Chapter 1
Climate Change and Disaster Risks in an Unsecured World

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Abstract For the past century, climate change impacts and disaster risks have resulted not only in millions of deaths but also in a long-term compromise on human security at various scales, from local to global. Theoretical and empirical bases both reveal how the intertwining relationship of climate change and disaster risk compromises the freedom of people for a decent and dignified life. Particularly imperiled are the livelihoods, health, food, safety, and even the culture of the vulnerable population. Asia, in particular, has been the world’s most vulnerable region in terms of quantity and magnitude of impacts from various forms of disasters, climate-induced or otherwise. Amid the escalating threats, the region continues to adapt and innovate building on the lessons it gained from its vast experiences in pursuit of resiliency and security. This chapter elaborates on the interrelationship of climate change, disaster risk, and human security gleaned through the experiences of Asia while also providing a grounded analysis of the key concepts to bridge the major gap in understanding their linkages, hence, embodying the unifying theme of the book.

Keywords Climate change · Disaster risk · Human security · Asia · Resilience

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1.1 Introduction

Since the establishment of the Intergovernmental Panel on Climate Change (IPCC) in 1988, the discussion on climate change and its related issues has been given utmost priority. To date, the IPCC’s published assessment reports have been the scientific basis for governments to develop policies that respond to the threats of climate change.

The importance of climate change gained more traction when the IPCC was co-awarded the 2007 Nobel Peace Prize with former United States Vice President Al Gore. Through the joint award for the work on climate change research and education, the Norwegian Nobel Committee aspired “to contribute to a sharper focus on the processes and decisions that appear to be necessary to protect the world’s future climate, and thereby to reduce the threat to the security of mankind” (Norwegian Nobel Committee 2007). The link between climate change and human security was further highlighted, given the awardees’ argument that conflict may arise due to environmental issues. Since then, there has been a heightened interest from the academe, international organizations, and funding agencies to conduct interdisciplinary and cross-sectoral research on climate change. Discussions and researches on the topic have also been more inclusive in recent years. From looking at climate change in the prospect of natural and geographical sciences, researchers have started exploring the issue through the lens of various fields of study such as economics, political science, sociology, anthropology, and international relations, among others.

To ensure a common understanding of key concepts, the most commonly used terms in this book have been adopted from various sources and summarized in Box 1.

**Box 1. Definition of terms**

Extreme events “comprise a facet of climate variability under stable or changing climate conditions. They are defined as the occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends (‘tails’) of the range of observed values of the variable.” (Lavell et al. 2012: 30)

Disasters are “severe alterations in the normal functioning of a community or a society due to hazardous physical events interacting with vulnerable social conditions, leading to widespread adverse human, material, economic, or environmental effects that require immediate emergency response to satisfy critical human needs and that may require external support for recovery.” (Lavell et al. 2012: 31)

Disaster risk is “the likelihood over a specified time period of severe alterations in the normal functioning of a community or a society due to hazardous physical events interacting with vulnerable social conditions, leading to widespread adverse human, material, economic, or environmental effects that require immediate emergency response to satisfy critical human needs and that may require external support for recovery.” (Lavell et al. 2012: 32)

Exposure refers to “the presence (location) of people, livelihoods, environmental services and resources, infrastructure, or economic, social, or cultural assets in places that could be adversely affected by physical events and which, thereby, are subject to potential future harm, loss, or damage.” (Lavell et al. 2012: 32)

Vulnerability is “the propensity or predisposition to be adversely affected” (Lavell et al. 2012: 32). It “includes the characteristics of a person or group and their situation that
influences their capacity to anticipate, cope with, resist, and recover from the adverse effects of physical events” (O’Brien et al. 2008: 14) with reference to Wisner et al. (2004).

Climate change is “an alteration in the state of the climate that can be identified by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer.” (Lavell et al. 2012: 29). It is also the change attributed “directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods” (United Nations Framework Convention on Climate Change [UNFCC] 1992) or the change identified by “changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer.” (Hegerl et al. 2007: 667).

Disaster risk management is defined as “the processes for designing, implementing, and evaluating strategies, policies, and measures to improve the understanding of disaster risk, foster disaster risk reduction and transfer, and promote continuous improvement in disaster preparedness, response, and recovery practices, with the explicit purpose of increasing human security, well-being, quality of life, and sustainable development.” (Lavell et al. 2012: 34).

