Chapter 10
Conflict, Development, and the Environment in Asia

Brendan Howe

Abstract In spite of dramatic progress in economic development and governance in Asia, major challenges to human security endure. In some cases, these have been exacerbated by national security and development policymaking. Among the most serious challenges are conflict, poverty, environmental degradation, and “natural” or “nature-induced” disasters. Each of these threatens human security. Through interaction with each other, however, they can also serve as insecurity multipliers. This chapter will focus on the intersections of these variables, using case material from several Asian countries. The first part of the chapter will consider conflict as a direct threat to human security, as a poverty multiplier, as a contaminator of the environment, and as a stimulus for state security policy prioritization that directly impacts upon the human security of the most vulnerable, as well as indirectly through resource allocation. Case material for this section will be drawn from the Democratic People’s Republic of Korea (DPRK), Myanmar, and the Lao People’s Democratic Republic (Lao PDR). The second part of the chapter will examine how insecurity at a state level can lead to a focus on national security and development models, which not only leads to environmental degradation but can also increase disaster vulnerability. It will further evaluate how mega-development practices can pose a direct threat to the most vulnerable, as well as indirectly through impact on the environment. The major case studies here will be Myanmar leading up to the devastating impact of Cyclone Nargis in 2008 and hydroelectric dams in Lao PDR and Malaysia.

Keywords Conflict · Development · Environment · Security · Vulnerability

For more detailed analysis of some of the issues and case studies addressed in this chapter, see Brendan Howe, The Protection and Promotion of Human Security in East Asia (Basingstoke: Palgrave Macmillan 2013). The author gratefully acknowledges research support provided by Heeseo Lee of the Graduate School of International Studies, Ewha Womans University.

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10.1 Introduction

East Asia (including the sub regions of Northeast Asia and Southeast Asia) has sometimes been viewed as ranking among the most dangerous or conflictual regions on the planet, enduring colonial and Cold War legacies and a number of potential flashpoints (Calder and Ye 2010). International governance initiatives have focused on nonintervention, and order rather than justice; while domestic governance has emphasized national interest and strength in terms of security and economic growth. Thus, Asian states remain among the most ardent champions of Westphalian sovereignty (Acharya 2003). Not only are states considered the main referent object of security, but also security threats have been generally identified from the perspective of the state (Nishikawa 2009). Regional security arrangements reflect these perspectives, with Southeast Asia’s “ASEAN Way” and Northeast Asia’s “Shanghai Spirit” both emphasizing nonintervention, and Asian actors across the political spectrum resisting the Western interventionary interpretation of the Responsibility to Protect (R2P) and decoupling it from the human security discourse (Howe 2013a).

In many ways, this regional security regime would seem to be successful. At the state-centric level of security reference, remarkable progress has been made in East Asia. In Southeast Asia, the Association of Southeast Asian Nations (ASEAN) regime has, despite historical, geopolitical, and societal animosities, prevented the outbreak of serious hostilities since the 1978 Vietnamese invasion of Cambodia. In Northeast Asia, since the armistice suspending the Korean War in 1953, there has been little physical manifestation of national rivalries beyond saber rattling and the occasional minor skirmish. With the possible exception of the People’s Republic of China (PRC) and the Republic of China (ROC—Taiwan), as well as and the Democratic People’s Republic of Korea (DPRK) and the Republic of Korea (ROK), states in the region no longer pose existential threats to each other. All seem to recognize a rational imperative to come to some sort of accommodation with one another in order best to secure collective goals and satisfy collective interests.

Throughout East Asia a premium is placed on economic development, with rapid success in this field combined with high levels of industrialization, urbanization, and modernization across the board. At the turn of the millennium, in a report on the increasingly networked global economy, “Emerging Asia” was highlighted by the US Central Intelligence Agency (CIA) as the fastest growing region, led by breakout candidates China and India, whose economies (at that time) already comprised roughly one-sixth or 16.67% of global GDP (CIA 2000). By 2017, China alone accounted for 14.84% (with India on 2.83%), and other regional economies, Japan (5.91%), South Korea (1.86%), Indonesia (1.16%), Thailand (0.53%), Hong Kong (0.42%), and Singapore (0.39%) (Gramer 2017). Yet, major challenges to human security endure in the region, some of which have even been exacerbated by the supposed successful developmental policies focusing on industrialization, urbanization, and modernization. Among the most serious challenges are conflict, poverty, environmental degradation, and “natural” disasters, which due to contributions of
human agency discussed later, should perhaps be termed “natural-induced disasters.” Each, individually, poses an increasing threat to the lives and well-being of the most vulnerable. Additionally, however, through interaction with each other, they can also serve as insecurity multipliers.

First and foremost, despite the decline of interstate wars, militarized international disputes continue, and intrastate conflicts and their legacies threaten directly the human security of the most vulnerable in numerous cases. This threat extends beyond the official cessation of hostilities through conflictual legacies such as contamination by the explosive remnants of war (ERW), socioeconomic disruption, governance failure, and environmental degradation. Conflictual operating environments also pose indirect threats to the human security of the most vulnerable. These include the securitization of governance, the normalization of state violence, contamination of the environment, and the diversion of resources to national defense projects. This avenue will be pursued in the first analytical section that follows. Case material for this section will be drawn from the Lao People’s Democratic Republic (Lao PDR or Laos), the DPRK, and Myanmar.

