Chapter 1
Disaster, Risk and Evolution of the Concept

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Abstract Disaster is a function of hazard, vulnerability and capacity. The subject of disaster has evolved over time, and the concept of risk reduction is an accepted trend globally in this regard. A number of recent literatures and reports supported the accelerated paradigm shift from response to disaster risk reduction in different countries. United Nations International Strategy for Disaster Reduction (UNISDR) has promoted the integrated concept of disaster risk reduction through five priority areas, known as Hyogo Framework for Action (HFA: 2005–2015). HFA is considered as the global framework of risk reduction, agreed by UN member states, with specific targets. Since the adoption of the HFA in 2005, a certain progress has been made in HFA implementation by national governments with support from international and regional agencies. At the same time, the need for comprehensive DRR approach, thus HFA implementation at local level, has been strongly recognized. Effective DRR relies on the efforts of many different stakeholders, including UN agencies, regional and international organizations, CSOs, private sectors, media and academics. The collaboration and cooperation among all stakeholders is crucial in order to improve the resilience of communities. Thus, local level implementation and multi-stakeholder collaboration are considered as the key aspects of disaster risk reduction.

Keywords Disaster risk • HFA • ISDR • Resilience • Vulnerability

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1.1   Introduction

The world continues to experience dramatic suffering and loss of life due to natural hazards. Disasters caused by natural hazards seriously undermine the result of development gains and investment, and remains a major impediment to sustainable development.

> Over the last 20 years, it is conservatively estimated that disasters have killed 1.3 million people, affected 4.4 billion and resulted in economic losses of USD 2 trillion. These are staggering numbers when you consider what it means in terms of missed opportunities, shattered lives, lost housing, schools and health facilities destroyed, cultural losses and roads washed away (UNISDR 2012a).

The Asia Pacific region is the most disaster prone and the most affected by disasters in the world. Although the Global Assessment Report 2011 suggests that deaths due disasters is declining globally, the concentration of human losses has been enormous in the region. Seventy-five percent of all deaths due to disasters from 1970 to 2011 are concentrated in the Asia pacific region (UNISDR and UNESCAP 2012).

The region also bares the largest proportion of disaster losses globally. For example, in 2011 the economic losses in the region were close to 80 % of the global losses. The most frequent hazard in the region is hydro-meteorological in nature. This means the region is more susceptible to the effects of climate extremes and climate variations. For example, 1.2 billion people have been exposed to hydro-meteorological risks through 1,215 events since 2000, compared to about 355 million people exposed to 394 climatological, biological and geo-physical disaster events during the same period (UNISDR and UNESCAP 2012; UNISDR 2012b).

Also, human exposure to hydro-meteorological hazards still continues to rise. Population almost doubled from 2.2 to 4.2 billion people between 1970 and 2010, and the average number of people exposed to yearly flooding more than doubled from 29.5 to 63.8 million. In addition, the population's resident in cyclone-prone areas grew from 71.8 to 120.7 million (UNISDR and UNESCAP 2012).

1.2   Evolution of the Disaster Paradigm

1.2.1   Recognition Towards Disaster Risk Reduction

In the 1970s and early 1980s, the vulnerability approach to disasters began with a rejection of the assumption that disasters are "caused" in any simple way by external natural events, and a revision of the assumption that disasters are "normal" (Wisner et al. 2004). In addition, since determinant of disaster risk was more focused than the existence of hazards themselves, the key problem of vulnerability was less understood. There is a danger in treating disasters as something peculiar, as events that deserve their own special focus. For example, it is to risk separating "natural" disasters from the social frameworks that influence how hazards affect people, thereby

putting too much emphasis on the natural hazards themselves, and not nearly enough on the surrounding social environment (Wisner et al. 2004). Hence global trends shows increasing losses from disasters and human activities are related to the increasing losses. Thus, people and societies are becoming more vulnerable. Although the frequency of dramatic natural events may be constant, human activities contribute to their increased intensity. Impact depends on development practices, environmental protection, regulated growth of cities, distribution of people and wealth and government structures (UNISDR 2002). If a disaster occurred in a megacity, the aftermath is spread all over the world because of the large information system and network, complexity and globalization. Therefore, international and comprehensive disaster risk reduction is needed. Development gains were being jeopardized by the increasing losses from severe disasters despite advances in science and technology. Because of these changes, a global movement concerned with a world safer form disasters was starting to develop from late 1980s (Kyoto University and UNISDR 2010).

