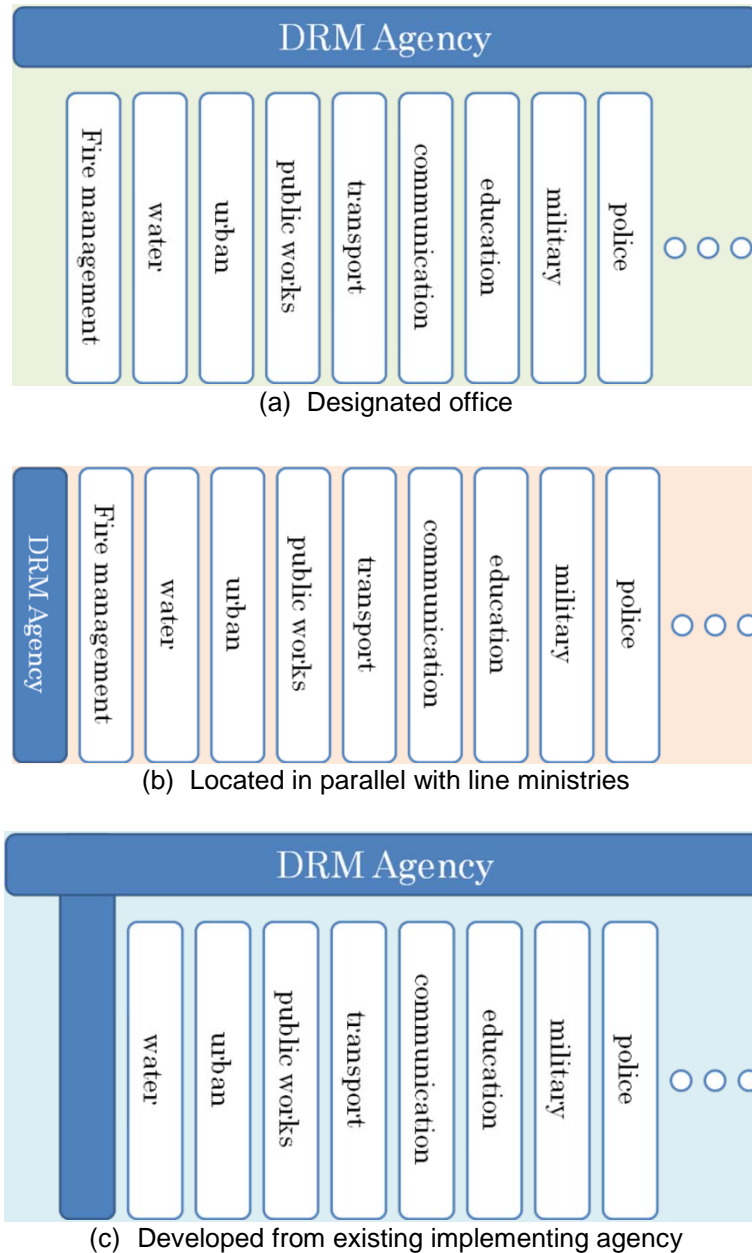
	Designated coordination agency (i) and (ii)	Developed from implementing organizations (iii)
Background	Newly established or strengthened coordinating body	Long history of implementing agency in disaster management, such as fire management, relief, or engineering
Staff	Limited number and experience	Large number and experiences in related field
Budget	Limited	Budget for project implementation
Sustainability	Difficult without donor support	Sustainable
Institutional development	Often established as a new organization from scratch	Can utilize existing institutions and staff
Activity	Neutral	May overlook, or be biased on, one or more key variables of original mandate
Coordinating power	Need authority, such as chairmanship of state heads	Can utilize original mandate as leverage

Source: Author's elaboration.

Model 1: Designated coordination agency

The focal point agency is designated as a coordinating and leading agency under a leading national body, such as the prime minister or president’s office (Figure 1 (a)). The agency does not implement projects and relief activities. The agency reports to the head of state, and coordinates and leads policy formulation, disaster management, and other key countermeasures. This case includes Indonesia and Japan.

Figure 1. Models of Focal Point Agency



Source: Author’s elaboration.

