A brief paper

on
disaster risk management issues

for the

National Assembly Committee for Science, Technology and Environment

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A. ORGANIZATIONAL MODELS FOR DISASTER RISK MANAGEMENT

Current status of disaster risk management in Viet Nam

Today, Viet Nam has a well-established but not well designed mechanism at national level (the Central Committee for Flood and Storm Control - CCFSC), in charge of flood, storm and other hazards, however, its personnel are not permanent professionals and its officials are often assigned from various organizations – that half-time half-responsibility status makes all disaster risk management (DRM) inefficient.

Institutionally, there are two structures, operating under separate control for DRM, including the CFSCC, which is under MARD and the Search and Rescue Committee (SRC) under the Deputy PM – this again causes weak coordination and authorization in DRM.

At local levels, local flood and storm command units (LFSCU) have the same problem with multi-function, part-time personnel responsible. Officials in charge of DRM are often assigned from the water management division under DARD and they have only water management knowledge and therefore they cannot cope with the realities and complexities of DRM.

Federal Emergency Management Agency in the USA

The most powerful organization in DRM in the US is the Federal Emergency Management Agency (FEMA). The primary purpose of FEMA is to coordinate the response to a disaster that has occurred in the United States and that overwhelms the resources of local and state authorities.

In March 2003, FEMA joined 22 other federal agencies, programs and offices in becoming the Department of Homeland Security (DHS). The new department brought a coordinated approach to national security from emergencies and disasters - both natural and man-made.

Today FEMA exists as a major agency of the DHS. The Administrator for FEMA reports directly to the Secretary of Homeland Security.

FEMA’s emergency response is based on small, decentralized teams trained in such areas as the National Disaster Medical System (NDMS), Urban Search and Rescue (USAR), Disaster Mortuary Operations Response Team (DMORT), Disaster Medical Assistance Team (DMAT), and Mobile Emergency Resource Support (MERS).

FEMA has led a Public-Private Partnership in creating a National Donations Management Program making it easier for corporations or individuals not previously engaged to make offers of free assistance to States and the Federal Government in times of disaster. The program is a partnership among FEMA, relief agencies, corporations/corporate associations and participating state governments. The technical backbone of the program is an online technology solution called The Aidmatrix Network which is managed by the independent nonprofit organization, Aidmatrix.
The mission of FEMA is “to reduce the loss of life and property and protect the Nation from all hazards, including natural disasters, acts of terrorism, and other man-made disasters, by leading and supporting the Nation in a risk-based, comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation”.

FEMA itself is more of a facilitator and coordinator of Federal support to state and local officials, rather than a massive Federal department with organic response assets. It relies heavily on other Federal departments and agencies, contractors, and state and local assets to perform its coordination mission.

At issue is whether FEMA should be an independent agency as it once was, or stay within DHS. The debate is spoken in terms of access to the President of the USA and the strength of the organization.

ARGUMENTS FOR MAKING FEMA AN INDEPENDENT AGENCY

(i) **Focus.** In the aftermath of Katrina, DHS leadership rightly focused their attention on the failed response and explored solutions to the problems. However, the significant attention FEMA received from DHS leadership may have been to the detriment of other important DHS components, because the department’s leadership was focused on fixing FEMA. If FEMA were to be removed from DHS, the Department leadership could focus on prevention of threats more effectively.

(ii) **Bureaucracy and Resources.** Within DHS, FEMA must compete with eight other major components for resources, priorities, and strategic direction. If FEMA were to be removed from DHS, it could compete and direct resources of its own accord, determine its own policies and programs, and independently request funding levels. As an independent agency, other agencies with a critical disaster response mission, such as the Department of Health and Human Services, would be on equal par with DHS, rather than competing with the DHS mission.

(iii) **Psychological.** The battering of FEMA during the creation of DHS, Hurricane Katrina, and subsequent changes, resulted in a significant turnover of dedicated and long-serving talent from FEMA, and an inability of remaining staff to reach their professional objectives. Removing FEMA from DHS could provide a morale boost for staff thereby enabling the organization as a whole to better accomplish its mission.

(iv) **Readiness.** Taking FEMA out of DHS could make the agency a more nimble organization, better able to respond to disasters without the oversight of DHS. There would be no “mother may I” mentality that is perceived by some inside the organization.

ARGUMENTS FOR FEMA REMAINING WITHIN DHS

(i) **Focus.** If DHS is to execute its incident management responsibilities, it should be vested with the critical preparedness and response missions of FEMA. Without FEMA, DHS will have little statutory or organizational capability to effectively manage the response to an incident.
(ii) **Bureaucracy and Resources.** With the Secretary of Homeland Security representing FEMA’s interests, FEMA has a powerful advocate within the executive branch. As a Cabinet Secretary, the DHS Secretary has the standing to raise issues with and garner the attention of his or her Cabinet peers and the President. The Secretary can also direct DHS resources to the FEMA mission during a disaster. Additionally, FEMA has a direct line to the President during crisis. Extracting FEMA could also cause bureaucratic confusion among agencies, as well as state and local officials who have labored to learn and abide by the current system’s protocols. Congress would be required to provide significant legislation to re-define roles, responsibilities, and authorities, to include statutory authority and funding. Additionally, separating FEMA from DHS would result in an unknown governmental administration systems.

(iii) **Psychological.** If FEMA were to be removed from DHS, staff in both agencies would likely feel the strain from yet another reorganization. Many feel that FEMA is finally a core component of DHS a never ending state of flux.

(iv) **Readiness.** The consequence of extracting FEMA from DHS could be a lower level of national readiness to respond to disaster. Instead of focusing on current disasters and preparing for future ones, the agency would instead be hobbled with required statutory, policy, budgetary and other bureaucratic manifestations of a reorganization.

**Central Disaster Management Council in Japan**

The president of the Central Disaster Management Council (CDMC) is the Prime Minister. In Japan, there is:

(i) A Minister of State for Disaster Management, who is in charge of coordinating all DRM policies and operations among ministries and agencies, and

(ii) The Cabinet Office for DRM with policy and planning functions and general coordination.
National Disaster Prevention and Mitigation Committee in Thailand

The National Disaster Prevention and Mitigation Committee (NDPMC) has either the Prime Minister or a designated Vice Prime Minister as Chair. The Committee is made up of a range of high-ranking officials from a range of Ministries, as well as five experts recognized for their expertise in the field of city planning and disaster prevention and mitigation. The Department of Disaster Prevention and Mitigation is appointed as the secretariat to this Committee.

The powers and functions of the Committee are outlined the articles of the Disaster Prevention and Mitigation Act (2007), which sets out the responsible institutions for disaster prevention and mitigation at the national and provincial levels and for Bangkok Metropolitan.