For the last several years, Disaster Risk Reduction (DRR) has gained its strong recognition due to the increased loss and damages of human lives and economic assets caused by the impact of natural hazards and through the evolution of the international discussion on DRR, which will be explained in the next section Yodmani (2001). Within the UNISDR Terminology 2009, DRR is defined as "the concept and practice of reducing disaster risk through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment and improved preparedness for adverse events". DRR has a broad context including governance, technical, education and awareness, infrastructure, mitigation and preparedness issues. As Twigg (2007) considers, there are different definitions of the term of DRR in the technical literature but it is generally understood to mean the broad development and application of policies, strategies and practices to minimize vulnerabilities and disaster risks through society (Matsuoka 2013).

A number of recent literatures and reports supported the accelerated paradigm shift from response to disaster risk reduction in different countries. The below are the several examples in their national policies recognizing the need and the ongoing paradigm shift (Shaw and Okazaki 2004).

- The Pakistan's National Disaster Management Ordinance was promulgated in December 2006. The National Disaster Management Authority (NDMA) was established and assigned to manage complete spectrum of all types of disasters through a paradigm shift by moving away from response and relief oriented approach and by adopting a disaster risk reduction perspective from local government level upwards (Government of Pakistan 2006).
- The Bangladesh National Plan for Disaster Management 2005–2006 specified "Our future direction is to ensure we achieve a paradigm shift in disaster management from conventional response and recovery to a more comprehensive risk reduction culture" (Government of Bangladesh 2005).
- The Philippine's National Disaster Risk Reduction and Management Plan 2011–2028 (NDRRMP) mentioned that "the enactment of Republic Act 10121 otherwise known as the Philippines Disaster Risk Reduction and Management

Act 2010 has laid the bases for a paradigm shift from disaster preparedness and response to disaster risk reduction and management" (Government of the Philippines 2011).

- Lao PDR's the latest draft National Disaster Management Plan 2012–2015 specified that "the plan has been developed on the basis of a national vision and mission to reduce the vulnerability of all the people of the Lao PDR to the effects of natural, environmental and human induced hazards to a manageable and acceptable humanitarian level by a bringing a paradigm shift in disaster management from conventional response and relief practice to a more comprehensive risk reduction culture" (Government of Lao PDR 2012).

As Yodmani (2001) discussed, it is important to note that a paradigm shift in the development sector from income poverty to human poverty has been paralleled in the disaster management sector by a shift from setting disasters as extreme evens created by natural forces, to viewing them as manifestations of unresolved development problems.

1.2.2 Resilience

The DRR community used the terms prevention, preparedness, resistance, mitigation, response and so on to describe various risk-reduction efforts. However, recently, building resilience against disasters has become one of the important concepts within DRR. As Surjan et al. (2011) discussed, resilience was first talked about in the 1970s in terms of defining ecosystem, and has gained stronger reorganization for the last decade or so in the socioeconomic regimes through the advanced holistic understanding of ecological, sociological, and economic systems. In addition, social scientist uses the term resilience to explain how human capabilities to return to normalcy after absorbing stress or surviving negative changes. For the last decade or so, the DRR community started paying attention to the notions of resilience and examining ways to build, nature and increase resilience (Surjan et al. 2011).

Resilience is defined as " the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manger, including through the preservation and restoration of its essential basic structures and function" (UNISDR 2009).

As Joerin (2012) pointed out, there were a number of scholars (Adger 2000; Allen 2006; Bruneau et al. 2003; Paton and Johnston 2001; Twigg 2007) regard the extent of people's abilities to respond to a disturbance (e.g. disaster) to be shaped by the political, economic, physical and natural context of their environment where they are embedded in. Twigg (2007) suggested the three capacities as a system or community resilience: (1) capacity to absorb stress or destructive forces through resistance or adaptation; (2) capacity to manage, or maintain certain basic functions and structures, during disastrous events; (3) capacity to recover or bounce back after an event. Surjan et al. (2011) considers that resilience has four main elements:

Redundancy, Flexibility, Capacity to reorganize, and Capacity to learn. Yodmani (2001) presented a disaster risk formula as below:

$$\text{Disaster Risk} = \frac{\text{Hazard} \times \text{Vulnerability}}{\text{Capacity}}$$

Therefore, considering these discussions, resilience has a broader concept than capacity because it goes beyond the coping or managing capacity. As Twig discussed, a focus on resilience means putting greater emphasis on what communities can do for themselves and how to strengthen their capacities, rather than concentrating on their vulnerability to disaster or their needs in a emergency.

World Disaster Report 2010 pointed out that the ultimate objective of DRR and climate change adaptation is to produce resilient cities. In the Asia Pacific Disaster Report 2012, Heads of the UNESCAP and UNISDR acknowledges "we are still working to identify the ways in which different components of risk consisting of hazards, vulnerability and exposure, which interact to increase to total risk and trigger damage" (UNISDR and UNESCAP 2012). Therefore, efforts to decompose risks in a community are important to understand what kind of hazards, vulnerability and exposure they are faced with to build their resilience.