The agency can neutrally coordinate various organizations and key stakeholders. This model is the most desirable, if properly formed. This is because the agency has no implementation roles and can function without the biases of the own interests of the agency. Establishing and empowering this agency needs a strong political commitment

and legal basis for it to develop and function as planned. For example, in Cambodia the focal point agency faces difficulty in coordination because of weak integration into the national administrative and budgetary structure of the government (ADPC 2007).

The agencies usually have limited internal capacity in financing and staff, and often face difficulties in coordinating and leading related governmental organizations. The agencies are usually established from scratch, or developed from weak organizations. New management and staff must be employed, and legislation and facilities must be developed when new offices are created. Some line ministries, which have a longer history, more capable staff, and larger budget than the focal point agency, tend to independently conduct projects without proper coordination with other organizations.

The agency needs to be located under a leading organization in the government, such as the president's or cabinet offices. In Asia, some agencies are situated in home affairs or defense ministries. Agencies with considerable political influence can promote effective DRM programs (World Bank 2012c). If the agency reports to the head of state, it can have the capacity to coordinate other line ministries. Central ministries, such as finance and economic planning ministries, can promote effective coordination and prioritization of DRM policies and programs, as well as resource allocation across different ministries (World Bank 2012a). However, in practice, these ministries rarely play a principal role in DRM.

Agencies in developing countries find it difficult to remain sustainable. This is a particular challenge for organizations without the injection of continual foreign assistance. International development organizations often support developing countries to establish and operate the agencies. Since DRM is not necessarily a high priority in these countries, the agencies often face difficulties in securing budgets for operation and even staff salaries once support from other countries or international organizations ends.

Model 2: Located in parallel with other line ministries in the government

The agency is located in parallel with other line ministries in the government (Figure 1 (b)). The agency, as a standalone coordinating body, does not have the authority or capacity to influence policy decisions for DRM at the highest level (World Bank 2012c). The case of Sri Lanka falls under this model.

Coordinating powerful ministries is a major challenge. Timor-Leste, for example, failed to promote DRM in line ministries because of the relatively isolated and weak position of the National Disaster Management Department (UNISDR 2011a). One important lesson from the Great Hanshin-Awaji Earthquake in Kobe, 1995, is that the national government needs strong leadership in disaster management. It was found that the focal point agency must establish a strong network to promptly collect damage information on the ground from line ministries, to timely report the situation to the Prime Minister, and to coordinate various ministries for effective response. Japan moved the disaster management office from a coordinating agency to the Cabinet Office, and created the Disaster Management Minister to strengthen its coordinating power. In the Maldives, the Disaster Management Center was moved from the housing ministry to the defense ministry with a higher profile in the government to strengthen capacities in reporting to the president and coordinating with other ministries.

Model 3: Developed from existing implementing organizations

The agency has been developed from existing implementing organizations, such as fire management and relief response organizations (Figure 1 (c)). The agencies have

expanded their functions from disaster response to coordinating policies and countermeasures in the pre-disaster phase. This case includes Bangladesh, Thailand and Viet Nam.

There are risks that the agencies are biased in coordination activities reflecting the mandates of their original agencies. While the agencies may have expertise, sufficient budgets, and experts in areas related to DRM, such as fire management, engineering and logistics, it is difficult for these agencies to promote areas in which they have limited knowledge and experience. For example, these organizations naturally put a higher priority on their original mandates for requesting foreign assistance in capacity building rather than other functions. Disaster management in most countries in this group has started from providing people affected by disasters with relief goods and conducting search and rescue activities. From such a beginning, Bangladesh was the first South Asian nation to establish a disaster management ministry (ADPC 2007).

Such agencies cannot easily expand their roles to coordination and holistic policy formulation at the pre-disaster stage, or promote DRM investment. Coordinating and leading other organizations is completely different from their original mandate. Some agencies originally aimed at effectively delivering and managing relief goods, and deploying search and rescue teams in devastated areas at the response phase. The functions of DRM at the pre-disaster phase include a wide range of policies and measures, such as infrastructure, urban development, and early warning, and need to involve more agencies and stakeholders in the process.