Human security “in the context of climate change is a condition that exists when the vital core of human lives is protected, and when people have the freedom and capacity to live with dignity. The vital core of human lives includes the universal and culturally specific, material and non-material elements necessary for people to act on behalf of their interests.” (Adger et al. 2014)

Resilience is “the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a potentially hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions.” (Lavell et al. 2012: 35)

The interrelationship of concepts is further presented in Fig. 1.1. As explained by Lavell et al. (2012), weather and climate events, such as typhoons, floods, droughts, and heat waves, are natural occurrences that may turn into a disaster due to vulnerable conditions and exposure. Blaikie et al. (1994) and Wisner et al. (2004) explained about the social causation of disasters, and argued that socioeconomic (e.g., job location, class, gender, ethnicity, age group, disability, immigration status) and political factors (e.g., power relations, political system at national and international scales) also contribute to disasters. For example, earthquake preparedness is affected by socioeconomic factors, particularly highlighting that people with low-income status (Najafi et al. 2015; Shapira et al. 2018) and lower levels of education (Muttarak and Pothisiri 2013; Paul and Bhuiyan 2009) tend to be more vulnerable. Countries with outdated infrastructure due to lack of resources, weak enforcement of proper building codes, and poor governance proved to have more exposure to the impacts of disasters (Halvorson and Hamilton 2007; Marks 2015). Floods and droughts have greater impact on poor households, especially in terms of property damages and the financial losses they experience as they rely on the environment for their livelihood (De Silva and Kawasaki 2018; Parvin et al. 2016). Weak governance has also been seen to aggravate disasters (Howe and Bang 2017), especially due to political (Woodward et al. 1998), as well as incoherent policies and underdeveloped decentralization strategies (Marks and Lebel 2016; Ng 2016).
Experts have recognized that climate change is a “threat multiplier,” especially with the impacts it has exhibited on agriculture and forestry, health, politics, and other facets of the society. Adger et al. (2014) support the argument of Scheffran et al. (2012) that climate systems and human security along with natural resources and societal stability are interconnected. The research reiterated that interconnection makes it difficult to determine specific interactions between climate change and human security; hence, concluding that a “good evidence on the chain of causality,” and not a highly confident statement, supports the argument. In recent history, climate change coupled with disaster risks have been observed to threaten human security, thereby affecting livelihoods, health, food, safety, and even culture, including other factors that hamper people from living a decent and dignified life.

1.2 Climate Change and Disaster Risks in Asia

Oliver-Smith (1994) and Warren (2016) as cited in Aguilar et al. (2016) stated that the root causes of disasters involve a historical process and manifest many years before the actual event as hazards called disaster risks, which are usually in the form of physical and social conditions (Hewitt 1983; Lewis 1999; Bankoff 2001; Wisner et al. 2004 as cited in Lavell et al. 2012). Fortunately, since 1999, world disaster data is collated through the Emergency Events Database (EM-DAT), a database maintained by the Center for Research on the Epidemiology of Disasters (CRED) housed at the School of Public Health of the Université Catholique de Louvain in Brussels, Belgium. The EM-DAT has been one of the most important tools for researchers
World disasters are attributable to the three kinds of natural hazards: (1) biological, such as plagues and disease epidemics; (2) geophysical, such as earthquakes, land-slides, tsunamis, and volcanic activity; and (3) hydrometeorological, such as food, drought, cyclones, and typhoons. Data shows that disasters have been increasing per year since 1900, ultimately recording a total of 440 cases in 2019. It can be noted that hydrometeorological hazards trigger the most number of disasters every year (Fig. 1.2).

For almost 120 years, Asia has experienced more disasters than any other continent in the world, with a total of 6,213 disasters, accounting for 40% of the world’s 15,401 total disasters (Fig. 1.3). Its regions located in the Pacific Ocean and Ring of Fire are regarded as one of the most disaster-prone areas that have recorded major losses and fatalities. Yet again, hydrometeorological events have constantly brought the most number of disasters in all regions.