1.2.3 Vulnerability and Exposure

As Twigg (2007) discussed, the terms "resilience" and "vulnerability" are opposite sides of the same coin, but both are relative terms since one has to ask what individuals, communities and systems are vulnerable or resilience to, and to what extent. Vulnerability is defined by UNISDR (2009) that "the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard". Exposure is defined by UNISDR (2009) that "People, property, systems, or other elements present in hazard zones that are thereby subject to potential losses" (UNISDR 2009). Exposure to hazards has multiplied as urban centers grow and economic activities expand into increasingly exposed and hazard-prone land (UNISDR and UNESCAP 2012).

$$\text{Natural Hazards} \times \frac{\text{Vulnerability and Exposure}}{\text{Resilience}} = \text{Disaster Risk}$$

Considering the recent discussions on resilience, exposure and vulnerability, the formula suggested by Yodmani (2001) can be modified as the other one as above, which reflects better the purpose of Disaster Risk Reduction to reduce vulnerability and exposure to hazards and to build resilience from impacts of disasters. As Asia Pacific Disaster Report 2012 pointed out, exposure to disaster risk is growing faster than our ability to build resilience and the shared challenge is to control both the growing exposure and rising vulnerability (UNISDR and UNESCAP 2012).

1.3   Evolution of the International Agenda on DRR

As various scholars (Twigg 2007; Joerin 2012; Surjan et al. 2011) discussed, disaster risk reduction is a relatively new concept and evolved only over the past two to three decades. The international agenda on Disaster Risk Reduction (DRR) advanced significantly during the last two decades. In the late 1980s, increasing losses in development gains from disasters prompted a global movement towards disaster risk reduction.

1.3.1   International Decade for Natural Disaster Reduction

The United Nations declared 1990s as International Decade for Natural Disaster Reduction (IDNDR) to contribute to technical and scientific buy-in and to make DRR agenda imperative. "Yokohama Strategy and Plan of Action" which was adopted at the first United Nations World Conference on Disaster Reduction (WCDR) in 1994 through the mid-review of IDNDR provided the first international blueprint for disaster reduction policy guidance focusing on social and community orientation while largely encouraging technical solutions to lessen the probability of disasters.

1.3.2   International Strategy for Disaster Reduction

At the end of the IDNDR in 1999, the United Nations General Assembly established the secretariat of the United Nations International Strategy for Disaster Reduction (UNISDR) to facilitate the implementation of the International Strategy for Disaster Reduction, as the successor mechanism of IDNDR within the United Nations to promote increased commitment to DRR and strong linkages to sustainable development. UNISDR was mandated in the United National General Assembly Resolution (56/195) "to serve as the focal point in the United Nations system for the coordination of disaster reduction and to ensure synergies among the disaster reduction activities of the United Nations system and regional organizations and activities in socio-economic and humanitarian fields" (UNISDR 2011a).

The second UN WCDR was held 3 weeks after the catastrophic event of the Indian Ocean tsunami in January 2005 in Kobe City, Hyogo Prefecture, Japan. With stronger political commitment on DRR, the "Hyogo Framework for Action (HFA) 2005–2015: Building the Resilience of Nations and Communities to Disasters" (UNISDR 2011a, b) was adopted by 168 Member States and endorsed unanimously by all UN Member States in the General Assembly. The discussions at the second UN WCDR and the HFA as the outcome document were based on the consultation process through the Inter Agency Task Force on Disaster Reduction facilitated by
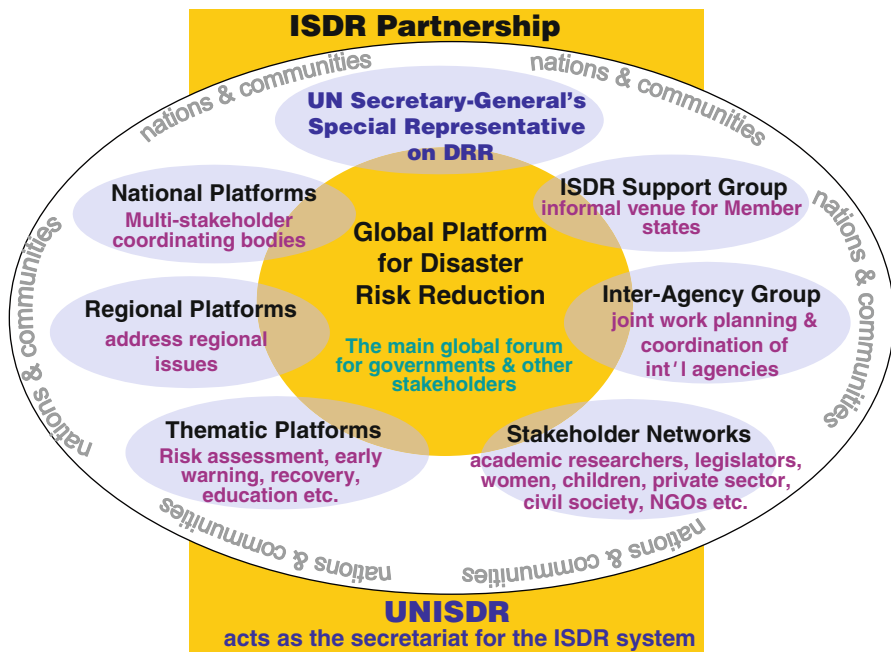
Fig. 1.1 Elements consisting ISDR system (*Source*: UNISDR 2005)

