

Non-Traditional Security: The Case of Environmental Challenges in the Mekong Subregion

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Abstract: In the first decade of the twenty-first century Non-Traditional Security (NTS) challenges are of rising importance due to their increasing impact on daily life and broader national interests. This paper focuses on the Mekong Region as an important subregion due to its significance for more than 70 million people living directly on the river banks and its importance for the economic development of the six riparian countries. This paper investigates NTS challenges in the Mekong Subregion with a focus on environmental challenges and argues that NTS are of increasing importance in the region and will increase in the future. Whereas economic growth is crucial for the improvements of the livelihoods on the Mekong River and the overall economic performance of the riparian states, environmental protection cannot be disregarded as doing so would have devastating impact on the subregion and the wider region in the future.

Keywords: Non-Traditional Security; Mekong Subregion; Environment; Water governance; East Asia

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The first decade of the twenty-first century marked the beginning of enormous change in geo-politics, geo-economics and security patterns in East Asia. Non-traditional Security (NTS) challenges are of rising importance in the twenty-first century due to their increasing impact on daily life and broader national interests. Most NTS challenges in the region – including transnational crime, drug and human trafficking, haze pollution, migration, piracy, spread of diseases and environmental degradation – are transnational in nature, impacting on several countries by crossing national boundaries and therefore cannot be solved solely by individual countries (Emmers, et al. 2006). For instance, environmental degradation affects East Asian countries in different locations and aspects including flooding, salt-water influx, forest depletion, groundwater deterioration, and water pollution. It is here defined as 'the reduction of the capacity of the environment to meet social and ecological objectives and needs' (UNISRD, 2007).

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Mekong River Banks in Phnom Penh, Cambodia, December 2012

The research underpinning this article is based on primary and secondary research on the Mekong region and highlights the significance of NTS in the subregion and its impacts on the population. Primary data was collected through semi-structured interviews, mainly in Thailand, Laos and Cambodia. This encompassed practitioners, academics, NGO leaders, representatives from active aid agencies and officials. Secondary data was obtained through journal articles, local publications and the national, regional and international media. The article outlines the importance of the Mekong subregion and its unique characteristics before focusing on the theoretical dimensions of NTS with an emphasis on water governance and the challenge of regional hydropower development. This is followed by combining a focus on both areas and, finally, some recommendations.

What is at stake at the Mekong Subregion?

This article focuses on the Mekong Region (see Map 1) as an important subregion due to its significance for more than 70 million people living directly on the river banks covering six

riparian countries – China, Myanmar, Thailand, Cambodia, Vietnam and Laos. The region is also critical for the economic development of the six riparian countries, which include some of the poorest countries in East Asia (Mehnton, et al. 2008). For instance, Laos and Cambodia's per capita GDP was estimated in 2012 to be around 3,000 USD and 2,400 USD respectively (CIA, 2013a, 2013b). Moreover, because the Mekong Region links the Association of Southeast Asian Nations (ASEAN) with China, it has implications for the whole region in regards to both NTS developments and regional cooperation.

The Mekong River is the largest river in Southeast Asia and the eight largest in the world (Campbell, 2009). It has enormous economic and ecological resources as well as political significance (Goh, 2006; Osborne, 2006). The Mekong River is central for food, accommodation and employment to millions and is also vital for the development of the entire Mekong region. However, these developments are currently at a crossroad which could lead towards peace, cooperation and harmony or conflict, dispute and insecurity. Floods, droughts, famines, environmental disas-

ter, soil erosion and deforestation are issues not only influencing regional and national developments but also directly impacting on the large population living directly on its banks, depending on the river for subsistence (Elliott, 2009). Additionally, the river is ecologically diverse with over eighty listed families of indigenous fish species in a significant and unique ecosystem with some of the world's highest diversities of fish and snails, including the endangered and iconic Irrawaddy dolphin and the giant Mekong catfish (Campbell, 2009).