The Act appoints a Commander in Chief for Disaster Prevention and Mitigation as a separate supreme entity to oversee all disaster prevention and mitigation activities. The Department of Disaster Prevention and Mitigation is the designated central government unit appointed to

56 organizations including independent administrative agencies, Bank of Japan, Japanese Red Cross Society, NHK, electric and gas companies and NTT

24 Ministries and Agencies

PM

Central Disaster Management Council (CDMC)

Designated Government Organizations

Designated Public Corporations

Formulation and promoting implementation of the Basic Disaster Management Plan

Formulation and implementation of the Disaster Management Operation Plans

Governor

Prefectural Disaster Management Council (PDMC)

Designated Local Organizations

Designated Local Corporations

Formulation and promoting implementation of the Local Disaster Management Plan

Mayors of Cities, Towns and Villages

Municipal Disaster Management Council (MDMC)

Formulation and promoting implementation of the Local Disaster Management Plan

Residents

Residents
lead operations in DRM. It is responsible for formulating the National Disaster Prevention and Mitigation Plan to be submitted to the NDPMC, for organizing and researching disaster prevention and mitigation measures, and for coordinating government agencies and all other actors in DRM activities.

To enhance its operation at the provincial level, the department sets up Disaster Prevention and Mitigation Centres in some provinces. These centres operate in the province in which they are situated as well as neighbouring provinces. In addition, Disaster Prevention and Mitigation Offices are established at the Provincial level to support the operation of DRM activities.¹

The Act appoints the designated Minister as Commander in Chief. The Commander in Chief has authority to control and monitor all measures and activities related to Disaster Prevention and Mitigation. The Commander in Chief is also the Chair of the NDPMC. The Permanent Secretary for Interior is appointed as the Deputy Commander in Chief.

The provincial governors are made responsible for all disaster prevention and mitigation activities in their provinces, including the formulation of a provincial level disaster prevention and mitigation plan to be implemented across their province.

Local Directors report directly to the District Director in the event of a disaster within their area. If the Local Director requires assistance, he/she reports to either the District or Provincial Director who will arrange the mobilization of relevant agencies to respond. The Act also requires surrounding Local Directors to assist the affected local Director.² Directors and designated officers are given a range of powers in order to effectively control and coordinate relief operations, including building temporary shelters and restricting access to certain areas. Local Directors are responsible for conducting damage assessments, and all affected people and property shall be recorded and provided with certification to be used for receiving recovery assistance or compensation.

Directors at each level have the power to appoint officials to perform disaster management activities. Directors can also establish volunteer centres within their jurisdiction to assist in performing DRM duties and direct charities on how to assist. The Director shall be responsible for notifying these organizations of coordination procedures and details of the relevant Prevention and Mitigation Plans.³

The Bangkok metropolitan Governor is given a distinct set of responsibilities under the Act. An entire chapter of the law deals with Bangkok metropolitan as a separate entity from the central and provincial governments.

**The National Committee for Disaster Reduction in China**

The National Committee for Disaster Reduction (NDRC) is the primary high level committee tasked with DRM, particularly for natural hazards/disasters. The NDRC is comprised of 34 ministries and departments, and a collection of representatives from military agencies and

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¹ National Disaster Prevention and Mitigation Act 2007, s 11.
² National Disaster Prevention and Mitigation Act 2007, s 23.
³ National Disaster Prevention and Mitigation Act 2007, s 42.
social groups, with the Vice Premier of the State Council as the Chair. While there is one main institution tasked with DRM, the law is not arranged accordingly.

The main standing body for overseeing DRM at the national level is the Emergency Management Office of the State Council, established in 2006, this Office operates under the auspices of the State Council. It is the daily implementing body for DRM. The Office coordinates with different entities depending on the nature of the hazard or disaster, including the National Disaster Reduction Committee, State Flood and Drought Control Headquarters, State Earthquake Control and Rescue Headquarters, State Forest Fire Control Headquarters and the National Disaster Control and Relief Coordination Office. Additionally, The People's Liberation Army and the Armed Police often participate in task forces, and social groups, NGOs and volunteers contribute to DRM efforts.

Through its laws, regulations and plans, China has established distinct disaster reduction and relief mechanisms. In particular, it has established specific systems for:

- **Emergency response**: This system is designed particularly for natural hazards and consists of a national overall emergency response plan, national specialised emergency response plans and departmental emergency response plans. In an emergency, the State Council will oversee the implementation of all emergency response plans of each relevant department. At the local government level, the affected governments are to establish emergency response committees, with the heads of local governments as the commanders, to draw up emergency plans, coordinate relief work, and report to higher level authorities.

- **Information release**: Central and local governments are to cooperate to ensure the release of prompt information concerning disasters to the public through press releases, interviews and press conferences.

- **Emergency relief materials and reserves**: China has at least 10 storehouses for emergency relief supplies at the central level, together with a number of others at the provincial level. To ensure that relief supplies can be urgently acquired, there is a list of commissioned relief supply manufacturers and template emergency purchase agreements to facilitate the process.

- **Early warning, consultation and information sharing**: A collection of departments, including civil affairs, land and resources, water resources, agriculture, forestry, statistics, and seismology, maritime affairs and meteorology are required to regularly share information regarding early warning. There is also a disaster information database, a public platform of national geographical information and a disaster information publishing and sharing system.

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4 Asian Disaster Reduction Centre, Country Report on China, p 3
5 Government White paper, ‘China’s Action for Disaster Prevention and Reduction’
7 Ibid.
• **Major disaster rescue and relief**: For search and rescue and emergency relief, relevant departments will dispatch working groups to conduct damage and needs assessments and coordinate relief work. These groups are also required by the State Council to coordinate with other relevant departments to draw up rescue plans, participate in disaster relief work and mitigate and prevent any possible secondary disasters.

• **Emergency social mobilisation**: There is a system now in place to ensure the involvement and participation of NGOs, mass organisations, the Red Cross, self-governmental organisations at the community level and volunteers in disaster prevention, emergency rescue, relief and donation work, medical, hygiene and quarantine work, post-disaster reconstruction, psychological support.

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**National Disaster Management Agency in Indonesia**

The Government established a **National Disaster Management Agency (NDMA)**, which has a status equivalent to a Ministry. The Agency consists of a **Steering Committee** and an **Executive Body**.

The **NDMA** is to produce guidelines on disaster management which address disaster prevention, emergency response, rehabilitation, and reconstruction. It must report to the President monthly on disaster management activities and at all times during a state of emergency. It is made specifically responsible for using and accounting for international donations as well as funds from the state budget. It is also assigned the task of establishing disaster management regional authorities.