UNISDR. The consultation process was building on the review of the Yokohama Strategy, which identified key challenges. International DRR agenda shifted from technical and scientific work among experts to political commitment by decision makers backed by such experts. This shift and increased political commitment and recognition on DRR led to the development of HFA as the comprehensive DRR policy guidance to all stakeholders. With the adoption of HFA, the United Nations General Assembly tasked UNISDR with supporting its implementation and monitoring the progress of its implementation. UNISDR is the UN office dedicated entirely to disaster risk reduction, as an entity of the UN Secretariat led by the Special Representative of the Secretary-General for Disaster Risk Reduction (UNISDR 2011a).

Adoption of the HFA at the second UN WCDR and its follow up has created and fostered the movement on DRR. This period corresponds to the period of realization of the people's vulnerability and emerging comprehensive approach on disaster management discussed by Surjan et al. (2011), leading to a more comprehensive approach by considering the inter-related components: hazard assessment; vulnerability analysis; and enhancement of management capacity.

UNISDR mobilizes and coordinates a vibrant network (Fig. 1.1) and partnership called ISDR system, which consists of numerous organizations, governments, inter-governmental and non-governmental organizations, international financial institutions, scientific and technical bodies and specialized networks, UN agencies,

civil society and private sector. All of these stakeholders have essential roles in supporting nations and communities in DRR.

The ISDR system's objective is to generate and support a global DRR movement and to build "a culture of prevention" in societies as part of sustainable development. In pursuit of this objective, the ISDR system coordinated by the secretariat of the United Nations International Strategy for Disaster Reduction (UNISDR) supports nations and communities to implement HFA, raises disaster reduction profile in organizational priorities and programmes, and builds a stronger, more systematic and more coherent international effort to support national disaster reduction efforts (Matsuoka 2013).

The UNISDR secretariat supports the ISDR system in HFA implementation, and coordinates international efforts on DRR, including the organization of a Global Platform every 2 years. UNISDR advocates for greater investment and the integration of DRR into policies and programmes for climate change adpation, and informs and connects people by providing practical tools and publishing the Global Assessment Report on DRR, an authoritative analysis of global disaster risk. UNISDR also supports the monitoring of HFA implementation (UNISDR 2012a).

Throughout the enhanced partnership and collaboration among a wide range of partners to implement HFA at various levels, the concept of resilience, vulnerability, exposure as components of disaster risks have become more informed concept in order to take concrete actions directly addressing to these components.

1.4 Progress on DRR at Different Levels

As Twigg (2007) discussed, no single group or organization can address every aspect of DRR which sees disasters as complex problems demanding a collective response from different disciplinary and institutional group—in other words, partnerships. The level of follow up actions of the ISDR system to promote HFA implementation includes global, regional, national, and thematic levels by emphasizing the multi-stakeholder partnership.

1.4.1 Global Level

The Global Platform on Disaster Risk Reduction is the main global forum being organized by UNISDR every 2 years in Geneva, Switzerland where the Headquarters of the UNISDR is located. The Global Platform brings together all parties and stakeholders involved in DRR, and campaigns to build global awareness. The first session of the Global Platform on DRR was organized in 2007, the second session in 2009, the third session in 2011, and the fourth session will be held in 2013. The Global Platform allows key actors to assess HFA implementation progress, enhance awareness of DRR, share experiences and learn from good practice, and identify

remaining gaps to accelerate national and local implementation. The outcomes of the session of the Global Platform are captured in a Chair's summary, which become key guidance for multi-stakeholders working on DRR in their own priority setting. Analysis of Chair's summaries of the Global Platform will be discussed later in this chapter to explore the trends within the recent discussions. The Global Platform is complemented by national, regional, and thematic platforms (UNISDR 2011b). Since the adoption of the HFA in 2005, the Global Platform has been playing a crucial role as the global mechanism to bring multi-stakeholders on DRR to discuss the progress and challenges in the implementation of HFA.