A major cause of environmental degradation and resource scarcity has been the industrialisation of the countries combined with increasing consumption rates, urbanisation, growing energy demand and production changes (Matthew, 2011). Environmental degradation has many extensive consequences in the Mekong Region resulting in environmental refugees, loss of biodiversity and instability. Practices such as deforestation and land degradation destroy natural resources and foster natural disasters, such as flooding in China and the Mekong region in 2010 or landslides in Thailand in 2009. These disasters have enormous economic, environmental and social consequences such as displacement, health problems or rising famines which can only be tackled successfully through transnational cooperation (Elliott, 2009; Matthew, 2011). Moreover, the well-being of the livelihoods is also closely related to potential ecological problems associated with (for example) damming on the Mekong. Hydropower developments on the mainstream of the river but also on its key tributaries are an acute challenge to the subregion with the current construction of the first mainstream dam build on the Lower Mekong, the Xayaboury dam in Laos, which will be followed by several other planned projects as visible in Table 1. It is evident from similar cases globally that damming can trigger four key ecological problems. As highlighted by Evelyn Goh, this can include the impoundment of large amounts of water behind dams, which is often dangerous and unreliable as construction of dams foster more frequent and larger landslides and earthquakes in the immediate area. Further, during the filling period of dams, the downstream countries can have dramatic falls of water in the dry seasons (Goh, 2006, p. 229). Secondly, flood and drought control capacity of Chinese dams are debatable, as the main



Map 1: Mekong Greater Subregion

	Mainstream		Tributaries		Total
	Existing or under construction	Planned	Existing or under construction	Planned	
China	5	3	0	0	8
Lao PDR	0	6	14	19	39
Lao PDR/Thai	0	2	6	0	8
Cambodia	0	2	0	4	6
Vietnam	0	0	10	2	12
Total	5	13	30	25	73

Source: MRC 2009, p.1.

Table 1: Hydropower dams on the mainstream of the Mekong and tributaries

purpose is water storage and electricity generation. However, the control of water and the reduction of normal flood peaks can have negative impacts on the ecological and agricultural patterns affecting nutrients and sediments which will reduce the natural soil fertility over wide areas used for rice cultivation in the lower Mekong (Goh, 2006). The importance is visible as 80% of Cambodia's

rice paddies are closely tied to annual floods (Roberts, 2001, p. 8). Additional implications of water control include fewer and lower floods resulting in increased salinity in the delta.

Fish and other aquatic species adapted to the ecosystem will be disrupted in feeding, spawning, and nursing in specific parts of the Mekong. This would foster a decline in biodiversity and would have

	Importance of flow	Water quality index	Environmental flows	Sustainability of water	Biodiversity	Total
Cambodia	5	4	5	4	5	23
China	3	5	1	2	3	14
Laos	3	5	4	3	4	19
Myanmar	2	5	1	5	5	18
Thailand	4	5	4	3	3	19
Vietnam	5	4	5	3	5	22
Average	3,7	4,7	3,3	3,3	4,2	19,2

Source: Adjusted from Phillips et al. 2006, pp. 128-129.

Table 2: Selected environmental-related indicators for the six riparian countries on the Mekong River

adverse effects on wild-capture fishery productivity. Further, as highlighted by experts, this will drastically affect the fisheries which provide employment and are also the main source of protein. Lastly, damming would impact on sediment patterns in the Mekong and, according to Blake, half the Mekong's annual sediment load which originates in the Chinese part of the river basin



Nam Ngum 1 hydropower dam - the first dam built in Laos

would be trapped on the way due to infrastructure. This would result in more erosion downstream which will alter the channel's course, weaken structure and increase coastal erosion and salinity (Blake, 2001, p. 5). These forecasted problems regarding new dams can be worsened by the increasing private investment in the region which could lead to lower standards as in previous projects such as the Nam Theun II dam. Further, these problems combined with other challenges such as population growth, food and water scarcity, pollution, diseases and refugee movements add to the pressure on water and other natural resources in the subregion.