Second, state insecurity and underdevelopment can stimulate unsustainable development practices that not only lead to environmental degradation, but can also increase disaster vulnerability, as well as lead to intrastate resource conflicts, all of which threaten the human security of the most vulnerable. Furthermore, national government policymaking, in response to the perceived double threat of poverty and insecurity, has impacted on the human security of vulnerable individuals and communities and upon the environment. Regional developmentalism and economic governance have been labeled “econophilia” (Buzan and Segal 1998). The related policy prioritization has contributed to remarkable patterns of economic growth, but it has also fed into ongoing and new human security challenges (Buzan and Segal 1998). For instance, the relocation of often already vulnerable and marginalized local populations to make way for developmental mega projects such as hydroelectric dams can further undermine human security (as described later). Infrastructure development can increase vulnerability to traffic accidents, to human trafficking, and to the degradation of the local environment in terms of drinkable water and breathable air. Hence, the prioritization of macroeconomic development in East Asia, has been described as assuming “cult-like status” (Christie and Roy 2001). This chapter will, therefore, further evaluate how state-centric, mega-development practices can pose a direct threat to the most vulnerable, as well as indirectly through impact on the environment. The major case studies in the second part will be Myanmar leading up to the devastating impact of Cyclone Nargis in 2008 and hydroelectric dams in the Lao PDR and Malaysia (Table 10.1).

All of these levels of security and insecurity are intricately linked in a nonhierarchical causality, with the potential to spill over across realms in any direction. The tendency of regional actors in East Asia to impose a security hierarchy on policymaking running from the top of this table to the bottom constitutes one of the central problems developed in the chapter. The following section expands on definitional challenges and the interaction between levels of security in theory and practice.
### Table 10.1  Levels of security/insecurity and existential threats

| Type of security       | Main actors                          | Existential threats from | Referent objects                   | Issues                                                                 |
|------------------------|--------------------------------------|--------------------------|------------------------------------|------------------------------------------------------------------------|
| Traditional            | States                               | States                   | States                             | Defense, deterrence, balance of power                                  |
| Comprehensive security | Intergovernmental organizations (IGOs), states | Non-state actors, environment | States and communities             | Water, food, environmental hazards, “natural” disasters, energy, terrorism, international crime |
| Environmental security | States, IGOs                         | States, multinational corporations (MNCs), communities, development | Ecospheres, biosphere, localized ecosystems | Climate change, global warming, sustainability, the Anthropocene, biodiversity, the global commons, pollution, consumption |
| Human security         | IGOs, states, Non-governmental organizations (NGOs) international community | Environment, states and non-state actors | Individuals and vulnerable communities | Explosive remnants of war (ERW), responsibility to protect (R2P), peacekeeping operations (PKOs), humanitarian intervention shelter, food, water, stability, sustainability, “nature-induced” disasters, conflict transformation |

#### 10.2 Conflict, National Security, and Human Insecurity

Nontraditional security agendas have increasingly come to the fore in both academic and policy discourse and are often termed “new security challenges.” The characteristics of such challenges include some, or all, of the following: a focus on non-military rather than military threats, transnational rather than national threats, and multilateral or collective rather than self-help security solutions (Acharya 2002; Waever 1995).

Human security is an emerging multidisciplinary paradigm for understanding global vulnerabilities at the level of individual human beings, incorporating methodologies and analyses from several research fields, including strategic and security studies, development studies, human rights, international relations, and the study of international organizations, existing at the point where these disciplines converge on the concept of protection (Howe 2012). The complexity of threats in people’s daily
lives now range from poverty, unemployment, drugs, terrorism to environmental
degradation and social disintegration, and the concomitant obligations upon those
who govern are summed up as a commitment to provide freedom from fear and
freedom from want (UNDP 1994). Despite remaining distinct in terms of focus and
referent objects, there is a close relationship between traditional and nontraditional
security (NTS) approaches, and considerable spillover between them (Howe 2013b).
All forms of security imply the existence of a referent object free from threats to its
continued existence. Likewise, insecurity means that the referent object is not able
to enjoy such freedom from threat. Vulnerabilities relate to the likelihood that the
referent object(s) will be exposed to existential threats.

National insecurity (wherein those acting in its name perceive there to be exist-
tential threats to the state) may lead to human insecurity (existential threats to the
lives of individuals) along various paths. It can divert resources from human devel-
opment, which in turn focuses on “human flourishing” or improving the lives of
people rather than the richness of the national economy (UNDP 2015). It can drain
energy (Suh 2013). It can create a permissive political circumstance where national
security is privileged at all costs (Unger 2012). Furthermore, it is likely to produce
and perpetuate an operating environment within which the exceptional use of internal
as well as external violence by the state becomes a permanent feature of the state
(Suh 2013). The human costs of modern conflicts, whether interstate or intrastate, are
borne, primarily, by the most vulnerable sections of society (Tirman 2015). Civilians
can be directly targeted, used as human shields, or become the victims of “collateral
damage” during conflicts.

Asia is certainly no stranger to the categories of international crimes listed under
the R2P: genocide, war crimes, ethnic cleansing, and crimes against humanity.
Indeed, the crimes against humanity, against their own people, perpetrated by the
Khmer Rouge regime in Cambodia were of such magnitude as to have been termed
“autogenocide” (Vittal 2001). Genocide of the more traditional or “purest” form
(Shaw 2000), focusing on the elimination of ethnic and religious minorities perceived
as posing a threat to the regime, was also perpetrated during this time. North Korea’s
crimes against its own people (detailed later) are of such a magnitude as to qualify
as crimes against humanity, although perhaps not reaching the level of autogeno-
cide (OHCHR 2014a). During the most recent interstate wars in the region, the
Korean War in Northeast Asia, and the collection of related Southeast Asian conflicts
involving the United States, China, Vietnam, Cambodia, and Laos, all sides have been
accused of actions amounting to war crimes under contemporary definitions, as well
as lasting environmental degradation (World Peace Foundation 2015a, b; Leaning
1993; Austin and Bruch 2000). Most recently, Myanmar has been accused of perpe-
trating a paradigmatic case of ethnic cleansing against the Rohingya Muslim minority
(OHCHR 2017; also detailed later).