For example, DRM institutions have evolved uniquely in Viet Nam. The focal point agency, the Disaster Management Center, is located in the department of dyke construction under the Ministry of Agriculture and Rural Development, which has the major mandate of constructing and maintaining river and coastal dykes. This is because the major disasters in Viet Nam are floods and high tides. Most staff of the center are engineers in flood control. The ministry is upgrading the center to the departmental level to provide a higher authority for coordination. If they can succeed in promoting a holistic approach including nonstructural measures and community-based activities, the country will become a good example for showing that an engineering-oriented organization can holistically manage disaster risks. Engineering organizations have a predisposition to focus on structural measures, and often tend to ignore nonstructural measures.

3.2 How Can Focal Point Agencies Coordinate Other Organizations?

There are similarities and common practices in coordinating organizations in terms of their enabling legislation, the national platform, and disaster management planning in Asia and the Pacific. Each country has made efforts to strengthen coordinating functions. It is important to seek political support for promoting DRM. In addition, practical methods of coordination should be established. Major practices that countries can apply are given below.

Practice 1: The national platform functions as the highest decision making body.

Many countries have established the national platforms that the heads of states or leading ministers usually chair, and these consist of various public organizations. High-profile leadership is a prerequisite for coordination. The platforms decide policies, draft acts, and formulate long- and medium-term plans as well as coordinate response activities in emergency. This practice is widely shared among countries in Asia and the Pacific.

Practice 2: Sub-committees under the national platforms play important roles in coordinating specific issues.

In Sri Lanka, various committees coordinate issues at different levels in the government. In addition to the National Council chaired by the President, the Disaster Management Center, the focal point agency, has established committees to practically coordinate DRM measures. The National Disaster Management Coordination Committee, chaired by the Secretary of the Ministry of Disaster Management, consists of 73 government organizations, and 127 members of government organizations, development agencies, NGOs, and private companies to coordinate DRM countermeasures. Under the committee, three subcommittees and the Inter-Agency Disaster Management Committee were established. Also, technical committees were created to produce building codes and disaster management guidelines for road maintenance and earthquake-warning related facilities. These technical committees consist of the officers of governmental organizations, international organizations, the private sector, and academia. In Japan, the Cabinet Office can establish expert panels, such as the panels reviewing countermeasures for the GEJE and assessing risks and damages of potential mega earthquakes. The recommendations and output from these panels guide line ministries to promote policies and measures.

Practice 3: Political commitment should be secured in coordinating mechanisms.

In Indonesia, the National Disaster Management Agency, the focal point agency, directly reports DRM situations to the President. In Japan, the Cabinet submits an annual white paper report on DRM to the National Diet. The white paper covers the status and issues of DRM, and specifies the budgetary allocations for the DRM programs of line ministries. The Diet forms a special permanent committee for disaster management in both its lower and upper houses to monitor governmental DRM initiatives.

Practice 4: Focal point agencies in national governments should have a mandate to allocate DRM budgets.

Budgets are typically allocated directly to line ministries. While focal point agencies coordinate and lead DRM policies, they rarely have such a mandate. As exceptional cases, the focal point agencies in Indonesia and Malaysia have authority to allocate emergency budgets to government organizations concerned in emergency cases. Also, the Office of Civil Defense in the Philippines manages an emergency fund for response and rehabilitation activities.

Practice 5: Focal point agencies can utilize drills and training as opportunities to strengthen coordinating capacities and networks.

A wide range of organizations, such as the military, civil society organizations, public works organizations, and the education ministry, are usually involved in conducting drills and training. Through preparing and conducting training and drills, the focal point agencies can strengthen communication and networks with other organizations.

Practice 6: Focal point agencies can strengthen coordinating powers.

This can be achieved by receiving staff seconded from line ministries or recruiting staff with experience of working at these ministries. In Japan, staff of the disaster management office in the Cabinet Office, including those at the management level, is seconded from line ministries. Through these staff members, the cabinet office can coordinate with other line ministries.

3.3 How Can National and Local Governments Establish Coordinating Relationships?

Since natural disasters are fundamentally local in nature, local governments and communities are in a good position to be the first responder, and to have the principle responsibility for DRM. National governments have various roles to support local governments to prepare for and respond to disasters. During normal times, the national government can provide financial and technical support to local governments in promoting DRM. The national governments should substantially support local governments when the local governments cannot manage large-scale disasters. Decentralization is required for the local governments to promptly respond to disasters on the ground. However, powers and budgets should be gradually devolved to the local governments, taking into account the limits of their capacity.