The NDMA is the body responsible for coordinating the implementation of all ‘disaster management activity’, which presumably expands from prevention and risk management activities to emergency response and recovery.

The **Steering Committee** of the NDMA formulates national policies, monitors and evaluates the organization of disaster management in the country. It consists of ‘relevant government officials’ and ‘professional community members’, but no further clarification is provided, apart from stating that membership is really at the discretion of the House of People’s Representatives of the Republic of Indonesia.

The **Executive Body** (like a secretariat) is established by the Steering Committee and is made up of professionals and specialists chosen by the Steering Committee. Its function is to control, coordinate and implement the ‘organization of disaster management’. Its duties relate to pre-disaster phase, emergency response and post-disaster phase. The law is very broad on the composition, function and responsibilities of the Executive Body, and as such, it states that further detail is provided in presidential regulation.

The Regional Governments [Part Two Article 18] are to establish **Regional Disaster Management Agencies (RDMAs)** in coordination with the NDMA. The RDMAs are comprised of agencies at the provincial and district/city level and are also divided into a Steering Committee and an Executive Body.

In addition to having similar responsibilities to the NDMA at the regional level, the RDMA are responsible for producing and disseminating a disaster prone area map and SOPs for
disaster management. It has to report its progress to a regional head and be accountable for the use of funds allocated from the regional budget.

Recommendations for a new disaster risk management structure for Viet Nam

There should be a new National Disaster Management Council that has:

- High authority, possibly under the Prime Minister
- Strong coordination power in all levels (national, provincial, district)
- Specialized functions in DRM with permanent staff and professionals, which have capacity to analyze circumstances and give advice on all components of DRM.

In disaster prone areas there should be a center for DRM with the role of coordinating all DRM actions within the province and between neighbouring provinces.

B. ANNOUNCEMENT OF DISASTER EMERGENCY STATUS

Current status of disaster emergency announcement in Viet Nam

Today, Viet Nam has no established mechanism for disaster emergency announcement that could trigger full-scale national mobilization of relief assistance.

Announcement of disaster emergency status in other countries the world

When a disaster occurs to a level that causes tremendous damage to a large territory it needs more critical measures to mobilize nation-wide assistance and relief. However, the critical level that triggers the issue of such a decision needs to be regulated in the law – that is the issue of emergency declaration.

In general, the basis for an emergency declaration does not depend on the severity of a hazard (the scale of the storm, earthquake, height of the wave, etc.) but rather depends on the capability of a community or region under the threat and if that capability is sufficient to deal with the circumstances and whether life and property are under serious threat, then the whole country should assist and to make that happen, there is a need for an emergency declaration.

Many of the laws within the Asia and Pacific region contain a provision on the process for identifying and declaring a disaster situation.

For example, in:
- **Indonesia**, the disaster management agency is responsible
for recommending to the Government when a declaration should be made.

- **The Philippines**, the National level committee is to recommend to the President when to declare a state of calamity, and when to lift such a declaration, according to criteria established by the national committee. One aspect of The Philippines Disaster Risk Reduction and Management Law of 2010, which is relevant to consider is incorporating a section on coordination of government authorities in an emergency and remedial measures, which are to be triggered upon a declaration of an emergency. For example, the imposition of price ceiling on basic necessities, the programming of funds for the repair of public infrastructure and the granting of no interest loans.\(^7\) As discussed in the section on International Standards and Agreements.

- **Sri Lanka**, the President may, either of his own volition or on the advice of the national committee, declare a state of disaster either in respect of certain defined areas or the whole country. The Act also prescribes that the declaration will last for two months unless extended, and it sets out some procedures for resource mobilization which are to occur upon a declaration.

**Declaration of State of Disaster in Sri Lanka**

The Act provides that when the severity of a disaster or impending disaster is so great that the counter measures required are likely to exceed the resources of the affected administration, the President may, either of his own volition or on the advice of the National Disaster Management Committee (NDMC), declare a state of disaster either in respect of certain defined areas or the whole country. The provision states that the proclamation will remain in effect for a period of two months, and may be further periods of two months at a time. The proclamation must also be approved by resolution of parliament. If the Parliament does not approve such a proclamation, it shall cease to be valid.

The Act also sets out procedures which will occur upon the declaration of a disaster. The President shall direct the ‘appropriate organizations’ designated by the NDMC to mobilize available resources and additional resources and implement the relevant provisions of the National Disaster Management Plan (NDMP) and the emergency operation plan.

When there has been a disaster declaration, the Council may obtain assistance from any NGO to assist in the discharge of its duties. The NGO shall act in accordance with the instructions of the NDMC and be paid for services rendered from the Fund of the Council.

**Presidential declarations on disasters and emergencies in the USA**

The Stafford Act authorizes the President to issue two types of declarations in the case of a: (i) major disaster and (ii) emergency, after an incident overwhelms state and local resources.

### MAJOR DISASTER DECLARATIONS

After receiving a request from the governor of an affected state for a major disaster declaration, the President may take one of three possible actions:

- (i) issue a major disaster declaration, or
- (ii) an emergency declaration, or
- (iii) decline the request.

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\(^7\) The Philippines: Disaster Risk Reduction and Management Law 2010, s 17
Major disaster declarations may be issued after a natural catastrophe “(including any hurricane, tornado, storm, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought)” or, “regardless of cause, after a fire, flood or explosion”.

The President may declare a “major disaster” in response to a request for assistance from a State Governor certifying that circumstances within the Governor’s state are: “of such severity and magnitude that effective response is beyond the capabilities of the state and the affected local governments and that Federal assistance is necessary.”

The President also may declare an “emergency” in response to such a request, but only if the request is supported by an additional finding that Federal emergency assistance is required to: “save lives and to protect property, public health and safety, or to lessen the threat of a disaster.”

Regulations further specify the factors considered by FEMA in evaluating a gubernatorial request (made by a governor) for a major disaster declaration. The factors considered to determine whether federal assistance is needed include an assessment of the:

- **per capita** impact of the disaster within affected states;
- insurance coverage in force;
- the presence and impact of hazard mitigation measures;
- the cumulative impact of disasters over the previous year; and,
- whether federal aid authorized by statutes other than the Stafford Act would better meet the needs of stricken areas.

Factors considered when determining whether federal Individual and Household Program (IHP) assistance is needed include:

- concentration of damages;
- number of injuries, deaths, or the extent to which essential services are disrupted;
- the impact on special populations that require higher levels of assistance;
- the extent to which voluntary agencies are able to meet the needs of victims; insurance coverage; and,
- measurements of needs such as disaster housing needs approved, number of homes destroyed or damaged, financial assistance required, and others.