The legacies of conflicts can impact on the human security of the most vulner-
able for years, decades, or even generations to come (Watson 2004). Postbellum
threats to both life and well-being include the breakdown of law and order, the
spread of disease due to refugee camp overcrowding, poor nutrition, infrastructure
collapse, scarcity of medical supplies (although ironically often a proliferation of
illicit drugs), and continued criminal attacks on civilian populations, unemployment, displacement, homelessness, disrupted economic activity, stagflation, and perhaps, most directly, ERW contamination (GICHD 2007; UNDP 2016). ERW include unexploded ordnance (UXO), landmines, and abandoned explosive ordnance (AXO). Negative effects include physical harm, amputation and death, psychological trauma, food insecurity, infrastructure limitations, and increased rebuilding costs.

### 10.2.1 Conflictual Legacies in Laos

During the Second Indochina War (1955–1975), four million large bombs, defoliants, herbicides, and more than 270 million submunitions were dropped over Laos (Landmine Monitor 2008). As a result, Laos is the most bombed country in history (Kingshill 1991; Cave et al. 2006). Civilian casualty levels were appallingly high (Cave et al. 2006). Many other vulnerable individuals became refugees, with 600,000 from a total population of just three million, fleeing their country between 1962 and 1971 (Paul 1971). For those who remained, living conditions were often deplorable (Zasloff 1970). Air-delivered submunitions are the most prolific form of ERW in Lao PDR (Handicap International 2004). Indeed, these have left Laos the world’s most ERW-contaminated country (NRA 2008), with 15 of Laos’ 17 provinces contaminated, and a quarter of all villages severely contaminated (UNDP 2008; NCCR 2008).

UXO restricts access to usable land; increases the cost and time of development initiatives; inhibits access to shops, schools, and medical facilities; disrupts potential earnings from tourism, mining, and hydroelectric projects; and causes significant human casualties. Now, more than four decades since the cessation of the overt interstate conflict, there remains a close correlation between Laos’ poorest districts and those of which were most bombed (Howe 2013a).

The costs of medical treatment and funerals for ERW casualties can push poor families deeper into poverty and destitution (Cave et al. 2006). As Tim Horner, former senior technical advisor to the National Regulatory Authority for the UXO Sector in Laos has explained, “The people hit hardest by UXO are often the poorest. Having to pay for treatment basically takes people from just being able to cope to being poverty stricken” (Howe and Sims 2011). Rural villagers commonly sell livestock to pay for medical treatment, yet in doing so they sacrifice vital family assets needed to stave off future financial hardship. Furthermore, the average cost of treatment for ERW injuries can be half the annual income of a rural family, and can thereby serve as a “poverty multiplier” (Handicap International 2004). On a broader scale, treatment and care of UXO survivors can be a burden for entire communities and a significant additional expenditure for Laos’ overtaxed medical system (UNDP 2008).

ERW is perhaps the primary factor limiting social and economic development in Laos. When mapped against each other, there is a clear visual correlation between the prevalence of poverty and ERW contamination (Phoenix 2001; NCCR 2008). UXO contamination is considered an ongoing development concern in all UNDP development assistance programs in the Lao PDR. Likewise, the government’s National
Socio-Economic Development Plan for 2006–2010 not only recognized UXO as a significant inhibitor to development, but also that it affects, in particular, already poor and vulnerable groups (Cave et al. 2006). As the population of Lao PDR gradually becomes more urbanized, in turn leading to population growth, there is an ongoing and growing need for more safe land. Hence, given the high levels of subsistence farming in the country, the inhibitory effect of ERW on land access represents a challenge to both the human security and the human development of significant sections of the populace.

10.2.2 National Insecurity, Underdevelopment, and Human Insecurity in North Korea

National insecurity can also contribute to an operating environment ill-suited to the promotion of safe havens, free from fear, want, and indignity for the most vulnerable sections of society. Successive administrations in Pyongyang have used the supposed hostile international operating environment within which the DPRK finds itself to foster a belief in the need for, or justification of, policies that further undermine human security among the most vulnerable of their citizenry. Foremost among these policies are juche (self-reliance) and songun (military first), as well as the successor policy under Kim Jong-un of byungjin (parallel development) of the economy and nuclear weapons. These misguided attempts at self-sufficiency, independence, and national strength-building have led to shortages, underdevelopment and more human insecurity. Attempts to promote energy sovereignty through privileging domestic sources and minimizing its reliance on trade contribute ultimately to the underproduction and inefficient use of energy.

Attempts to promote sovereignty in food policies, have had equally or even more disastrous results. In the 1980s, the growth rate of rice production began to slow, and when North Korea was hit in the 1990s by the combination of natural disasters and the collapse of the Soviet bloc, widespread hunger exploded into massive starvation and famine (Haggard and Noland 2005). In 2019 and 2020, bad weather, poor harvests, and the impact of the COVID-19 pandemic as well as government countermeasures, have exacerbated food insecurity in the DPRK. In May 2019, food rations, upon which about 70% of the population depend, were cut from 550 g to just 300 g per person following poor results in the year’s early harvest, while drought, typhoons, and flooding impacted the late harvest that year (BBC 2019). 2020 has already been a record year for typhoons impacting the Korean Peninsula, following on from the historically long and heavy rainy season. Furthermore, the United Nations Food and Agriculture Organization (FAO) has warned that North Korea could face an even more serious food shortage due to the coronavirus pandemic, with over ten million North Koreans, some 40% of the population, being food insecure (KBS World 2020).