1.4.2 Regional Level

Regional Platforms, being coordinated by regional presences of UNISDR with a wide range of regional partners, are regional-focus mechanisms which exist in all the regions (Africa, Asia, Pacific, Americas, and Europe). Through the regional platforms, including regional ministerial conferences, regional DRR actors get together and discuss regional progress and challenges on DRR, including participations from representatives from states, national platforms, NGOs, scientific and technical organizations, and regional intergovernmental organizations, UN offices, economic commissions, development banks, inter-governmental organizations, committees, associations and networks. In Asia and Pacific Region, the regional ministerial conference on DRR is organized every 2 years to promote the regional implementation of HFA and aims at addressing common regional challenges and priorities. ASEAN Agreement on Disaster Management and Emergency Response (AADMER) was entered into force in 2009 as a regional agreement that legally binds ASEAN Member States to promote regional cooperation and collaboration in reducing disaster losses and in testifying joint emergency response to disasters in the region. In Africa, African Regional Strategy for DRR was endorsed by the African Union. Pacific region has the Pacific Disaster Risk Reduction and Disaster Management Framework for Action: 2005–2010 (the Madang Framework). The Medium Term Plan 2007–2011 was adopted by the Ministerial Session of the European and Mediterranean Major Hazards Agreement (EUR-OPA). The Arab Strategy for DRR 2010–2015 was adopted by the League of Arab States Council of Ministries Responsible for the Environment.

The HFA has brought about a significant momentum for change at the regional level, as these regional adopted strategies are modeled on HFA (UNISDR 2011b). As appreciated within the external evaluation conducted by AusAID, the regional platforms and ministerial conference have improved the ability of UNISDR to coordination among various actors (AusAID 2012). Also considering the increased importance and priority to DRR in each region witnessed for the last several years in particular since the adoption of HFA, the regional actors on DRR have been increasing which requires a regional coordinating mechanism.

1.4.3 National Level

The need to systematically reduce the increased impact of disaster has gained strong recognition especially after the December 2004 Indian Ocean tsunami disaster (UNISDR 2007a). As discussed earlier in this chapter, DRR is the cross cutting issues and requires political and legal commitment, public understanding, scientific knowledge, careful development planning, responsible enforcement of policies and legislation, people-centered early warning systems, and effective disaster preparedness and response mechanism. A multi-stakeholder National Platform for DRR can help provide and mobilize the required knowledge, skills and resources (UNISDR 2007a).

A National Platform for Disaster Risk Reduction is a nationally owned and led forum or committee for advocacy, coordination, analysis and advice on DRR. This mechanism of national DRR coordination has been promoted by UNISDR for the last two decades including IDNDR period. HFA reinforced the call for national platforms for DRR as well (UNISDR 2011b). The number of countries which established its national platform on DRR has been increased to 81 countries as of the end of 2011 (UNISDR 2012a). Ideally, National Platforms are comprised of various stakeholders to combine different expertise. Stakeholders include government, nongovernmental organizations, academic and scientific institutions, professional associations, Red Cross/Red Crescent Societies, private sector, media, etc.

Harvey (2010) stressed that the role of the national government in DRR is the responsibility to set the laws and regulations. Asia Pacific Disaster Report 2012 pointed out the challenge in terms of development of DRR legislation. There is no linearity in the development of DRR legislation, policy on its subsequent integration into development planning. This means that countries develop and adopt instruments that fit their needs without necessarily going through a sequential and comprehensive process. Out of 47 countries analyzed in the Asia and Pacific region, only 10 countries have available laws and policies on DRR and development plans that cover DRR and CCA. Of these ten countries, only one country, Viet Nam have DRR legislation, a DRR plan that is long term, and both DRR and CCA fully integrated into its national development plan (UNISDR and UNESCAP 2012). The Philippines is also one of the countries which advanced the DRR legislation and policies, including the enactment of "Philippines Disaster Risk Reduction and Management Act of 2010" as well as the Act No. 9729 "Climate Change Act of 2009" (Office of Civil Defense 2011). In order to monitor these progresses made at national levels, the monitoring mechanism through National Progress Reporting for HFA implementation being facilitated by UNISDR, which will be discussed in detail in the next section in this chapter.