**EMERGENCY DECLARATIONS**

The declaration process for emergencies is similar to that used for major disasters, but the criteria (based on the definition of “emergency”) are less specific. Whereas all major disaster declarations require a gubernatorial request and, generally, findings and certifications as summarized above, emergency declaration requirements are less rigorous. For example, the President may issue an emergency declaration without a gubernatorial request if primary responsibility rests with the federal government. Also, specific thresholds or calculations of past averages are not considered, but FEMA officials do assess whether “all other resources and authorities available to meet the crisis are inadequate” before recommending that the President issue an emergency declaration.
Immediately following a declaration of a major disaster or emergency, the President must appoint a Federal coordinating officer to the affected area. That officer is required to make an initial appraisal of the types of relief most urgently needed, set up a field office, coordinate relief in the region, and assist the local citizens and officials in obtaining Federal assistance.

The President must also form emergency support teams of Federal personnel that may be deployed to the affected area to assist the Federal coordinating officer. In each case, the FEMA Associate Director determines the particular types of Federal relief that will be provided to the affected region.

**Declaration of State of Emergency in Japan**

In time of an extraordinary disaster whose repercussions on the national economy and public welfare are serious and far-reaching, the Prime Minister may, when he deems it particularly necessary in the interest of enforcing emergency measures, declare a state of emergency involving the whole or part of the affected area, upon referring the matter to a Cabinet Conference. Such a declaration shall specify the area concerned, give a brief account of the situation warranting such action, and set the date and time when the declaration takes effect.
When a state of emergency has been declared, the Prime Minister shall put the matter before the Diet for its consent not later than twenty days from the date of declaration. When there has been a resolution to refuse consent as provided under the preceding paragraph, or when the Diet has voted to repeal the declaration of a state of emergency, or when there is no longer the necessity for the declaration, the Prime Minister shall promptly revoke said declaration.

In case of an urgent need to preserve the economic order of the nation and to ensure the public welfare when confronted with a situation of emergency as a result of disaster and when the situation does not allow time, the Cabinet may enact an ordinance in order to take necessary steps on the matters listed below:

(i) rationing of materials of daily necessity in critical shortage; restriction or ban on their transfer or delivery;
(ii) fixing a ceiling on prices of commodities, consideration for labor, fees for services in the interest of emergency measures, rehabilitation and a stable life for the citizens.
(iii) deferment of monetary debts (exclusive of wages, compensation payments for disaster damage, payment of monetary debts involving labor relations, withdrawals from accounts in banks or backing facilities for such payment); extension of the duration of a creditor's rights.

Declaration of State of Calamity in the Philippines

The National Council shall recommend to the President of The Philippines the declaration of a cluster of barangays, municipalities, cities, provinces, and regions under a state of calamity, including epidemics, and the lifting thereof, based on the criteria set by the National Council. The President's declaration may warrant international humanitarian assistance as deemed necessary.

The declaration and lifting of the state of calamity may also be issued by the local sanggunian, (council) upon the recommendation of the Local [National] Disaster Risk Reduction & Management Council (NDRRMC), based on the results of the damage assessment and needs analysis.

The declaration of a state of calamity shall make mandatory the immediate undertaking of the following remedial measures:

(i) Imposition of price ceiling on basic necessities and prime commodities by the President upon the recommendation of the implementing agency as provided for under Republic Act No. 7581, otherwise known as the "Price Act", or the National Price Coordinating Council;
(ii) Monitoring, prevention and control by the Local Price Coordination Council of overpricing/profiteering and hoarding of prime commodities, medicines and petroleum products;
(iii) Programming/reprogramming of funds for the repair and safety upgrading of public infrastructures and facilities; and

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8 Japanese parliament is called the Diet. It consists of the House of Representatives (480 members) and the House of Councillors (242 members). The members of the Diet are elected by the Japanese people.
(iv) Granting of no-interest loans by government financing or lending institutions to the most affected section of the population through their cooperatives or people's organizations.

Recommendations for a disaster and emergency announcement set-up for Viet Nam

There should be a clear consistent mechanism for disaster announcement:

- by the Prime Minister (for a major disaster) or by a Chairman of the Provincial People’s Committee (for a local disaster)
- upon advice from the National Disaster Management Centre or call from authority of affected areas
- based on criteria set by the NDMC
- That triggers immediate undertaking of remedial measure that set in the set plan.

C. FINANCIAL RESOURCES FOR DISASTER RISK MANAGEMENT

Current status of disaster risk management-related financial resources in Viet Nam

Today, Viet Nam has a Disaster Prevention Fund with substantial sources from the local reserve budget that accounts for 2-5% of local budget revenues and covers all emergency needs in the locality. Therefore in disaster situation, there is always need for central budget assistance and that assistance is mostly for after disaster relief rather than for pre-disaster preparation.

There is also mismanagement of the flood and storm prevention fund at local level that make that financial source more inefficient.

Disaster risk management funds in other countries in the world

A common feature of the laws is establishing a fund specifically for DRM as a means to ensure a sufficient allocation of resources to DRM at all levels of administration. Some of the laws stipulate that a certain percentage of the state budget is to be allocated to DRM. For example, The Philippines’ Disaster Risk Reduction and Management Bill states that 5% of revenue that comes from “regular sources” is to be allocated to DRM measures.

The laws often sets out how the funds are to be used, which institution is to manage the funding and what the DRM fund is to consist of, for example, donations, grants and loans. Further detail and issues to be considered in establishing DRM Funds are discussed in other sections of this report.

When establishing a DRM fund, it would be important to consider whether the fund could be used for emergency relief, or whether a separate or “sub-fund” should be set aside specifically for emergencies. Indonesia, for example, has separate, ‘on call funding’, which can be used in times of emergency.
Federal Disaster Relief Fund in the USA

Congress makes an annual appropriation to the Federal Disaster Relief Fund ("DRF") to support disaster relief efforts by states, localities and certain non-profit organizations. Financing for Federal disaster relief conducted pursuant to the Stafford Act comes primarily from the DRF, although many relief activities fall within the statutory mandate of one or more responsible agencies and are not reimbursed. Funds appropriated to the DRF remain available until expended. When particularly catastrophic events exhaust DRF funding, Congress may authorize supplemental appropriations.

The DRF is administered by DHS and supports Federal assistance for major disasters or emergencies. It provides grants for mass care for disaster survivors, the restoration of damaged or destroyed facilities, amelioration of the impact of future disasters, clearance of debris, and aid for those with uninsured critical needs.