State security has deprived the people of resources and rights, which in turn have undermined trust in the government to alleviate the challenges faced by people in
their everyday lives. This has led to greater regime insecurity, and therefore a greater emphasis on state security, as well as the deliberate destabilization of the international operating environment in order to create conditions, which justify national security policy prioritization. A vicious circle. Economic mismanagement, governance failure, negligence, and oppressive behavior by the state has had grave consequences for ordinary citizens, and the country remains deep in distress despite various flawed attempts at reform and the intermittent inflow of international aid (Howe 2013a). Hence, the “hostile” international environment is used to justify domestic security and governance policy. Indeed, so pervasive has this approach become that North Korea has even deliberately destabilized the international operating environment through brinksmanship. As a result, “the ‘military first policy’ becomes a useful tool both domestically and internationally” (Koga 2009).

Despite internal and external crises, severe economic stagnation, and political pressures from the international community, the regime has survived. At least, in part, this regime’s survival has been purchased at the expense of human security and human rights of the citizens. The concept of “our own socialism,” combined with a cult of personality, has contributed to a situation in which the directives of Kim Jong-eun, (and Kim Jong-il and Kim Il-sung before him), trump all laws and directly control and discipline the North Korean people, as well as their access to information (Lankov 2015). There is no room for rebellion even if a great number of people suffer at the hands of an evil authoritarian regime. And suffer they have. Grave human rights abuses in North Korea have increasingly attracted the attention of the international community, culminating in the February 2014 report of the UN special commission documenting “unspeakable atrocities” committed in the country. In late November 2014, the United Nations Third Committee—the Social, Humanitarian and Cultural Committee—took the initiative in demanding stronger actions toward DPRK by requesting that the United Nations Security Council refer the DPRK and the regime of Kim Jong-eun to the International Criminal Court (ICC) to face charge of crimes against humanity (OHCHR 2014b). Although the initiative did not make it to the ICC, the action by the HRC was at least a clear indicator of the seriousness of the issue.

Other policies deemed necessary for national security or regime survival, such as the continuation, proliferation, or expansion of its notorious prison camps, have further exacerbated the situation. In 2011, Amnesty International noted a significant expansion in the camps from the footprint of 2001, visible via satellite imagery (Amnesty International 2011). A 2014 white paper for the Korea Institute for National Unification (KINU) noted a lower but still horrific set of figures estimating the prison camps as holding approximately 80,000–120,000 people (Han et al. 2014). Meanwhile, spending on the military has diverted funds essential for the protection and promotion of human security in North Korea. This has also been the experience of the citizens of Myanmar.
10.2.3 National Security Prioritization in Myanmar

Martin Smith has described Myanmar as “a pre-eminent example of a post-colonial state subsumed in what development analysis describes as a ‘conflict trap’” (Smith 2007). From the coup in 1962, until a partial retreat from the forefront of governance in 2011, a series of military junta ruled the country, more often in conflict with internal opposition groups and ethnic insurgencies, than with external threats. Even after the replacement of military with civilian control, given national security challenges both real and perceived, the government has continued to prioritize policy platforms emphasizing national sovereignty, territorial integrity, and the national unity of diverse ethnic nationalities. This has continued under the leadership of Nobel Peace Prize laureate Aung San Suu Kyi and her National League for Democracy (NLD) administration, with the persecution of one of the most vulnerable groups of people in the country, the Muslim Rohingya (OHCHR 2017).

Since 2008, Myanmar’s third Constitution has guaranteed the military 25% of parliamentary seats and the control of significant ministries and positions in the executive. Despite successive waves of people empowerment, first, in the immediate aftermath of the devastating cyclone Nargis (addressed in more detail later); second, with constitutional and governmental changes in 2010; third, with the breakthrough in negotiations between the government, the military, and the NLD in 2011; and most recently, with stunning election victory of the NLD in 2015, the governance structure remains best described as a mixed system of civilian and military government. Indeed, for Alistair Cook “the formal role of the military remains intact” (Cook 2017). There are even suspicions that there may be a military “shadow cabinet” waiting in the wings to resume control if their interests are too overtly challenged (Pe AZ, Panna Institute, 2017, pers. commun.). The national security focus and military dominance have distorted budgetary allocations, leaving little for human-centered development and resilience building. Direct military spending consistently totals around a quarter of the national budget; higher than that on health and education combined. For the 2015–2016 fiscal year, overall, 10.66% of the national budget was allocated for the four government ministries in the social sector, most responsible for human-centered policies: The Ministry of Health (3.65%), the Ministry of Education (6.79%), the Ministry of Labor, Employment and Social Security (1.15%), and the Ministry of Social Welfare, Relief and Resettlement (0.07%) (Win K, NLD Central Working Committee, 2016, pers. commun.).

In fact, the government has little control over the military. This in part explains the brutal treatment meted out since October 2016 by Myanmar’s security forces to the mostly stateless Muslim Rohingyas in the country’s Rakhine state. The OHCHR (2017) has reported “devastating cruelty” against the Rohingyas and “the very likely commission of crimes against humanity.” While this may explain the NLD’s inability to act to rein in the military, it does not absolve the leadership of their duty to speak out. Aung San Suu Kyi has responded to criticism that: “[W]e must work ourselves for our country’s responsibilities, because we are the ones who best understand what our country needs” and that a UN inquiry was “not suitable for the situation of
our country” (Selth 2017). Aung San Suu Kyi’s office has accused international aid workers of helping “terrorists,” a claim that has prompted fears for their safety and been condemned as dangerously irresponsible (Holmes 2017). Others fear that the NLD is disempowering NGOs and maintaining the national security/unity focus of previous administrations (Pe AZ, Panna Institute, 2017, pers. commun.). The threat posed by such a focus, to both human security and the environment, was graphically demonstrated by the impact and response to cyclone Nargis in 2008. This also segues into the second area of analysis.