In 2020, Germanwatch released its 15th edition of the Climate Risk Index (CRI) report which aims to assist in evidence-based policymaking and global discourse through a historical analysis of the climate change impacts in the last 20 years. Eckstein et al. (2020: 3) define the CRI as an indicator of “the level of exposure and vulnerability to extreme events, which countries should understand as warnings in order to be prepared for more frequent and/or more severe events in the future,” which only focuses on extreme weather events. Countries are ranked by their CRI scores, which was computed using a weighted total score of the following loss indicators: (1) number of deaths the highest-ranked country, with a weight of 1/6; (2) number of deaths per 100,000 inhabitants, with a weight= 1/3; (3) sum of losses in USD in purchasing power parity (PPP), with a weight=1/6; and (4) losses per unit of gross domestic product (GDP), with a weight of 1/3. A higher CRI rank indicates that the country is more vulnerable to impacts of weather-related loss events. To have a wider perspective of how countries have been impacted in the last 20 years, the
CRI report also computed a long-term CRI by getting the average of CRI scores from 1999 to 2018 which is further elaborated in Fig. 1.4. According to Eckstein et al. (2020), countries in the top 10 rank high in the list either because of extreme disasters experienced or due to the high frequency of severe weather events affecting them each year. The results further prove how Asia has been seriously impacted by extreme events considering that six out of ten countries in the list are from the region. Specifically, these countries are located in the subregions of South Asia and Southeast Asia.

To further scrutinize the impact of these extreme events to Asia, Fig. 1.5 illustrates the total number of fatalities per region for the period 1900–2019. Most fatalities occurred in Asia with deaths reaching a total of 25,996,996, which accounts for 80% of the total world fatalities. Moreover, Fig. 1.6 delves deeper into the data at the country level, and presents the top 10 countries that have experienced the most fatalities since 1900. Data is further broken down to the specific extreme event that contributed to the fatalities. The top five extreme events that accounted for the most fatalities are as follows: (1) drought, 9.6 million; (2) impact, 6.8 million; (3) epidemic, 6.5 million; (4) earthquake, 1.6 million; and storm, 1.3 million. Among all Asian countries, China recorded the highest number of fatalities amounting to 12,521,960 deaths, which is mostly attributable to the 1931 China floods, followed by India with 9,106,069 deaths, and Bangladesh with 2,990,892 deaths.

While all aforementioned information explains that Asia has indeed experienced a greater share of disasters and impacts compared to the rest of the world, it is also important to look at socioeconomic indicators that may have increased the region’s vulnerability and exposure. The indicators were obtained from the databases of the
United Nations Global Sustainable Development Goals (SDG) and World Bank, and were chosen to represent a category of human security as discussed in the Human Development Report (United Nations Development (UNDP) 1994). Table 1.1 shows Asian data as compared to those from the rest of the world for a clearer perspective of the region’s current conditions. In 2018, around 89 million Asians lived below the
international poverty line of USD 1.9 per day, representing 2% of the total regional population. For the other indicators, Asia lagged behind the rest of the world. For the food security aspect, 11.14% of the Asian population are undernourished, compared to the global level of 10.80%. For the environmental security aspect, 93.47% of the Asian population, or 4,168,857,585 people are exposed to PM 2.5 air pollution, compared to the global level of 91.30%. Finally, compared to the rest of the world, more Asians are displaced due to disasters (0.28% vs. 0.25%), and due to conflict and violence (0.38% vs 0.31%). Therefore, the combination of the frequency of natural occurrences and relatively poor socioeconomic figures in various human security aspects has undoubtedly put Asia at a disadvantage, making it more vulnerable to climate change and disaster risks.

1.3 Human Security in the Context of Climate Change and Disaster Risks: A Framework of Analysis

Narratives on the unprecedented climate change impacts and natural disasters in Asia have portrayed the intertwining relationship of climate change, disaster risks, and human security across time. Statistics have proved the vulnerability of Asia not only because of its exposure to these hazards but also due to the underlying sociopolitical and socioeconomic conditions (Redclift et al. 2013). Widespread poverty, undernourishment, unsafe drinking water services, worsening air pollution, high level of internal displacement due to conflict and violence, are few of the manifestations of persistent issues in Asia. These factors, coupled with the worsening threats from climate change and disaster risks, do not only increase the vulnerability of the people but also decrease both their coping and adaptive capacities.
Table 1.1  Asia at a glance: selected human security indicators and statistics for 2017 and 2018