Congress appropriates money to the DRF to ensure that the federal assistance is available to help individuals and communities stricken by severe disasters. Funds appropriated to the DRF remain available until expended. Such accounts are referred to as "no-year" accounts. Supplemental appropriations measures are generally required each fiscal year to meet the urgent needs of particularly catastrophic disasters.

Pre-Disaster Mitigation Grants (PDM) program established by the DMA is intended to reduce losses and suffering “resulting from natural disasters” and provide a source of funding to ensure: “the continued functionality of critical services and facilities after a natural disaster”.

Assistance is authorized to help state and local governments implement: “pre-disaster hazard mitigation measures that are cost-effective and are designed to reduce injuries, loss of life, and damage and destruction of property, including damage to critical services and facilities under the jurisdiction of the states or local governments”.

Disaster insurance in the USA

Disaster insurance is a type of property insurance. It supplements the other finance sources for individuals and households affected by disaster. However, today the disaster insurance constitutes a very small part compared to other traditional assistance funds.

There are four layers of disaster insurance:

(i) Individual self-insurance (this is equivalent to the deductible on an insurance policy) to reduce moral hazard. The amount of self-insurance could vary with income.

(ii) The purchase by homeowners of private disaster insurance (they conceive of an all-hazards policy bundled with traditional homeowners coverage).

(iii) Reinsurance and catastrophe bonds purchased in the private market by primary insurance companies.

(iv) A form of government backstop against truly large losses, either in the form of a state fund, multistate pool, and/or federal reinsurance for catastrophe schemes. This scheme would need to be coupled with restrictions on disaster aid; assistance for low-income homeowners; and the adoption of risk reduction measures, such as building codes and land use regulations.
Studies in the US and other developed counties revealed further weak take-up of disaster coverage, insurance companies have been scaling back disaster coverage in some areas, or for some perils, because private insurance markets are concerned about adverse selection, the catastrophic nature of the risk, or consumer unwillingness to pay the required premiums with the thought that in catastrophe, the Federal assistance and other traditional relief shall come anyway.

Another scheme with small-scale farmers in the developing world who are dependent on rain-fed agriculture and thus sensitive to climate extremes is weather index insurance. The amounts of coverage an individual farmer would purchase are very small, and the transaction costs to verify losses would make traditional insurance too costly to provide to this group. Weather index insurance has been offered as a possible solution. They thus have smaller transaction costs because losses do not need to be evaluated at a property level.

**Hedging disaster risk in the international financial market in Mexico**

Mexico applies a very special policy that allows sharing disaster risks in the global financial market.

In the past, when a disaster occurred, the Government had to shift budgetary resources away from planned public infrastructure expenses into reconstruction efforts. To avoid this problem, in 1996 the Mexican Government created a fund for natural disasters — FONDEN — to which it transfers budgetary funds for disaster relief and reconstruction efforts. In addition, Mexico developed an institutional framework for disaster preparedness involving risk assessment, risk reduction, the promotion of a culture of prevention, and insurance. With these initiatives, Mexico moved from an *ex-post* response to disasters to an *ex-ante* preparedness approach.

The operation of FONDEN does not stop there, it uses various instruments to support local states and entities in responding to natural disasters, including reserve funds and risk transfer solutions. In 2006, FONDEN issued a US$160 million catastrophe bond (CatMex) to transfer Mexico’s earthquake risk to the international capital markets. It was the first parametric cat bond issued by a sovereign.

After the CatMex matured in 2009, Mexico decided to further diversify its coverage by pooling multiple risks in multiple regions. In October 2009, it issued a multi-peril cat bond using the World Bank’s newly established MultiCat Program, which helps sovereign and sub-sovereign entities pool multiple perils in multiple regions and reduce insurance costs.

**How to transfer risks to global financial market?**

The issuer is a Special Purpose Vehicle (SPV) that indirectly provides parametric insurance to FONDEN against earthquake risk in three regions around Mexico City and hurricanes on the Atlantic and Pacific coasts. The cat bond will repay the principal to investors unless an earthquake or hurricane triggers a transfer of the funds to the Mexican government.

Transfer disaster-related risks to the capital markets shall reduce pressure on public budgets, ensure that adequate funds are in place for relief activities, and cover multiple perils.

With this bond, Mexico transferred a pool of disaster risk to the market for the first time; secured multi-year protection for the covered risks at a fixed price; and reduced potential
pressure on public budgets. Mexico effectively locked in funding for disaster relief prior to the event happening, rather than relying only on public budgets after the event. The demonstration effect of this transaction for other emerging market countries is significant. It has paved the way for other highly exposed countries to manage fiscal volatility and stabilize government budgets by transferring extreme natural disaster risks to capital markets, while obviating the need to build up excessive budget reserve

**Brief overview on transferring disaster risks to the global financial market**

- FONDEN enters into an insurance contract with local insurance company Agroasemex. Agroasemex enters into a reinsurance contract with Swiss Re to transfer all of the catastrophe risk. Swiss Re enters into a derivative counterparty contract with a Cayman Islands-based special purpose vehicle (MultiCat Mexico 2009 Ltd.) to transfer the catastrophe risk. The SPV issues floating rate notes (Cat Bonds) to capital markets investors to hedge its obligations to Swiss Re under the counterparty contract. The proceeds received from investors are invested in US Treasury money market funds and deposited in a collateral account.

**Recommendations for new disaster risk management - related financial resources for Viet Nam**

- There should be a clear regulation for a DRM fund that:
  - sets a fixed, or minimum, state budget allocation for DRM activities
  - must be available and prioritized for DRM, including pre-disaster preparedness and aftermath relief
  - has a clear mechanism to distribute and use such budget
  - has a public-private- partnership (PPP) approach

**D. INFORMATION AND EARLY WARNING SYSTEMS FOR DISASTERS IN SOME COUNTRIES OF THE WORLD**

**1. Approach for four components of disaster risk management:**

(1) Mitigation; (2) Preparedness; (3) Response; and (4) Recovery

In reality, the phases in DRM do not happen one after another in a defined sequence. They can all occur at the same time, but at a certain time, some activities will receive more attention, e.g. relief and response activities will be undertaken more intensively in the immediate aftermath of a disaster. This idea is captured in the ‘expand-contract’ model:
The expand-contract model still refers to the same types of activities as the disaster management cycle, but emphasizes how each has to be seen as a continuous process, and not limited to one ‘stage’ in time.

![EXPAND-CONTRACT MODEL](image)

(Kotze and Holloway 1996)

Mitigation is considered as an important stage that can help people to avoid and reduce losses when adverse natural events occurred. The World Meteorological Organization (WMO) estimated that US$1 invested in mitigation will reduce by US$7 the economic loss related to a disaster.