10.3 Environmental Degradation, Unsustainable Development, and Human Insecurity

Within governance literature, human security, development, and poverty are readily understood as interrelated and connected in a complex causality (Howe 2013a). These linkages are even more apparent when it comes to consideration of environmental degradation and natural disasters. Natural disasters lead to human and economic losses with the potential to have a long-term impact on national economies, in turn leading to a new generation of vulnerable extreme poor. The extreme poor need resources to survive, and often resort to short-term desperate and unsustainable measures degrading the natural environment. This degraded environment in turn increases vulnerability to natural disasters (UNDP 2004; Ahrens and Rudolph 2006).

In this circular linkage, the poor are the most vulnerable when natural disasters occur, and human security issues are the most pronounced in areas of heaviest dependence on natural resources. Thus, by creating disaster-resilient communities, it is possible to enhance human security (Shaw 2006). It follows, therefore, that in order to break this vicious cycle, resilient communities, must be built from the bottom up rather than the top down, imposed through national security and development policy platforms. Furthermore, as families, neighbors, and local authorities are likely to be the first responders assisting those affected by natural disasters, local communities must not only be educated and trained but also empowered. Unfortunately, in the following case studies, at times due to a national unity and security focus legacy of conflict, regional governments have come up short in fulfilling these obligations.

10.3.1 Vulnerabilities in Myanmar

Myanmar is highly vulnerable to natural hazards. A total of 27 “natural” disasters, or as indicated earlier, “nature-induced” disasters, were recorded between 1980 and 2010, causing the death of approximately 140,000 people and affecting the lives and livelihoods of 3.9 million people, an average of 125,000 people a year (Disaster Risk
Reduction Working Group 2013). Cyclone Nargis, the most powerful cyclone to have struck Myanmar and that devastated parts of the country in May 2008, affected more than 50 towns, left more than 140,000 people dead, and 2.4 million people made more vulnerable by loss of property and livelihoods (UNEP 2009). Underlying governance failures and long-term trends leading up to Nargis had, however, left the country and its citizens even more vulnerable to the devastating impact of the storm than might otherwise have been the case.

As detailed above, due to military expenditure prioritization, Myanmar was particularly deficient in basic services which would contribute to disaster risk reduction (DRR). Resources earmarked for infrastructure improvement were, and continue to be diverted into macro-development projects, such as the construction of the new, isolated (and thus more secure) capital of Naypyidaw, gas pipelines like the Yadana Project, which takes natural gas from the Andaman Sea through a pipeline in southern Myanmar to Thailand and is the single largest source of revenue for the military (Global Security 2016), and hydroelectric dams (the impact of which is addressed below). By contrast, shortly before the cyclone hit, the national health system was ranked 190th out of 191 globally, and the government spent just 0.2% of GDP on health care (Mullany et al. 2008). The actual burden of responding to Nargis lay with the Ministry of Social Welfare, Relief and Resettlement (MSWRR) which received 0.003% of the national budget (Aung PT, ASEAN Committee on Women, 2016, pers. commun.). Local and national authorities had also refrained from building storm shelters and instituting other measures to increase resilience (Howe and Bang 2017). A lack of preparedness at the national government level was compounded by insufficient resilience education at the provincial level (Myint HT, NLD Central Working Committee, 2016, pers. commun.). As a result, necessary evacuations did not take place (Lwin and Maung 2011). Indeed, post-disaster analysis identified the main cause of the tragedy as being a lack of awareness of the danger, how to prepare, and when and where to evacuate (Shikada et al. 2012).

The United Nations Environment Programme (UNEP) noted in its case study on Learning from Cyclone Nargis, that because previously the government focused on development priorities rather than on natural resource sustainability, “[a]ttention was directed towards increasing production by harnessing more land area and building infrastructure such as embankments, without fully considering environmental impacts,” thereby reaffirming the linkages between environment deterioration, disaster vulnerability, and human insecurity. The pre-disaster struggle for survival among the most vulnerable communities had further resulted in overexploitation of the environment and unsustainable natural resource management. As a result, these vulnerable communities lived in an insecure environment susceptible to catastrophic impacts from natural disasters. Senator U Kyi Win, Irrawaddy representative of the NLD Central Working Committee, places the blame for the magnitude of the disaster squarely on human impact on the environment, in particular the deforestation of mangroves which would previously have provided a natural barrier to storm surge (2016). The mangrove destruction had been caused by the expansion of fisheries and paddy fields (including a government-sponsored initiative for double cropping) at least in part for export; industrial salt production; the production of
coke (for which the government granted an excessive number of licenses); and the
direct use of mangrove wood. Poor forestry management was exacerbated by poor
enforcement of what regulations were in place due to corruption, including bribery
to escape punishment for infringements (Win K, NLD Central Working Committee,
2016, pers. commun.).

Furthermore, Cyclone Nargis’s intensity and unusual direction were believed to be
caused by global climate change (Lwin and Maung 2011). Figure 10.1 demonstrates
how, due to global climate change, the path of Nargis deviated from that normally
taken by cyclonic tropical storms in the region, impacting on a much more vulnerable
part of the country, thereby causing much greater devastation and suffering.

Given that extreme weather events are occurring with increased frequency around
the world, with its long-exposed coastline, Myanmar remains particularly vulnerable.
Resilience remains weak in every region, even Naypyidaw (Khaing AT, Ministry of
Livestock, Fisheries, and Rural Development, 2016, pers. commun.). According to
the 2017 University of Notre Dame Global Adaptation Index (ND-GAIN 2017),
Myanmar ranks 144 out of 181 countries in terms of vulnerability and 172 out of 191
for readiness. This is an improvement of the 2014 rankings, but it still shows serious
vulnerability and lack of readiness. Along with Honduras and Haiti, Myanmar has
been ranked as one of the three countries most affected by climate risk for the 20-year
period from 1996 to 2015 (Kreft et al. 2017). Deforestation contributed to the severity
of the 2015 floods and landslides, but it can also contribute to drought, the natural

Fig. 10.1 Path of Cyclone Nargis (Source Tun Lwin, former director general of the Meteorology
and Hydrology Department of Myanmar, now chairman and CEO of Myanmar Climate Change
Watch. Interviewed by author in Yangon, January 22, 2016. Reproduced here by kind permission)
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hazard seen by some as ultimately an even greater threat to Myanmar’s resilience (Myint HT, NLD Central Executive Committee, 2016, pers. commun.).