| Human security categories | Indicator                                                                 | Year | Number of People | % share in total Asia population | World percentage |
|---------------------------|---------------------------------------------------------------------------|------|------------------|----------------------------------|------------------|
| Economic security         | Population in poverty (international, below $1.9/day)                     | 2018 | 89,331,056       | 2                                | 10               |
| Food security             | Prevalence of undernourishment                                             | 2017 | 497,701,600      | 11.14                            | 10.80            |
| Health security           | People using at least basic drinking water services                        | 2017 | 4,168,857,585    | 93.34                            | 89.60            |
| Environmental security    | PM2.5 air pollution, population exposed to levels exceeding WHO guideline value | 2017 | 4,174,955,909    | 93.47                            | 91.30            |
| Personal security         | Internally displaced persons, new displacement associated with disasters   | 2018 | 12,701,108       | 0.28                             | 0.25             |
| Community security        | Internally displaced persons, total displaced by conflict and violence     | 2018 | 17,050,000       | 0.38                             | 0.31             |

Source  United Nations Global SDG Database (https://unstats.un.org/sdgs/indicators/database/), accessed August 2020; World Development Indicators (https://databank.worldbank.org), accessed August 2020

From a humanist perspective, discussions on these threats have drawn attention to the necessity to prioritize the welfare of human beings regardless of gender, race, religion, ethnicity, citizenship, or other distinguishing characteristics (Gasper 2015). It is the dignity and sanctity of human life that has provided enough reason to guarantee the fullest possible development and rights for every human being. Since the initiation of the discussion on human security, its concept has been evolving to articulate the most effective means for its operationalization. From the threats of war among nations, the configuration of threats for human security has greatly changed in this post-Cold War period. Although some threats are still considered as ancient and persistent while others unprecedented, this contemporary world has much to offer in terms of addressing these threats (Alkire 2003). Extensive researches, technological and analytical advances, political changes, strong international cooperation and collaboration are some of the significant changes that have been utilized to
widen the understanding and efforts to ensure human security. Yet, the complexities and multidimensionality of human security continue to challenge various responsible institutions, especially that environmental threats have escalated beyond their perceived manageable impacts because of climate change and natural hazards (Alkire 2003; Gasper 2013; Leaning and Arie 2000).

Consequently, the vagueness of human security, encompassing everything from physical security to psychological well-being, has required it to be viewed in various lenses to magnify the specific elements that are being undermined (Alkire 2003). In terms of climate change and natural disasters, Fig. 1.7 provides the analytical structure of how the concepts of climate change and disaster risk undermine human security. The figure shows the different systems on which climate change manifests its alterations with emphasis on the physical systems that overlap with the hazards from the hydrometeorological subgroup of natural disasters. Aside from the hydrometeorological subgroup, natural disaster persists threatening the vulnerable population through the biological and geophysical hazards that similarly took thousands of lives in the past century. Further, specific elements of human security are provided to narrow down the scope by which human security can be examined in terms of the freedom and capacity to live with dignity. Likewise, the enumerated specific elements of human security embody the vital core of human lives consistent with the definition of human security stated by Adger et al. (2014).

Fig. 1.7 Analytical framework of climate change, disaster risk, and human security employed in the book
Climate change, as defined previously, presents the means of where it has been manifesting, the observed and projected impacts. Observed impacts have utilized the palaeo-climatic evidence to prove that toward the end of the nineteenth century, global (combined land and ocean) average warming of $0.45\pm0.15\,^\circ C$ had been recorded beyond the natural climate variability. Such fluctuations have been attributed to the increasing greenhouse gases (GHG) brought by anthropogenic activities like the burning of fossil fuels, deforestation, and urbanization (IPCC et al. 1990; Steffen et al. 2011). Analysis of the observed global average surface temperatures for more than the past half-century had shaped the climate models used for the projection of future climate conditions (Buis 2020). Unfortunately, the increased accuracy of these climate models revealed the continuous rise of global mean temperature by $2.6-4.8\,^\circ C$ for the next decades (Hayhoe et al. 2017). Thus, suggesting greater impacts on the biological, human, and physical systems that directly undermine human security.