1.4.4 Thematic Level

DRR is a cross-cutting issue and need to be integrated into various thematic areas and be taken acted upon. Thematic Platforms are independent groups in the disaster risk reduction community focused on supporting the implementation of the HFA on

a specific area focus. They aim to integrate specific global technical expertise with the concerns of policy makers and practitioners in their thematic areas. Existing thematic platforms within ISDR system includes the themes such as recovery, early warning, earthquake, flood, wind related hazards, land slide, education, capacity development etc. A number of self-organized thematic platforms mainly composed of technical and scientific bodies have been established. They integrate global technical expertise, regional concerns, and national capacities within the thematic areas. By working with these thematic platforms, UNISDR developed guidelines for integrating thematic issues such as gender issues for disaster risk reduction, which was appreciated in the external evaluation on UNISDR conducted by AusAID (2012).

Considering the broad expertise requiring for taking comprehensive DRR policies and actions, expertise inputs through thematic platforms are useful for the international community. Together with the scientific and technical committee, these expert thematic platforms contribute to the thematic technical analysis for the Global Assessment of DRR.

As UNISDR is a relatively young organization being established in 2000, early years of UNISDR focused heavily on advocacy to ensure DRR to be more widely recognized. In recently years, the coordination function has significantly advanced through its convening role including the organization of the Global Platform, Regional Platform, facilitation of these thematic platforms, monitoring of the HFA implementation, and the issuance of the Global Assessment Report. United Nations General Assembly Resolution in 2011 (United Nations 2011) requested UNISDR to facilitate the development of a post-2015 framework for disaster risk reduction.

1.5 Hyogo Framework for Action and Its Five Priorities

"Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters" was formulated as a comprehensive, action-oriented response to international concern about the growing impacts of disasters on individuals, communities and national development. Based on careful study of trends in disaster risks and practical experience in DRR, and subjected to intensive negotiations during 2004 and early 2005, the HFA was finally brought to fruition and adopted at the second United Nations World Conference on Disaster Reduction (January 2005 in Kobe, Hyogo, Japan), and was endorsed unanimously by all the United Nations Member States at the United Nations General Assembly in the same year (Matsuoka et al. 2011, 2012; Matsuoka 2013). The expected outcome of the HFA is substantive reduction of disasters losses in lives and in the social, economic and environment assets of communities and countries. This is further elaborated into the below three Strategic Goals and five Priorities for Action (UNISDR 2005).

HFA three strategic goals:

1. The more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction;

2. The development and strengthening of institutions, mechanisms and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards; and,
3. The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes in the reconstruction of affected communities.

HFA five priorities for action:

HFA priority 1: making disaster risk reduction a priority,
HFA priority 2: improving risk information and early warning,
HFA priority 3: building a culture of safety and resilience,
HFA priority 4: reducing the risks in key sectors, and
HFA priority 5: strengthening preparedness for response.
Through the priorities 1–5, HFA recommends a set of actions to help implement comprehensive DRR.

1.6 Mid-Term Progress Review of the HFA

1.6.1 Mid-Term Progress Review of the HFA

During the year 2010, the Mid-term review of the HFA implementation was conducted by UNISDR. Since the adoption of the HFA in 2005, a certain progress has been made in HFA implementation by national governments with support from international and regional agencies. At the same time, the need for comprehensive DRR approach, thus HFA implementation at local level, has been strongly recognized. The Report for the HFA Mid-term review (UNISDR 2011b) admitted that there was still insufficient level of implementation of the HFA at the local level. In addition, GAR 2011 mentions that the strong recognition to the central role of local governance in DRR and DRM acknowledge by most countries, and also added that a failure to strengthen local governments and make progress in community participation means that the gap between rhetoric and reality is widening (UNISDR 2011d). Such gap is being targeted to address through international initiatives such as the ISDR World Campaign for DRR "Making Cities Resilient 2010–2015" (UNISDR 2010), which promotes local governments from around the world to take action in implementing DRR activities.

1.6.2 Comparison Between Global and Asia-Pacific Regional Progress

This section provides an overview analysis of general trends of the HFA implementation in the Asia-Pacific region, as compared to broader global trends towards

improved DRR. First, the section briefly outlines the background of the recent 2011 publication, the Global Assessment Report (GAR) on Disaster Risk Reduction. Then, it presents a comparative bar chart with a written commentary on the position of the Asia-Pacific region, in relation to global progress over the past 4 years of 2007–2011, consisting of two reporting cycles.

In the reporting period of 2007–2009, 102 countries participated in the reporting process. The Global Assessment Report 2009 considered 78 countries for its analysis. In the reporting period of 2009–2011, 133 countries participated in the reporting process. The Global Assessment Report 2011 considered 82 countries for its analysis (delayed submissions were not included in the analysis by the GAR). The Asia-Pacific regional synthesis report reflects the review and analysis of information from the national progress reports of 27 countries in the region, covering the 2009–2011 reporting period (UNISDR 2011c). Except for Priority Area 2, in general, HFA progress in the Asia-Pacific was either less than, or equal to, the global progress during the 2009–2011.