ASEAN’s Regional Integrated Multi-Hazard Early-warning System (RIMES), did notify Myanmar’s Department of Meteorology and Hydrology about the impending storm on April 26 and continued to give updates until it made landfall 5 days later (Lwin T, Myanmar Climate Change Watch, 2016, pers. commun.). And during this period, the Director General of the Department of Meteorology and Hydrology contacted senior local and national government officials, and military commanders, with regular warnings and updates, as well as briefing official news outlets, but it was difficult and even dangerous to convince those in power that a terrible disaster, exacerbated by poor governance, was about to happen (Aye NY, Ministry of Social Welfare, Relief and Resettlement 2016, pers. commun.). An interview with the Director General was eventually published on May 2 but hidden inside the paper rather than on the front page and with a very toned-down message (Lwin T Myanmar Climate Change Watch, 2016, pers. commun.).

Due to security-related paranoia concerning domestic non-governmental actors, authorities clamped down on the activities of civil society first responders, ultimately arresting and imprisoning some of those who had done the most to respond to Nargis (Win K, NLD Central Working Committee, 2016, pers. commun.). Likewise, despite, within a week of landfall, twenty-four countries pledging USD 30 million of financial support, the regime was reluctant to accept foreign assistance, and ultimately only did so on the basis that it could control aid distribution, after which it was “slow to issue visas to foreign specialists and to allow aid into Myanmar” (Selth 2008). Indeed, the government did not allow international experts and cargo ships with aid goods into its territory for several weeks (Kapucu 2011). Even then, only “friendly” countries were allowed into Myanmar, while naval vessels loaded with aid supplies from the United States, Britain, and France were denied permission to dock or deliver supplies by helicopter (Selth 2008).

10.3.2 Vulnerabilities in Laos

The government of Lao PDR has likewise been concerned primarily with national security and development; or, according to Deputy Prime Minister of Foreign Affairs Thongloun Sisoulith, the need to safeguard political stability for national development (Sisoulith 2011). Being the only country in Southeast Asia faced with Collier’s “poverty trap” of lacking direct access to the sea (Collier 2008), has presented barriers to Lao’s participation in international trade since the sixteenth century (Pholsena and Banomyong 2006). Hence the government has focused, almost to the point of obsession, on transitioning from being “landlocked” to becoming “land-linked” or a crossroad for trade (Rigg 1998). In its attempts to achieve this geoeconomics objective, the Lao PDR has forged partnerships with neighboring countries. These include two major railway projects linking the country with Thailand, Vietnam, and China.
Giant Consolidated, a Malaysian company in charge of constructing the 220-kilometer railway linking Lao’s western border with Thailand to Vietnam, finally began construction operations after minor derailments, which had postponed the groundbreaking ceremony. Laos has also been in negotiations to borrow 7.2 billion USD from China to fund the 430-kilometer railway stretching from the capital Vientiane to Vietnam and ultimately to southwestern China. China initially pulled out of the partnership after assessing that the project would be unprofitable, but, in October 2014, agreed once more to finance the project. Guan Huabing, China’s ambassador to Laos, has noted that the project may boost bilateral ties between the two countries, characterizing it as “strategic” and “historic” (Gerin 2014). Furthermore, implementation of large-scale public infrastructure projects at the macro level, often in partnership with neighboring countries, has been the focus of the government’s National Development Plan. Projects have typically been in the form of either (1) hydropower projects to generate electric power and revenue or (2) commercial exploitation of land to boost growth.

Energy-hungry Thailand has invested heavily in the Lao hydroelectric industry and also forms the major market for the export of surplus energy produced as a result of dam construction. As first out of 11 dams proposed to be built on the Lower Mekong, the Xayaburi Dam is situated between Laos and Thailand, in Xayaboury Province of northern Laos. Standing 810 meters tall, it is expected to generate 1,260 megawatts of electricity, most of which will be exported to Thailand. The total cost of building the dam is estimated to be 3.5 billion USD (International Rivers 2011). The second and most recent dam proposed to be built on the Mekong River Basin, the Don Sahong Dam, is to be situated on the Siphandone area of southern Laos, approximately 2 km north of the Laos–Cambodia border. The dam would stand between 30 and 32 meters high and generate 260 megawatts of energy for export to Thailand and Cambodia (ibid). The Government of Laos has also encouraged the development of rubber plantations in partnership with Vietnamese and Chinese interests. Further Chinese investment has come through the development of casinos and tourist infrastructure, and Vietnamese companies have partnered with the Government of Laos in logging ventures. Stuart-Fox (2009) has explored the importance of these international partnerships for Laos, terming them the “Vietnamese Connection” and the “Chinese Connection.” Official sources report that roughly 1.1 million hectares or 5 percent of the country’s arable land has been subjected to 2,600 land deals since 2010 (Heinimann and Messerli 2013). These land leases take the form of foreign investment projects brokered between the government and private enterprises.