For the biological systems, climate change has significantly altered the biogeochemical cycles of the Earth, hence, causing modifications to different ecosystems including their functioning (Steffen et al. 2011). Both observed and projected impacts of climate change reveal the increasing threat to the environment resulting in higher extinction risks and an abrupt and irreversible global and regional-scale change in the composition, structure, and function of the ecosystem (Field et al. 2014). Similarly, alterations in the biogeochemical cycles and the biosphere have induced changes in the physical system through the increasing frequency, intensity, spatial extent, duration, and timing of weather and climate extremes, which lead to unprecedented extremes (Seneviratne et al. 2012). Coupling the impacts of climate change in the biological and physical systems provides the bigger picture of how climate change undermines specific elements of human security through the changes in the human and managed systems. Clearly, the occurrence of weather and climate events hinders the provision of ecosystem goods and services (Osborn 2019) which directly imperil the food production, livelihoods, socioeconomic condition, and health of the affected population.

Interestingly, the physical system of climate change overlaps with the hydrometeorological subgroup of natural disasters. With this, the enumerated events in the physical system of climate change can also be viewed as natural hazards. Yet, the pervasive impacts of climate change consider it as a threat multiplier for disaster, security, and conflict (Huntjens and Nachbar 2015). Climate change directly enhances these natural hazards by increasing their intensity and frequency while also exacerbating the existing environmental degradation and mismanagement, demographic changes, rapid and unplanned urbanization, and scarcity of livelihood options for the poor (Cardona et al. 2012). Disaster risk differs from climate change because of its widened scope that covers beyond the occurrence of the natural hazards. In the context of disaster risk, natural hazard itself does not produce disaster and is not the sole concern. Other factors such as the vulnerability of the affected population, their exposure to these natural hazards and their coping capacity are also essential considerations.

For instance, the intersection of climate change and disaster risk and how they undermine specific elements of human security are vividly manifested through
circumstances such as the sea-level rise and ocean warming that have been affecting the frequency and magnitude of typhoons and storm surges. Hence, resulting in frequent wiping out of lives, shelters, properties, infrastructures, transport systems, and livelihoods (Laffoley and Baxter 2016), thereby increasing the vulnerability of the exposed population, in this case, the coastal community. Typically, these events will be followed by widespread flooding and possible landslides that worsen the situation because of the expansion of the affected population coupled with other societal, political, and economic concerns. Drought, on the other hand, has intensified and extended, thereby, affecting millions of lives and aggravating the problems on food insecurity, water pollution and scarcity, crop damage and failure, and poverty (UNESCAP 2020). Likewise, these examples could also ignite conflict within the affected population and sometimes including the concerned states due to resource scarcity and competition (Huntjens and Nachbar 2015). On the other hand, projected climate change impacts, increased exposure, and vulnerability could also lead to population displacement as an act of adaptation particularly if the threats greatly compromise their livelihood sources. Cultural dimensions of the community could also be threatened since most of their cultural values and practices are embedded in their livelihoods and territories that are being undermined by climate change and human security (Adger et al. 2014).

Apart from the hydrometeorological hazards, other sources of risks could also come from biological and geological hazards. Biological hazards have organic origins or conveyed by biological vectors like pathogenic microorganisms, toxins, and other biotic substances. These hazards pose risks to animals, livestock, and plants that could result in outbreaks, epidemics, and/or pandemics. Among the prominent disasters from biological hazards that have taken countless lives are the Ebola Virus Disease outbreak in West Africa, Zika virus infection in the Americas and the Pacific, Yellow fever in multiple countries in Africa, Severe Acute Respiratory Syndrome (SARS-CoV) in Asia (UNISDR 2018) including the current Coronavirus disease (COVID-19) that has been afflicting the whole world. On the contrary, geological hazards differ from the previous hazards because it originates from earth’s internal processes such as earthquakes, volcanic activity, and emissions and other related geophysical processes like mass movements and landslides. Oftentimes, these processes are enhanced by the hydrometeorological hazards, for instance, tsunamis. Although it is triggered by undersea earthquakes and other geologic events, it is also considered as a coastal water-related hazard since it takes part in the oceanic process (UNISDR 2009). In the same way, exposure of the vulnerable population to these hazards could directly curtail the vital core of human security.