2. Information and early warning systems

Information and early warning systems (EWS) in DRM is considered as one of the most important measures to reduce losses of life and economic in disadvantage events caused by the floods, droughts, storms, forest fires, and other hazards. Experience shows that in order to have an effective EWS, four components are required:

1) Detection, monitoring and predicting hazards;
2) Analysis of risk involved;
3) Disseminating in a timely manner the warnings – properly implementing the authority of the government; and
4) Implementing the emergency plans for preparedness and response.

The information and EWS can be effectively operated when it ensures a number of the following principles:

a. The commitment from national and local authorities;
b. Roles, responsibilities and coordination mechanisms among agencies and organizations related to information systems and early warning must be clear;
c. Provide the favorable conditions and resources (human and material resources) from national to local levels for information and EWS;
d. The possibility of accessing to the information of everyone; the alert information must be clear, consistent including the risks and the level of threats in order to have emergency preparedness and response actions (for example, using colors, flags, etc.);
e. Understanding of local government and people be affected should be enhanced;
f. Feedback of information is efficient and system is upgraded regularly.
According to statistics, the extreme events of meteorological and hydrological events have increased nearly 50-times in the five past decades but the loss of human life globally has decreased significantly, about 10 times, millions of people lives have been saved over this time. This was seen as a result of increased capacity for monitoring and forecasting of meteorological and hydrological hazards, which have been significantly improved and that preparedness work an emergency response are more effective.

3. Information and Early Warning System in Viet Nam

Recently, Viet Nam has paid more attention to the EWS for natural hazards. Some recent related activities include:

In 1998, the Central Office of the Steering Committee for Flood and Storm Control, Ministry of Agriculture and Rural Development has received and implemented the project VIE/97/002 (1998-2004) supported by UNDP and a number of international organizations. The project objective were to support the preparation of overall strategy and action plan on preparedness, mitigation and protection of natural disasters; improved measures to cope with natural disasters at national and community level; strengthen national warning system, reports and response to natural disasters; develop disaster zoning maps in the central provinces; installation of flood warning systems on the rivers or flash floods in the Central Region; provide disaster warning graphics for Vietnam Television; and set up a system of storm warnings by radio for the fishing communities.

In 2011 Viet Nam has cooperated with Japan in a pilot project to build a system of environmental monitoring and early warning system for natural hazards that will be developed in Da Nang, Can Tho, Thanh Hoa. The Institute of Information Technology and Panasonic, Japan have cooperated to build an early warning and monitoring system to ensure it operations of 24/7 in difficult harsh circumstances, without maintenance and a stable source of electricity.

The environmental monitoring and EWS for natural hazards will have the functions of gathering the information which are regularly measured by the sensors associated with meteorological satellites and the reading heads to record the information of rainfall, speed wind, water in order to serve for warning purpose. At the same time, the system also identified areas affected by natural hazards and then transmits information and images of data using a built-in camera to the Center, or using a helicopter mounted with equipment to gather information and transmit to the Centre. The Information collected will be transmitted to the Provincial People Committees and local administrative agencies, according to a pre-defined command system to issue orders, relief, fire and to urge people to evacuate. The system will also provide information to the people about natural hazards by using a built-in speaker system to call for an evacuation.

Under the framework of the Mekong River Commission, a regional hydrological monitoring system in the Lower Mekong basin, Mekong-HYCOS, has been supported by the French Development Agency (AFD) and the World Environment Fund, France (FFEM) for the four countries in Lower Mekong Basin, namely: Laos, Thailand, Cambodia and Viet Nam.

The goal of the project is to establish a hydrological observation system with high reliability (data collected and shared almost in real-time) in the four country members to monitor the water resources in Lower Mekong basin.
32 meteorological stations on major tributaries of the Mekong, Tonle Sap and the Mekong Delta area have been upgraded with automatic water and rainfall meter systems; systems of data archive systems; telemetry measurement systems allow transfer of data received by satellite or by an appropriate means of information.

In June 2011 the Ministry of Natural Resources and Environment (MoNRE) approved the project: "Investigation and assessment and zoning warning risk of landslide in mountainous regions of Viet Nam to serve for the planning, direction and management of disaster prevention in the context of climate change". The Project is being implemented by the Institute of Geosciences and Minerals with the participation of many agencies within and outside the MoNRE.

In 2012, MoNRE started to build disaster warning towers in 28 coastal provinces and cities. Under the plan, a total of 179 towers in 28 provinces, of which 44 towers with integrated tsunami warning system will be installed along the coastal area from Ha Tinh to Binh Thuan. This project will contribute to the provision of a EWS for natural hazards for maritime activities, especially inshore fishing activities. The project is expected to be implemented from 2012 to 2014.

An installed EWS tower

Regarding to the Draft Law on the Prevention and Protection of Disasters: it is observed that the Law has stipulated the contents relating to the activities of construction, upgrading and expansion of the network stations, monitoring stations, hydro-meteorological, seismic, receiving station, to broadcast information forecasting, early warning of storms, floods, earthquakes, tsunamis, rain and other systems to track changes in the weather, hydrographic, oceanographic, seismic within the nation and international regions.

The Law also defines the responsibility of MoNRE and provides the guidance and direction for the activities of organization of monitoring, collection, identification, assessment, monitoring, zoning, gas-related disaster forecast object, hydrographic, oceanographic; the responsibility of Vietnamese Academy of Science and Technology in guiding and directing the identification, assessment, monitoring, warning earthquakes, tsunamis; the Ministry of Information and Communications will be responsible in guiding, coordinating and directing the development of radio, television and other communication systems to transmit, disaster
warning and forecast; organizations and individuals responsible for proactive equipment to receive information and participate in radio warning of natural hazards.

4. Experiences in information and EWS of some countries

1) CHINA
Since 1980, China has announced 30 Laws and other legal documents related to disaster prevention and mitigation. The Chinese Government has established a series of disaster emergency mechanisms, such as a:

   a. disaster emergency response system;
   b. mechanism of dissemination for disaster information;
   c. system of material reservation for emergency response and relief; and
   d. system for disaster information sharing and consultation and early warning system;
   e. mechanism of joint coordination mechanism of rescue and relief in major disaster;
   f. mechanism of social mobilization in case of emergency.

Local governments at various levels also have similar these working mechanisms.

The systems of released information and early warning of natural hazards/disaster are working in following the principles of "fast, accurate, open and transparent". The central and local governments are expected to work in earnest manner in providing the emergency information related to disasters and other emergencies through the competent authorities, press releases, interviews and press conferences to inform in a timely manner to the public about the danger, the disaster and its progress, the progress of the work of the emergency response, disaster prevention and knowledge of disaster prevention and other information, and to ensure the public right to be informed and supervised.