The national government can support local governments in strengthening DRM during normal times. The national government guides the local governments to establish DRM mechanisms by enacting new laws and budgetary systems. In Japan, prefectural and municipal governments have the primary responsibility for DRM, while the national government has responsibility for developing large-scale DRM infrastructures, such as dams and embankments for managing floods and droughts in major rivers. The national government in Japan does not have local offices. This is because local governments and communities have developed capacities by coping with disasters as local events through their history. The Indonesian Government has supported local governments to create DRM offices in all 33 states, and in around 400 prefectures and cities, since 2008. The national government is establishing tsunami warning systems with local governments.

The national government can provide financial subsidies to local governments to promote DRM at the local level. Local governments are unlikely to put a high priority on DRM among various development areas because of limited financial capacity. A national subsidy mechanism is useful to promote countermeasures as a minimum requirement throughout the country (Ishiwatari 2012a). For example, retrofitting schools and hospitals that are crucial in disaster management operations needs financial support from the national government. Budgets and authorities are often devolved to local governments in the education and health sectors. The local governments tend to put higher priority on allocating budgets for constructing new buildings or purchasing equipment, rather than retrofitting existing buildings in preparation for unpredictable earthquakes.

Some national governments have established local offices or seconded their staff to local governments to promote capacity development, and to guide and support DRM at the local level. Sri Lanka has created new district disaster management coordination units at the local level. Myanmar has seconded national government officers to local offices. In Viet Nam, the national government dispatches staff to support and guide local governments in emergency response.

The national government's support is required when local governments cannot properly respond to large-scale disasters. Various government agencies can mobilize experts, including search and rescue teams, medical teams, and engineers to devastated areas by utilizing national networks. Also, the national government provides meteorological and hydrological services and disaster information, such as monitoring and warnings of typhoons, floods, tsunamis and earthquakes. Based on disaster information received from the national government, local governments can issue evacuation orders to the public. In the GEJE, many municipalities suffered serious damage to their office

buildings and incurred considerable staff losses, which hampered their disaster response timing and effectiveness. The national agencies of the police, fire departments, infrastructures, medical facilities, and self-defense forces had prepared specialized teams by compiling rosters and conducting training during normal times, and were able to start deploying these teams on 11 March 2011, the day of the disaster.

Powers and budgets in DRM should be gradually devolved from the national government, while taking into account the limited capacity of local governments. Decentralization is required to promptly respond to disasters on the ground. In developing countries, however, limited capacity at the local level is a common problem. Since DRM is a relatively new mandate for local governments in developing countries, it takes some time for local governments to accumulate experience, and develop capacities and institutions.

4. CONCLUSIONS

Countries in Asia and the Pacific have substantially developed disaster risk governance by creating focal point agencies, establishing national platforms, promoting legislation in line with the HFA, and developing mechanisms for cooperation of national and local governments. Megadisasters, such as the Indian Ocean Tsunami, Cyclone Nargis and the GEJE, became opportunities for making these improvements. A designated coordinating agency with high authority in the government is theoretically required to neutrally coordinate and to lead organizations concerned with DRM, but this has not been easy to realize. In some countries implementing agencies have expanded their mandates for coordination. The focal point agencies have made various practical efforts in coordination, such as forming technical committees.

While devolution to local governments is needed to effectively respond to the needs of people affected by disasters on the ground, local governments typically face difficulties in taking on powers and budgets devolved from the national government because of their limited capacity. In some cases, national governments have established local offices or seconded staff to the local governments to promote DRM at the local level. Some national governments have also provided local governments with financial subsidies and technical support to guide DRM measures at the local level.

APPENDIX: DISASTER RISK MANAGEMENT GUIDANCE FOR DEVELOPING COUNTRIES

Place DRM as a core part of national development strategies and programs in order to mainstream DRM.