1.7 Localizing HFA Implementation

The HFA appeals to national governments, while acknowledging the enabling support of international and regional players, to take action so that disaster losses, in terms of lives, social, economic and environmental assets, are substantially reduced by 2015. To help attain that outcome, it identifies five specific Priorities for Action. The five priorities are not mutually exclusive, especially when focusing on the processes. HFA implementing guideline for national governments titled "Words Into Action: A Guide for Implementing the Hyogo Framework" (UNISDR 2007b) was produced by UNISDR together with partners to be used as a guideline on what processes governments can take in order to take actions and accomplish the five priority areas.

There has been progress in implementation of HFA at the national level; however, a strong need for a comprehensive DRR action at the local level has arisen. This is because impacts of disasters are most immediately and intensely felt at the local levels; therefore, the most effective process in which the HFA would be implemented is at the local level, adapted and owned by the citizens and officials of the local government. Through this process, the decentralized local/city governance in DRR activities is strengthened, and stakeholder roles and responsibilities are identified, clarified, and eventually carried out (Shaw 2009).

Each local entity is unique in its immediate and long-term needs for DRR. All people and entities have a stake in DRR to protect their lives and livelihoods; therefore, not only should their voices be heard, but also they should be able to participate actively. The HFA will greatly increase in its importance and impacts if implemented by local/city governments who have access to those citizens and entities. To facilitate this process, development of the HFA implementation guideline for local governments called "A Guide for Implementing the Hyogo Framework for

Table 1.1 20 Tasks drawn from five HFA priorities to be implemented by local stakeholders (*Source*: Kyoto University, UNISDR 2010)

Local/city governance (HFA priority 1 related)

Task 1. Engage in multi-stakeholder dialogue to establish foundations for disaster risk reduction

Task 2. Create or strengthen mechanisms for systematic coordination for DRR

Task 3. Assess and develop the institutional basis for disaster risk reduction

Task 4. Prioritize disaster risk reduction and allocate appropriate resources

Risk assessment and early warning (HFA priory 2 related)

Task 5. Establish an initiative for community risk assessment to combine with country assessments

Task 6. Review the availability of risk-related information and the capacities for data collection and use

Task 7. Assess capacities and strengthen early warning systems

Task 8. Develop communication and dissemination mechanisms for disaster risk information and early warning

Knowledge management (HFA priority 3 related)

Task 9. Raise awareness of disaster risk reduction and develop education programme on DRR in schools and local communities

Task 10. Develop or utilize DRR training for key sectors based on identified priorities

Task 11. Enhance the compilation, dissemination and use of disaster risk reduction information

Vulnerability reduction (HFA priority 4 related)

Task 12. Environment: incorporate DRR in environmental management

Task 13. Social needs: establish mechanisms for increasing resilience of the poor and the most vulnerable

Task 14. Physical planning: establish measures to incorporate disaster risk reduction in urban and land-use planning

Task 15. Structure: strengthen mechanisms for improved building safety and protection of critical facilities

Task 16. Economic development: stimulate DRR activities in production and service sectors

Task 17. Financial/economic instruments: create opportunities for private sector involvement in DRR

Task 18. Emergency and public safety; disaster recovery: develop a recovery planning process that incorporates DRR

Disaster preparedness (HFA priority 5 related)

Task 19. Review disaster preparedness capacities and mechanisms, and develop a common understanding

Task 20. Strengthen planning and programming for disaster preparedness

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Action by Local Stakeholders" (Kyoto University, UNISDR 2010) emerged under the initiative called ISDR Asia Regional Task Force on Urban Risk Reduction (RTF-URR), which is one of regional thematic platforms of the ISDR system (Table 1.1).

"A Guide for Implementing the Hyogo Framework for Action by Local Stakeholders" (referred hereon as the Guide) interprets "Words into Action" to use for local level implementation by customizing the guidelines made for national level. The Guide is not for contingency planning alone, but it is a tool for development as well as local/city governance. By using this guideline, stakeholders may identify the gaps in its DRR plans and activities, which will allow them to then seek

Table 1.2 Tools listed in the guide for implementing HFA by local stakeholder (Source: Kyoto University, UNISDR 2010)