2) INDONESIA
In 2007, Indonesia issued the Law of the Republic of Indonesia No. 24 concerning disaster management, in which the EWS is considered as one of the three main components of disaster management. The EWS's contents have been defined in the Law:

   a) Observation of disaster signals;
   b) Analysis of the results observed from signals of disaster;
   c) Decision-making by the authorities at all levels;
   d) Disseminating the warning information;
   e) Community actions.

In an effort to apply an effective tool for information dissemination and EWS, the Indonesian Government has announced plans to use the short messaging system (SMS) to alert people of an impending disaster. The results of the analysis of the EWS in an area will be conveyed to the public via SMS. The system will allow 80% of phone users in an area to receive information about an upcoming disaster risk as well as help state officials respond quickly to
the threats. The Meteorological Agency and Geography (BMG), which operates the EWS, is also associated with the media to ensure that the warning information is transmitted quickly.

3) JAPAN
In order to strengthen all phases of DRM - prevention, mitigation, preparedness and response as well as recovery and rehabilitation, relevant laws and regulations were enacted, some of them are the Disaster Countermeasures Basic Act (1961), the Erosion Control Act (1897), the Disaster Relief Act (1947), the Building Standard Law (1950), the Landslide Prevention Act (1958), River Act (1964), and the Act on Special Measures for Large-scale Earthquakes (1978).

Information and EWS is not stipulated separately in some articles of the 1961 law, but yet many of the other laws and legal documents related to the management of major disasters, such as earthquakes, tsunamis, volcanic eruptions are clearly defined.

The Japanese legal frameworks especially emphasise strengthening the science and technology investment to modernize EWS. Japan put to the test EWS for a national disaster or war in 2012. During this, the information is transmitted by the system from the Government via satellite and then relayed through the system of local radio stations to the people in case of disaster and war. By this design, it only takes 1-2 seconds to transfer information from the Government to the system of local broadcasting.

There is also an earthquake EWS to provide advance notice of the expected seismic intensity and the estimated arrival time of the main motion. These assessments are based on the instantaneous analysis of the concentration and intensity of earthquakes using the documented terrain observed by seismic diagrams near the epicenter. The early warning tool, QuakeGuard™ has been applied and proven an effective EWS for the seismic warning system, providing an early warning through advanced technology patented P-waves. QuakeGuard™ will detect the early signs of an earthquake and also provides a response, automatic programming through warnings, alarms or an automatic control system.

In Japan, the effective release of timely information and EWS has helped to significantly reduce the number of deaths and injuries as well as damage to public property.

4) THAILAND
In 2005, Thailand set up a Committee to develop an EWS and a few months later the National Disaster Warning Center (NDWC) was established. This Center is then transferred from the Secretariat of the Prime Minister to the Ministry of Information and Communications Technology (ICT) and is responsible for a system of tasks to improve disaster prevention and mitigation.

The NDWC was equipped with new equipments, and established a system of national and international information. The NDWC is mainly responsible to detect earthquakes and seismic data analysis to determine the ability to create a tsunami before giving notice to the public, the authorities and emergency services like where to evacuate to evacuate people to safety.
In 2006, the Thailand International Cooperation and Development Agency (TICA), NDWC and the National Oceanic and Atmospheric Administration (NOAA) of the United States of America (USA) have a lot of technical cooperation in the efficient analysis of tsunami warning systems, joint cooperation in meteorology and oceanography, hydrology and deploying a system to detect tsunami in the Indian Ocean and have an agreement of depth assessment and reporting tsunami from DART II buoys in the Indian Ocean.

Thailand also installed warning tower systems throughout the country. The Mayor/Governor of a city/province is the official responsible to decide to announce the warning signal to the warning tower.

The Department of Water Resources Management, Ministry of Natural Resources and Environment in collaboration with the Office of Meteorology and Hydrology Thailand are building an EWS for landslides, flash floods in the community in the steep mountains and along rivers used for inland waterways, especially in the northern and southern regions of Thailand.

5) PHILIPPINES

In 2009, The Philippines developed and published “Guidelines of early warning systems - the experiences of The Philippines”. These Guidelines were prepared in cooperation with GIZ (Germany) and the European Union (EU). The Guidelines formulated a flood EWS for the islands and how to operate the system.

Scientific institutions and universities of The Philippines have also developed a local tsunami warning system with low-cost to supply for high-risk coastal communities in The Philippines; including cities, coastal towns and cities. Manila and other coastal areas will be added after the pilot tests.

An EWS is a particularly important position in DRM. The strengthening of information systems requires massive mobilization of human and material resources and the indispensable support of science, technology and legal and institutional facilities as well. Legalizing the EWS in Draft Law on Prevention, Protection and Mitigation of Natural Disasters in Viet Nam should be considered comprehensively for inclusion.

**Recommendations**

Regarding to the strengthening of the EWS for natural hazards, it is proposed that the Draft Law on Prevention, Protection and Mitigation of Natural Disasters in Viet Nam should include some articles that stipulate clearly the EWS for natural hazards, including the development, direction, responsibilities of agencies/authorities at all levels (central and local levels) and resources (human and financial) for the development and modernization of the countries existing EWS for all natural hazard types.
E. MAINSTREAMING DISASTER RISK REDUCTION INTO SOCIO-ECONOMIC DEVELOPMENT PLANS AND STRATEGY

Regional policy on mainstreaming disaster risk reduction into the development plans

In May 2005, the 5th Meeting of the Regional Consultative Committee on Disaster Management (RCC) was organized in Hanoi, Viet Nam by the Asian Disaster Preparedness Center (ADPC) and co-hosted by the Government of Vietnam. Delegates from RCC member countries, namely Bangladesh, Cambodia, China, India, Indonesia, Iran, Jordan, Lao PDR, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand, Timor L’este and Viet Nam attended the meeting. The Meeting issued the “Hanoi RCC 5 Statement on Mainstreaming Disaster Risk Management in Development (MDRD) in Asian Countries”.

The Statement noted: “Realizing that disaster risk management (DRM) is not a stand-alone sector but an essential concern that operates at all levels and across all sectors; and that significant action is required to mainstream DRM in the process of development policy, planning and implementation; and a proactive approach is required by decision makers and planners in planning agencies and Ministries of all levels of Government, the donor community; UN and development agencies”.