Firstly, by strengthening the coordination role of the national government through an enhanced legal framework:

- The designated coordinating agency with high status in the government should be set as the ultimate goal of establishing the focal point agency at the national level. This agency has authorities to formulate a vision and national policies, to allocate DRM-related budgets for government organizations and to demand compliance and actions from the organizations.
- Since it is quite difficult to form such agency in practice, a gradual approach should be taken. A coordinating body could be newly established or strengthened as the focal point agency. Alternatively, an existing organization of disaster management, such as fire management or relief, could expand its functions to coordinate other organizations at the pre-disaster stage.
- The focal point agency should be situated under a leading body in the government, such as the cabinet office, president's office, home affairs ministry or defense ministry. The coordination agency needs a high-profile status inside the government.

Secondly, by building up a flexible cooperation system among concerned organizations and with local governments:

- The focal point agency should develop practical methods of coordinating other ministries and local governments. These include receiving seconded staff from line ministries and seconding staff to local governments.
- Decentralization is required to promptly respond to disasters on the ground. However, power and budget should be gradually devolved to the local governments, taking into account limits of their capacity.
- National governments should provide financial and technical support to local governments in promoting DRM at the local level. When local governments lose their capacity of disaster management in megadisasters, the national government needs to mobilize resources throughout the country to respond to the disaster.

REFERENCES

- Ahrens, J., and P. M. Rudolph. 2006. The Importance of Governance in Risk Reduction and Disaster Management. *Journal of Contingencies and Crisis Management* 14 (4): 207–220.
- Amini-Hosseini K., and S. Hosseinioon. 2012. Evaluation of Recent Developments in Laws Regulations for Earthquake Risk Mitigation and Management in Iran. *Risk, Hazards and Crisis in Public Policy* 3(1): 1–20.
- Asian Development Bank. 2012. *Learning Lessons: ADB's Response to Natural Disasters and Disaster Risks*. Manila: ADB.
- Asian Development Bank. 2013. *Investing in Resilience: Ensuring a Disaster-Resistant Future*. Manila: ADB.
- Asian Disaster Preparedness Center (ADPC). 2006. *Mainstreaming Disaster Risk Reduction into Development Policy, Planning And Implementation in Asia*. Bangkok: ADPC.
- Asian Disaster Preparedness Center (ADPC). 2007. *National Platforms for Disaster Reduction*. <http://www.google.co.jp/url?sa=t&rct=j&q=national%20platforms%20for%20disaster%20reduction%20adpc&source=web&cd=1&ved=0CC4QFjAA&url=http%3A%2F%2Fwww.dkkv.org%2FDE%2Fpublications%2Fresource.asp%3FID%3D237&ei=h9v1Ua-gA6TI4AObo4DwBQ&usq=AFQjCNEx50WRr5sc6sdRbxPRQhgBJymy1g&bvm=bv.49784469,d.dmg>.
- Cannon, T. 2008. Reducing People's Vulnerability to Natural Hazards: Communities and Resilience. *Research Paper* 2008/34. Helsinki: United Nations University-World Institute for Development Economic Research.
- Castanos, H., and C. Lomnitz. 2008. Ortwin Renn, Risk Governance: Coping with Uncertainty in a Complex World. *Natural Hazards* 48(2): 313–314.
- Central Disaster Management Council. 2011. *Report of the Committee for Technical Investigation on Countermeasures for Earthquakes and Tsunamis Based on the Lessons Learned from the '2011 Earthquake off the Pacific Coast of Tohoku'*. Tokyo: CDMC.
- Committee on Promoting Disaster Management of Central Disaster Management Council. 2012. *Final Report: Reestablishing Resilient Japan (Yuruginai Nihonno Saikochikuwo Mezashite [in Japanese])*. Tokyo: Committee on promoting Disaster Management of Central Disaster Management Council.
- Davis, I. 2011. Reducing Disaster Risks 1980–2010: Some Reflections and Speculations. *Environmental Hazards* 10(1): 80–92.
- Global Facility of Disaster Reduction and Recovery (GFDRR). 2010. *GFDRR Partnership Charter - 2010*. Washington, DC: The World Bank.
- Gopalakrishnan C., and N. Okada. 2007. Designing New Institutions for Implementing Integrated Disaster Risk Management: Key Elements and Future Directions. *Disasters* 31(4): 353–372.
- Hay, J. E. 2009. *Institutional and Policy Analysis of Disaster Risk Reduction and Climate Change Adaptation in Pacific Island Countries*. Suva: United Nations International System for Disaster Reduction (UNISDR) and the United Nations