NTS challenges: A theoretical approach

The traditional notion of 'national security' (defined as protection of the state's sovereignty and territorial integrity from external military threats) is still of major importance. However, states – as well as non-states actors – have also raised broader, contemporary concepts that go well beyond external military threats, including human and environmental security. As one observer pointed out nearly thirty years ago at the World Commission on Environment and Development: 'Today we cannot secure security for one state at the expense of the other. Security can only be universal, but security cannot only be political or military, it must be as well ecological, economical, and social. It must ensure the fulfilment of the aspirations of humanity as a whole' (Timoshenko in WCED, 1987).

Environmental security is central to national security, comprising the dynamics and interconnections among the natural resources, the social structure of the state, and the economic drivers for local and regional stability. Interconnectedness is one of the major characteristics of environmental causes and consequences and can trigger conflict between states or within a state as a result of environmental degradation (Elliott, 2003, p. 47). As a result it can threaten the security of a state, its people or even a whole region. This is supported by China and ASEAN which share the perspective that if economic stability and growth falter, regime survival could be in danger (Arase, 2010).

The environment and security can be linked in different ways through traditional or non-traditional lenses (Goh, 2006). The traditional notion of security links

environmental degradation with conflict and contributes to potential interstate conflict. The non-traditional realm of security focuses on the relationship between environmental degradation and social welfare relating to the effects of environmental scarcity and degradation on the well-being of communities and individuals (Goh, 2006, p. 229). This includes a focus on human security, which is increasingly defined as the security of individuals as human beings instead of only being a citizen within a specific territorial entity (Graeger, 1996). Although non-state actors are the drivers behind NTS, this research uses the traditional way and focuses on the state level and the negotiation process. However, this is intertwined with the NTS aspect because states need to provide clear and sufficient water for their citizens, economies and industries. Those in the Copenhagen School argue that war and force are not the only core elements of security studies and use a broader definitional catchment in conceptualising security by including many different types of threats.

This leads to another often discussed point in environmental security focusing on the inclusiveness or exclusiveness of water security, energy security, food security and others in the area of environmental security and its implications. To add another large field such as water or energy security into environmental security broadens the topic and makes it more bulky and difficult. However, for this research on a transboundary river it is important and necessary because of the rapid growing demand of developing countries such as China and possible conflict between water resources and energy demand. Gleick argues that the regional level plays an important role as conflicts are more likely to occur on local or regional levels in developing countries because common property resources may be more critical to survival and less easily to replace or supplement (Gleick, 1993).

This is visible on the Mekong as water governance is closely related to the environmental effects, especially regarding water quality and water flow. For instance, damming on the upstream river not only reduces the water flow influencing the problem of water scarcity or allocation in the downstream countries, but also influences the water and soil quality (Lowi, 1999). This is also supported by the study of Phillips et al and the adjusted Table 2 which illustrates

the significance of environmental-related indicators for all riparian states in the Mekong basin ranked on a scale from 1-5 with 5 indicating a high importance for the country. The result is that environmental issues play a significant role for all countries and that the most pressing ones basin wide are water quality, biodiversity and the flow regime (including base flow) which would be affected by the planned regional hydropower projects affecting all countries but severely the most downstream countries Cambodia and Vietnam (Phillips et al, 2006, p.128-129).

Whether water scarcity or security can be seen as a national security threat in addition to an environmental threat depends on several factors. According to Lowi these include water dependency on one special river and the physical location on the river, relating to the upstream-downstream phenomenon. Further factors are the countries climate and condensation, the demand of a growing population and the political relations within the given country and the region (Lowi, 1999, p. 380). For instance, China's role as the most powerful country on the upstream on the Mekong River with several other water resources is different to the role of the most downstream country, Vietnam, with a rapidly growing population and a strong focus on agriculture as one of the largest exporters of rice (it was the world's second largest rice exporter in 2012) (Fernquest, 2012). Similarly, for instance, Cambodia depends to 82 % on water originating from outside their borders, which shows that water scarcity could develop into a national security threat (Gleick, 1993, p. 103). Growing energy demand is one of the other major aspects in the subregion and often conflict through hydropower developments with environmental challenges. Food and energy depend on access to water and add to the dilemma on transnational river basins such as the Mekong River (Schneider, 2011).

Transboundary dilemmas: A fight for water?