Taken together with the econophoria of national developmentalism, however, these macroeconomic projects pursued with international partners, have the potential negatively to impact both human security and environmental considerations. Either human needs are neglected because of the prioritization of macroeconomic policies or they are sacrificed for the “collective good” (Howe and Park 2015). The Xayaburi Dam has been criticized for being a threat to aquatic biodiversity and fishery productivity as well as people’s livelihood (International Rivers 2011). The dam will block the migration paths for 23–100 species of fish. By destroying the river’s ecosystem, the dam will put at least 41 species of fish at the risk of extinction. More than 2,100
people will have to be resettled because of floods created by the dam and 202,000 people who meet their basic needs through fishing or cultivating rice on the riverbank’s farmlands would face challenges to their livelihoods. The government has promised financial assistance to those who have had to resettle since 2013, with aid packages totaling 5 million kip (670 USD) per family per year. Families were granted up to 20 kilograms of rice per adult and up to 15 kilograms per child. The assistance and resettlement process was poorly managed, however, and could not replace access to river’s resources, which provided a natural source of sustainable income and food (Vandenbrink 2013). The combination, therefore, of low-quality resettlement programs, environmental degradation, and a lack of viable livelihood options has directly contributed to further impoverishment of the most vulnerable.

Blockage caused by the Don Sahong Dam threatens the migration, feeding, and breeding patterns of the 201 species of fish living between Laos and the neighboring countries. For people living in the lower Mekong Basin, their livelihoods would be greatly affected because fish is a major source of food as well as revenue (International Rivers 2008). As for the Irrawaddy dolphins who inhabit the Laos–Cambodia border, the noise from constant bombing for rock excavation would damage the dolphins’ sensitive hearing and their environment will be greatly altered because of increased boat traffic, changes in water quality, and habitat destruction (World Wildlife 2014; Ryan 2014).

The problems associated with land leases or “land grabs” are twofold: for ethnic minorities or indigenous people, their displacement puts them at risk of increased poverty and higher mortality; for land deals themselves, lack of transparency in the process makes accountability and enforcing land regulations increasingly difficult (MacLean 2014). For ethnic minorities and indigenous people living in rural areas, the land grabs continue to drive them off arable farmland without adequate consultation or compensation. As a result of which, mortality rates among the rural poor who have been forced to abandon their traditional livelihoods and move to urban areas, have been found to have risen 30% (UNDP 2001). Furthermore, faced with a lack of opportunity to conduct traditional farming practices, a lack of work skills, and inadequate health and education facilities, the resettled communities are driven into deeper poverty. Those who are forced to relocate from the Mekong River Basin as a result of climate change face similar challenges. Chapman and Van (2018) have noted that the 18 million inhabitants of the low-lying Mekong Delta in Vietnam are also some of the world’s most vulnerable to climate change and that, over the preceding 10 years, around 1.7 million people migrated out of its vast expanse of fields, rivers, and canals while only 700,000 arrived. Likewise, according to Nguyen Huu Thien (2017), the Mekong Delta faces the three big challenges of climate change, unsustainable development, and hydropower plants.

These problems and vulnerabilities are exacerbated by the loose enforcement of existing land regulations to compensate displaced populations. As a communist country, Laos retains the right to forcibly seize or redistribute land without prior consent. Although a 2005 decree requires investors to compensate resettled villagers affected in full or in part at replacement cost, implementation has often been piecemeal or non-existent, with little negotiation taking place between the villagers and
the government. This unlawful deprivation of land shows how the country’s natural resources have been “captured by an elite growing spectacularly rich while one-third of the population lives on less than $0.61 a day” (Redd 2013).

While Laos, Myanmar, and North Korea are all conflict-affected states lying toward the bottom end of most development indices, it would be wrong to assume that only in such cases of challenged governance do we find these sorts of policy patterns. Similar threats to the environment and the human security of the most vulnerable, generated by regime insecurity and econophoric macroeconomic developmentalism, can be found throughout the region in more developed countries, from China, to Vietnam, to the final case study addressed in this chapter, Malaysia. All these countries share a history of insecurity and internal and external conflict, leading to policy prioritization of national political and economic strength and stability. Often, the environment and the human security of the most vulnerable sections of society are seen as the necessary and inevitable casualties of achieving these national goals.

10.3.3 Vulnerabilities in Malaysia

Malaysia achieved independence in 1957. Since that time the country has experienced rapid industrialization, significantly as a result of top-down macroeconomic growth policies promoted by the national federal government through a centralized planned economy. The development policies of Malaysia have been geared toward moving the country from an agriculture-based nation to an industrialized nation (Howe and Kamaruddin 2016). Yet, despite significant economic growth, Malaysia’s sociopolitical governance still leaves much to be desired, with distributive injustice meaning that the benefits of development have yet to be felt by some of the most vulnerable sections of society, and worse, big development projects causing irreparable harm to minorities as well as to the environment.

The building of Bakun Dam in the East Malaysian state of Sarawak displaced 10,000 indigenous people “forcibly” moved from the 70,000-hectare reservoir and catchment area to a 4,000-hectare sponsored resettlement site at Sungai Asap (Sovacool and Bulan 2011b). Bakun flooded about 700 square kilometers made up of farmland and forest. The people living in this area depended on the land around them for survival, with the majority relying on the forest for “their agriculture, hunting, and gathering of forest products” (Choy 2005). The problems of indigenous communities have been exacerbated by Malaysia’s land policy that does not uphold native land tenure or native customary rights land unless the native communities “start cultivating crops, felling trees, and conducting rotational agriculture to claim ownership of the land” (Sovacool and Bulan 2011b). For most of the indigenous communities of Sarawak, their relationship to the land is more than just as it would be toward a farming place. Rather they feel bound to the preservation of the forest (Cooke 1997).