Defining the intertwining relationship of climate change and disaster risk and how they undermine human security is necessary to articulate the pervasive threats that thwart the operationalization of human security. Clarity in this aspect opens up the broader opportunity on how this contemporary world could tailor its advances to ensure human security in its simplest form. Hence, sparing the vulnerable population from receiving a response mechanism that misfits the existing localized threats brought by climate change and natural hazards. Recent initiatives, particularly the international cooperation among nations, unify them through intergovernmental
agreements and strategies that have been evolving since the 1970s to provide solutions to these pressing concerns. For instance, Hyogo Framework for Action (HFA) 2005–2015 has emphasized the necessity of building resilient nations and communities to disasters in order to reduce the loss of lives including social, economic, and environmental assets.

Afterward, the Sendai Framework for Disaster Risk Reduction has been proposed as the successor of HFA. The framework is a 15-year, voluntary, and non-binding agreement that involves the State and other stakeholders including the local government unit (LGU) and private sectors. The State has the primary role to reduce disaster risk while other stakeholders share the responsibility to attain substantial reduction of disaster risk and losses of lives, livelihoods, and health as well as the economic, physical, social, cultural, and environmental assets of persons, business, communities, and countries (Aitsi-Selmi et al. 2015). Implementation of the said framework including the national climate change adaptation and mitigation strategies entails political intervention in order to harmonize them with the national and local plans to fulfill the end goal of having a resilient and secured Asia.

In essence, the concept of human security pertains to the provision of freedom from fear and freedom from want (United Nations Development [UNDP] 1994) for every human being amid threats of climate change and disaster risk. However, the current concept still remains to have difficulty in its operationalization. Perceptions of people adversely affected by these threats have their own ideas of threats/risks and security based on the reality that they are living and surrounded with. Local perspectives on human security may still be consistent with the proposed concepts and theories yet, it still outweighs the gravity of the localized threats in the form of poverty, food and water scarcity, localized climate change effects on crops, regular occurrences of flooding and landslides, awareness of the presence of lawless elements and many others (Atienza 2015). Thus, viewing human security on a local basis provides the closest possible means of providing appropriate solutions. For this reason, this book gleams toward the rich experience of Asia to unravel both the stories of loss and the glimmers of hope that this region unceasingly holds. Consequently, the lessons that they have acquired from their vast experience has greatly shaped the region in their pursuit of resiliency and sustainability. Asia, then, is a picture of a progressive region in terms of ensuring human security amid the increasing threat from climate change and disaster risks.

1.4 Organization of the Book

This book revolves on themes carefully selected by the editors highlighting the Asian context, elements, specific cases, and responses associated with the interlinked nature of climate change, disaster risk, and human security. The four major themes are as follows: (1) understanding the context of climate change, disaster risk, and human security in Asia, (2) breaking down the elements of human security threatened by climate change and disaster risks, (3) drawing lessons from cases in the Asian context
on how climate change and disaster risks undermined human security, and (4) recognizing current Asian initiatives that address challenges posed by climate change and disaster risk on human security. Drawing from their vast multidisciplinary and diverse experiences in the academe, research and policymaking, and field observations, each chapter author brings attention to the growing interest of climate change and disaster risk, and their relationship to human security. Further, the authors attempt to substantiate lessons learned and best practices using actual cases in Asia that have addressed various pressing environmental and social issues. Figure 1.8 is a map of Asian country cases presented and discussed in the book.

The first theme gives emphasis to ensuring that readers have a common understanding of the current situation of climate change, disaster risk, and human security in Asia. It lays down the foundation of these issues by looking at both historical and current perspectives to determine how they have changed over the years.

The second theme breaks down the elements of human security to explain how they are affected by climate change and disaster risks. These elements are scrutinized under environmental, socioeconomic, and political lenses to provide more substantial details on how they are threatened at present.

The third theme exhibits actual cases that have changed the Asian landscape in terms of its view on human security after being subjected to issues related to climate change and disaster risks. With Asia being considered as one of the most vulnerable

![Fig. 1.8 Country cases discussed in the book](image-url)
regions in the world, this theme captures actual lessons learned that can be helpful for other countries to ensure their preparedness and lessen, if not prevent, the impact of climate change and disasters.

The fourth and last theme highlights notable initiatives by Asian countries to address the dangers brought about by climate change and disaster risks on human security. It underscores best practices that can be emulated by different countries and incorporated in all levels of their policy and decision-making.

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