The Mekong region continues to be of great political interest for the region and beyond as future development will be linked more and more closely to China. China's main interest in the region is twofold. First, the physical suitability for hydropower at the Mekong River to fulfil the exponential growing energy demand in the major

Chinese cities; and second, to contribute to China's main goal of economic development, especially in the western agricultural provinces which are deficient to the rapid developments in the urban areas. The Chinese National Defence Paper of 2002 states that the Mekong area is strategically important for China's security, especially in regards to NTS threats but also as connection and boost for Western provinces and continental Southeast Asia through major connecting roads or improved navigation on the river (Hensengerth, 2009b; PRC, 2002).

Laos' future economic growth depends heavily on hydropower development for its own energy demand, but more importantly as an important source of revenue through energy exports to its neighbours (including Thailand, China and Vietnam), which face increasing energy shortages. Thailand's interest is positioned in water diversion and irrigation projects to advocate its arid northeast region. Vietnam's focus is on reducing damming on the Mekong as around 50 % of Vietnam's annual rice crop is produced in the Mekong delta which shows increasing salinisation; however, on the other side, Vietnam also needs to satisfy its growing energy demand (Campbell, 2009; Hensengerth, 2009a). Cambodia is primarily concerned about the Tonle Sap Lake, the biggest lake in Southeast Asia, which depends on the Mekong River's enormous water flows in the wet season in order to reverse the direction in the dry season. This results in the carrying of high amounts of fish and other aquatic

life which bred in the lake during the wet season and count for at least up to 60% of the annual protein intake of Cambodia's population (Osborne, 2000).

Energy, security and the environment have become intimately connected as is evident in the dilemma of water security between dam constructions juxtaposed with the need to preserve river flow and fishing necessities on the Mekong. Further damming of the Upper Mekong results in habitat loss for people, can obstruct the 600 migratory fish species that swim to their spawning ground, and fosters the trapping of sediment which influences the Mekong's delta nutrients (Arase, 2010; WWF, 2010). This could also be intensified through Lower Mekong dams such as the Xayaboury dam in Laos which is planned and currently under construction (International Rivers, 2013).

Besides the individual goals of the six riparian governments, transnational organizations such as multinational companies, epistemic groups and financial institutions within the region, play a significant role and often cut across national and international boundaries with different plans and demands (Greene, 2005; Sneddon & Fox, 2006). This includes fishers, boat operators, NGOs, energy suppliers, construction companies and environmentalists pursuing different and sometimes contradictory interests and goals in the Mekong region. For instance, external countries and companies have interests in large scale hydropower and other infrastructure projects or through extensive aid programs.

Recommendations & conclusion

Whereas throughout human history, environmental impacts such as pollution or over excessive exploitation have been local problems, today environmental issues connect local, national, and international processes and therefore adequate responses are needed in an interdependent world (Greene, 2005). NTS issues are an important challenge in East Asia and although efforts are made on the national and regional level, transboundary effects remain a problem and will likely increase in the future. Environmental degradation is likely to continue requiring long term political decisions. These need to include the problems of growing population pressures, the fight against poverty, policy failure, political instability and the rising demand for energy, food and other resources (Elliott, 2009; Greene, 2005). Besides several external and regional challenges, each of the six riparian countries also faces several internal challenges and problems which influence regional development and the countries' own goals for the Mekong River. Whereas economic growth is crucial for improving livelihoods on the Mekong River and the overall economic performance of the riparian states, environmental protection cannot be disregarded as doing so would have devastating impacts on the subregion and the wider region in the future. Increased transnational cooperation in regional institutions, including NGOs, local communities and global organisations, are the key to reach long-term economic, social and environmental security in the region. Today's



Wood transporter on the Mekong, Luang Prabang, Laos, March 2013



Gold panning in the dry season – important income for many villages along the Mekong, Luang Prabang, Laos, March 2013

political decisions and guidelines are crucial to the livelihoods of current and future generations. These decisions will guide the region towards its destiny. As a result, decisions on the river's usage, development, policies and partnerships need to be as collective as possible and made with the best possible knowledge, principles, values and conscience.

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