Choy (2004) has detailed four levels of land conceptualization among these communities: (i) temuda, the land area around the longhouses; (ii) menoa, forested land used for game hunting and gathering, which provides the people with all their
daily subsistence needs; (iii) dampor, cultivated land which is located a distance away from their longhouse settlements; and (iv) pulau, or protected forest area, which provides the indigenous communities with traditional resources such as water catchments. Likewise, Cooke (1997) has noted how the Penan community, an indigenous hunter-gatherer tribe of Sarawak, view their relationship to the land as one not of ownership, but rather of trusteeship, wherein the rights of both the current and future generations are respected. Under Malaysia’s national land-ownership regulations, however, land that is not cultivated is considered state land and thus the indigenous peoples’ claims to these lands are not recognized.

A more extensive body of research and literature reviews by Sovacool and Bulan\(^1\) show the extent of damage and hardship upon livelihood and survival of communities within the zones earmarked for “community relocation and resettlement.” These negative impacts include the creation of “boom and bust towns” as well as inflation caused by the sudden increase and decrease of population due to the influx of construction workers during the development period (Sovacool and Bulan 2011b). The other two social problems identified by the authors include the impact on “navigation” capacities and “community livelihood” as well as “unfair compensation,” which has affected the area and the people living near Bakun Dam. Hydroelectric dams also have negative impacts on the wider environment, which in turn adversely affect local communities. The Bakun Dam caused “irreversible destruction of 69,640 hectares of forest ecosystem” (Choy 2005). The overall environmental cost with the building of dams also manifests itself in the form of greenhouse gas emission “especially carbon dioxide and methane, arising from microbial decomposition of some 69,640 ha of submerged forest, vegetation, wildlife and soil” (ibid.). Dammed water is also prone to the proliferation of algae, which, if left unattended, leach oxygen from the water, bringing about a state of hypoxia (oxygen depletion). The Bakun reservoir is particularly prone to this phenomenon as the bottom holds massive quantities of vegetation (Howe and Kamaruddin 2016).

The state government has yet to release any environmental or social impact assessments despite the fact that the dams are promoted as part of the International Hydropower Association’s Hydropower Sustainability Assessment Protocol. The International Association of Communication Activists criticized the fact that construction on Murum Dam began before the project’s environmental and social impact assessments (ESIA) had even started and that the ESIA remains inaccessible to the public (Hurwitz and Herbertson 2013). The construction of the smaller Batang Ai Dam in the 1980s involved the relocation of the indigenous Iban (members of one of the largest indigenous groups of Sarawak, formerly animist, now majority Christian) from the Lubok Antu District. Here, too, the problems of insufficient compensation,

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\(^1\)Including **inter alia**: Sovacool BK, Bulan LC (2011a) Meeting targets, missing people: the energy security implications of the Sarawak Corridor of Renewable Energy (SCORE), Contemporary Southeast Asia: A Journal of International and Strategic Affairs 33(1): 56–82; Sovacool BK, Bulan LC (2011b) Behind an ambitious megaproject in Asia: The history and implications of the Bakun hydroelectric dam in Borneo, Energy Policy 39: 4842–4859; Sovacool BK, Bulan LC (2012) Energy security and hydropower development in Malaysia: The drivers and challenges facing the Sarawak Corridor of Renewable Energy (SCORE). Renewable Energy 40: 113–129.
lack of opportunities, and the difficulties of transition to a cash economy, including loan repayments, undermined the human security of the relocated groups (Osman 2000). If Bakun truly serves as a harbinger of things to come with the other planned Sarawakian dams—or a continuation of trends established with Batang Ai—then other indigenous communities must brace themselves for the sort of environmental damage and loss of human security endured by those already relocated (Howe and Kamarudin 2016).

10.4 Conclusion

As a result of their conflictual heritage, many Asian states have focused on state-centric security and development models. These have, however, not only proved insufficient to address human security and environmental considerations at the local, national, and transnational levels but have exacerbated them. They may even stimulate the generation of future interstate conflict as a result, for instance, of transborder pollution, refugee flows, and control or destruction of water resources.

The noninterventionary nature of international relations and organizations in Northeast and Southeast Asia in particular has made it difficult to address the life-threatening impact of transborder “yellow dust” and “haze,” respectively. On the other hand, a number of human insecurity considerations have challenged the national or even international security perspective of neighboring states; as has occurred with refugees from Myanmar in Bangladesh, North Koreans in China, and Vietnamese in Hong Kong. Lack of human development can also lead to transborder migration, and transborder crime. Security concerns related to Asian transborder migration and refugee flows feature prominently on the traditional security radars of China (Vietnamese, North Koreans, and Burmese nationals), Thailand (Burmese and Lao nationals—particularly ethnic Hmong), Malaysia (Indonesians and Philippine nationals), and Australia (Chinese and Pacific Island nationals) (Howe 2013a). Environmental degradation can also pose national and international security challenges, with such conditions impacting on the human security and human development of vulnerable individuals, groups, and even nations, stimulating the movement of people just as surely as more traditional push factors. This was behind the 2007 controversial position of Australian Federal Police Commissioner Mick Keelty when he identified climate change in the Asia-Pacific region as the greatest security threat faced by Australia due to the relocation of peoples (Lauder 2007).

It is, therefore, in the enlightened self-interest of states and statesmen as well as the international community in East Asia and beyond, to pay attention to both environmental and human security concerns, recognizing the vicious cycle between national insecurity, human insecurity, and environmental insecurity. It becomes plausible then to understand that one way to address human insecurity is to help insecure states ameliorate their national security concerns, and vice versa, with the amelioration of human security concerns helping a target state feel less vulnerable. At the
same time, environmental security is not just vital for one’s own direct national security considerations, but also for regional and international considerations. Climate change and degradation of nature, relate quite literally, to the operating environment within which these mutually constitutive processes occur. There is a nonhierarchical, even circular causality operating in East Asia whereby (Table 10.2).

Thus, only holistic governance approaches can hope to deal with the complex web of causality and insecurity addressed in this chapter.

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