In October 2012, 5th Asian Ministerial Conference on Disaster Risk Reduction was held in Yogyakarta, Indonesia. The Conference was attended by Heads of Government, Ministers, and Heads of Delegation of countries in Asia and the Pacific. The Conference has issued “Yogyakarta Declaration on Disaster Risk Reduction of in Asia and the Pacific 2012”:

Concerning the mainstreaming DRM in the development, the Yogyakarta Declaration called on DRR stakeholders to: Participate fully in the consultations now underway worldwide to mainstream disaster risk reduction into the post-2015 Development Agenda and to provide input for the development of a new Post-2015 DRR framework. On integrating local level disaster risk reduction (DRR) and climate change adaptation (CCA) into national development planning: Strengthen laws and regulations, institutional arrangements, and risk governance for DRR and CCA; link national development planning and financing with local development agenda; make use of existing regional and sub-regional resources for local capacity building; and increase the involvement of multi-stakeholders, especially the vulnerable groups including women, children, elderly and persons with disabilities, in planning and decision-making processes”.

The Statement and declaration above-mentioned are presented for the important role of mainstreaming DRM into national and sector development plans and strategy. The experiences of some countries are briefly described below to further emphasis the view of the 2005 Hanoi Statement and Yogyakarta Declaration 2012.

Mainstreaming disaster risk reduction into socio-economic development plans in Viet Nam

The Government of Viet Nam has issued a number of policies and legal instruments guiding the mainstreaming of DRR into socio-economic development plans of the country at all levels, such as: Viet Nam's Agenda 21 for Strategic Direction for Sustainable Development of Viet Nam (2007); the National Strategy on the Prevention and Mitigation of Natural Disasters to 2020 (2007); the National Target Program to Respond to Climate Change, (2008); the Scenarios for Climate Change and Sea Level Rise for Viet Nam (2009); the Community Based DRM Decision 1009 (2009); the National Strategy for Environmental Protection
The localities and sectors have responded actively to and are proceeding with, the mainstreaming of DRR into their development planning and plans, including the National Strategy on Prevention and Mitigation of Natural Disaster to 2020, the Community Based DRM Decision, and the National Target Programme of Adaptation to Climate Change; the sectors which are heavily affected by natural hazards and climate change have well also started to mainstream DRR into their annual planning and plans and have organized reviews and shared experiences in mainstreaming DRR into socio-economic development planning and plans of sectors.

Many projects/programs of integrating DRR into the socio-economic development plans in the locality have been implemented with the support of international organizations. However, the integration and strategic direction of DRR and climate change adaptation (CCA) in the socio-economic development plan still have constraints as it is mainly based on experiences and qualitative forecasts; the mainstreaming activities are conducted mainly in some sectors that are directly related to the disaster and are particularly vulnerable such as water, agriculture, fisheries; DRM is considered as the main activity of the CCFSC and Search and Rescue Committees rather than the task of the whole social system. There is also a lack of mechanism for mainstreaming activities.

Regarding mainstreaming activities, the Draft Law on Prevention, Protection and Mitigation of Natural Disasters in Viet Nam has stipulated the basic principles for mainstreaming: the contents of natural hazard DRM must be integrated in the planning and socio-economic development of the country, ministries and local levels.

Experiences of mainstreaming the disaster risk reduction into socio-economic development plans in some selected countries

1) CHINA
China mainstreams DRM activities into all Five-year social-economic development plans at all levels from the national to the provincial and in all sectors.

In 2006, the Five-year Plan for science and technology development, the Chinese Government has put in as a major task of the technical development plan an emergency response system and an enhanced, national public security force to ensure public security, address disasters and other public accidents.

In 2007 the Chinese Government announced the Five-year Plan of Comprehensive Disaster Reduction, which requires local governments to include the delivery of disaster relief in their local socio-economic development plans.

2) INDONESIA
In 2007, Indonesia announced Law No. 24 on Disaster Management that includes many articles/provisions that stipulates that the central government and local authorities are responsible for mainstreaming DRR and disaster management activities into their respective planning and development programs. The mainstreaming of DRM into development plans
must be made through local government coordination and be integrated and synchronized. The necessary components of DRM should be included in regional and national plans.

In addition, DRR must be integrated into the various sectors, from building infrastructure to education at all levels. Disaster risk reduction should be integrated into local prioritized policy and be implemented by the capable institutional structures.

Recently, Indonesia has policies and detailed implementation plans for strengthening the legal and institutional framework for national DRM content and always sets out to integrate DRR into the decision-making development process.

3) THE PHILIPPINES

The Philippines has a comprehensive legal and institutional framework relating to the mainstreaming the DRR into national and local plans and policy.

The Philippines has integrated DRR into plans and activities in all sectors from land use planning, budgeting, infrastructure, education, health, environment, housing and other areas. The Philippines also requires that the mainstreaming of DRR within the country utilises internationally accepted principles of DRM and other relevant strategies and policies.

There are a range of projects supported by international organizations aimed at mainstreaming DRR and supporting local governance. For example, GTZ/DILG, in collaboration with ADPC and supported by ECHO, integrate DRR into the education sector, and develop modules to mainstream DRR into the high school curriculum as well as conduct research on the impact of disasters on education.

An example of specific guidelines on mainstreaming DRR into socio-economic development plans and policy in The Philippines

4) JAPAN

In accordance with the Disaster Countermeasures Act, 1997 (revised in 2003), the portion bearing in any plan related to disaster prevention, which is prepared by the chief officer of a designated administrative organ as provided under other Acts, may not be inconsistent with or in conflict with the basic disaster plan or any operational disaster prevention plan.

Designated national and local public corporations shall have the responsibility to formulate a disaster prevention plan pertaining to their respective business and to implement it as
prescribed by law, and at the same time, to render cooperation in their respective activities to
the prefecture, city, town or village in order that the State, prefecture, city town or village
may effectively formulate and implement their disaster prevention plans as provided by this
Act.

Designated national and local public corporations are obligated to contribute through their
respective businesses toward the cause of disaster prevention, in view of the fact that their
business is for the public good.

**Recommendations**

Viet Nam has a relatively comprehensive legal framework and institutions to enable the
integration of DRR activities into socio-economic development plans at national, local and
sectoral levels. However, for successful integration activities, it is important that the
resources for these activities are sufficient and available (i.e. human and physical resources as
well as budget).

Integration projects have been implemented but are so far only at the pilot stage and have not
been scaled up and developed into national policies.

Viet Nam needs guidance for the integration of DRR into socio-economic development
activities on the basis of the Law.

**REFERENCES**

There are numerous publications, such as Guidelines and manuals relating to the
mainstreaming of DRR into socio-economic development plans and strategies at national and
local levels, which have been introduced and legisltated for, in many countries in the Asia
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