HFA priority 1 related tools
Focal point for disaster risk reduction
Multi-stakeholder dialogue
Disaster risk reduction framework and action plan
Stakeholder engagement/coordination mechanisms
HFA priority 2 related tools
Risk communication and dissemination mechanisms for disaster risk information
Early warning systems
Community risk assessment
Gap analysis (including risk-related information)
HFA priority 3 related tools
Disaster information system
Public disaster awareness raising programme/strategy
Training programmes and networks in support of DRR
HFA priority 4 related tools
Disaster recovery plan
Environmental impact assessment
Financial/economic instruments
Poverty reduction programme/strategy
Promoting building safety and protection of critical facilities
Risk-sensitive urban and land-use planning
Sectoral sub-work groups to stimulate DRR activities in production and service sectors
HFA priority 5 related tools
Disaster preparedness planning and programming
Capacity assessment of disaster preparedness and mechanisms

appropriate partnerships and networks to work together for safer communities. Thus, putting this Guide to use requires an arena or forum at local level by which people of different backgrounds and affiliations can share experiences, uncertainties, knowledge, and success stories of others. This forum is referred to as a "local platform." The local platform of multi-stakeholders will thus serve as an advocacy tool of DRR in the local context. It will facilitate coordination and participatory process engaged in problem-solving based on evidence. Resources from various areas will be combined. Also, it will streamline the planning process so that DRR can be accepted as a public value and be mainstreamed into local/city plans as well as day-to-day operations of constituted authorities and businesses.

Breaking down a problem into its components often helps to simplify and understand the situation. Each component may have its unique solution, and different tools can be used to reach such solution. Tools are best utilized by help from trained professionals to different sectors. Table 1.2 lists a sample of tools mentioned in the Guide that would be helpful in accomplishing the tasks given in each HFA priority area. The Guide also gives detailed descriptions of these tools, including its purpose, relevance, and use.

In the guideline "Words into Action", 22 tasks are identified to implement HFA Priority for Action. According to the "Words into Action," each task is a primary area of effort for implementing DRR and can be used to monitor achievement by using them as indicators of progress. The 22 tasks of "Words into Action" were adapted to be used at local/city levels, and a slightly modified version of the list of 20 tasks was presented in the Guide for local/city government's use (Table 1.2).

1.8 DRR Stakeholders

No single agency or actor can deal with DRR issues alone (Izumi 2012). Effective DRR relies on the efforts of many different stakeholders, including UN agencies, regional and international organizations, CSOs, private sectors, media and academics. The collaboration and cooperation among all stakeholders is crucial in order to improve the resilience of communities (UNISDR 2007a; Izumi and Shaw 2011, 2012a, b). In the rest of this section, the roles of stakeholders in DRR at international, regional, national and local levels are discussed. This chapter focuses on the traditional stakeholders in DRR that have been working for DRR as programme implementer for many years.

"International organizations" mainly consist of two major categories—international governmental organizations (IGOs) such as UN agencies, and international non-governmental organizations (INGOs) (Archer 2011). Also, there are some organizations that belong to neither such as the International Committee of the Red Cross (ICRC) and the International Federation of Red Cross and Red Crescent Societies (IFRC) that hold memberships that have their own set of legal rights defined by international conventions (Roeder 2011). ICRC and IFRC together with the Red Cross and Red Crescent National Societies comprise the International Red Cross and Red Crescent Movement. IFRC has more a strong priority on DRR.

Alliances and networks also play an important role in DRR. The alliance and network do not consist of only international entities, but rather, of national and local entities invited from all over the world. DRR is deeply linked to climate change, rapid population growth, environmental degradation, and overall increased conditions of vulnerability, and these complex nature of the subject requires discussion, learning, and information exchange beyond cities, countries, and regions that all the entities belong to.

The discussion and conference to form the Local Government Alliance for DRR has taken place since 2008 at the international level with the leadership of UNISDR. This initiative is linked to the 2010–2011 World Disaster Reduction Campaign on Making Cities Resilient by UNISDR. The Alliance aims for knowledge and information sharing, encouraging the active role of local and regional authorities in DRR, improving local governments' understanding of DRR strategies and implementation by the central government, and ensuring the coordination of DRR actions among relevant stakeholders (UNISDR 2009). Through the Alliance, it is expected

to promote capacity development for local governments, localize HFA, and share lessons learned from climate change adaptation programs (UNISDR 2009).

In addition, GNDR was formed in 2008 to bring together CSOs committed to influencing and implementing DRR policy and practice at the local, national, and international levels. The activity and achievement of the Network is highlighted by a global survey called "Views from the Frontline (VFL)" that targeted local authorities, CSOs, and communities in 48 countries about the implementation of DRR at the local level. For the second VFL survey conducted in 2009, 69 countries participated (GNDR 2009, 2011). The report results clearly showed there is a gap in the progress of the HFA implementation between the national and the local levels, and the progress in establishing national policies and legislation had not generated widespread challenges in local practices.

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