- Development Programme (UNDP). <http://www.unisdr.org/we/inform/publications/18869>
- Independent Evaluation Group (IEG) World Bank. 2011. Natural Disaster Response: Lessons from Evaluations of the World Bank and Others. *Evaluation Brief 16*. Washington, DC: World Bank Independent Evaluation Group.
- Ikeda, M. 2012. Knowledge Note 2-2 Disaster Management Plans. In *Learning from Megadisasters*. <http://wbi.worldbank.org/wbi/document/disaster-management-plans>
- International Recovery Platform (IRP). 2009. Why Governance Issues Are Important in Recovery? *Knowledge for Recovery Series Info Kit Governance 1*. Kobe: IRP Secretariat.
- Ishiwatari, M. 2010. Japanese Experiences of Disaster Risk Reduction. *Asian Journal of Environment and Disaster Management* 2(3): 247–248.
- Ishiwatari, M. 2012a. Government Roles in Community-Based Disaster Risk Reduction. In *Community-Based Disaster Risk Reduction: Community, Environment and Disaster Risk Management* edited by R. Shaw R. Bingley: Emerald Group Publishing Limited.
- Ishiwatari, M. 2012b. Review of Countermeasures in the East Japan Earthquake and Tsunami. In *East Japan Earthquake and Tsunami: Evaluation, Communication, Education and Volunteerism* edited by R. Shaw and Y. Takeuchi. Singapore: Research Publishing.
- Japan International Cooperation Agency (JICA). 2010. *Final Report: The Preparatory Study on Disaster Management Program for Indonesia*. Tokyo: JICA.
- Kettl, D. F. 2000. The Transformation of Governance: Globalization, Devolution, and the Role of Government. *Public Administration Review* 60(6): 488–497.
- Ministry of Finance, Japan. 2012. *Joint Statement by the Finance Minister of Japan and the World Bank President at the Sendai Dialogue*. http://www.mof.go.jp/english/international_policy/mdbs/wb/press_release/20121010sendai_statement.htm
- Nishikawa, S. 2010. From Yokohama Strategy to Hyogo Framework: Sharing the Japanese Experience of Disaster Risk Management. *Asian Journal of Environment and Disaster Management* 2(3): 249–262.
- Pasteur, K. 2011. *From Vulnerability to Resilience: A Framework for Analysis and Action to Build Community Resilience*. Rugby: Practical Action Publishing.
- Pelling, M., and A. Holloway. 2006. *Legislation for Mainstreaming Disaster Risk Reduction*. Teddington: Tearfund.
- Raschky, P. A. 2008. Institutions and the Losses from Natural Disasters. *Natural Hazards and Earth System Sciences* 8: 627–634.
- Turnbull, M., L. C. Sterrett, and A. Hilleboe. 2013. *Toward Resilience: A Guide to Disaster Risk Reduction and Climate Change Adaptation*. Rugby: Practical Action.
- United Nations Development Programme (UNDP). 2010. *Disaster Risk Reduction, Governance & Mainstreaming*. New York: UNDP.
- UNESCAP, and UNISDR. 2012. *Reducing Vulnerability and Exposure to Disasters: The Asia-Pacific Disaster Report 2012*. Bangkok: UNISDR.

- UNISDR. 2005. *Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters*. Geneva: UNISDR.
- UNISDR. 2007. *Guidelines: National Platforms for Disaster Risk Reduction*. Geneva: UNISDR.
- UNISDR. 2011a. *Global Assessment Report on Disaster Reduction*. Geneva: UNISDR.
- UNISDR. 2011b. *Mid-Term Review, Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*. Geneva: UNISDR.
- Wisner, B., et al. 2004. *At Risk: Natural Hazards, People's Vulnerability and Disasters, Second Edition*. London: Routledge.
- World Bank. 2012a. *Acting Today For Tomorrow: A Policy and Practice Note for Climate- and Disaster-Resilient Development in the Pacific Islands Region*. Washington, DC: World Bank.
- World Bank. 2012b. *Executive Summary of Knowledge Note: Learning from Megadisasters*. Washington, DC.: World Bank.
- World Bank. 2012c. *Sendai Report: Managing Disaster for a Resilient Future*. Washington, DC.: World Bank.