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Water management in Thailand: dams and the voice of the affected and displaced people

ocated in the monsoon region of Southeast Asia, Thailand is blessed, and sometimes cursed, by abundance of water supplies. As the country opens to international trade, the richness in natural resources and large alluvial plains have transformed Thailand to emerge as "the rice bowl of Asia" in which the agricultural product is one of the main pillars of national income (Water Resources System Research Unit, Chulalongkorn University, 2013). As the main rice exporter, the Thai government controls and centralizes water resources policies for

better management in order to support a growing cultivation. Floods and droughts are both very common and affect farmlands. Mismanagement can result in devastation and will trigger economic upheaval or political turmoil. Consequently, large dams have been built all over the country and yielded positive results by expanding irrigation areas. Experience shows that a construction of mega dams involves forced relocation, environmental degradation and immensely affects people's livelihood. However, in the government's perception and the tacit recognition of the majority, for the common good, sacrifice needs to be made.

Nevertheless, such an idea is problematic. Despite the undeniably benefit of dams, many people affected by their presence are the victims of the state's water control. Their grievances are ignored and their protests have been merely recognized as small groups causing political turmoil. Furthermore, the notion of migration and resettlement in Thailand are mostly limited to a regular flow of either economic migrants or asylum seekers from neighboring states. This perception reflects the problem that environmental migration and forced displacement have had no platform on the government's agenda. Thus, by bringing together stories from the lost voice of dam-induced migrants in the past and the voice of possible displaced people in the future, this paper is a humble attempt to speak on their behalf with the hope to raise an awareness that construction of dams is not merely the notion of people's sacrifice for national development, but also in many cases represents the dilemma for voiceless local communities.

In order to clarify this claim, the paper will be divided into three main parts. First, the overview of water management in Thailand and its recent controversy over the Great Flood in 2011 will be presented. Second, environmental migration and the socio-cultural impacts of building large dams will be exemplified through case studies. It is hoped that these cases will illustrate how livelihoods have been transformed. Third, the Thai government's new mega project to build more dams will be explored alongside the responses of local movements. THANITA YAMSIRI WATER MANAGEMENT IN THAILAND: DAMS AND THE VOICE OF THE AFFECTED AND DISPLACED PEOPLE

1. FLOODS, DROUGHTS AND WATER MANAGEMENT IN THAILAND

1.1 Overview of Thailand

Thailand covers a land area of 514,050 square kilometre (km²) or 321 million *rai*¹ of which about 40 per cent (131 million *rai*) is an agricultural area (Royal Irrigation Department, 2010). The country can be characterized into six main regions: the *Chao Phraya* Central Plain, the Southeast Coast, the Northeast Plateau, the Central-Highlands, the North and West Continental Highlands and the South Peninsular. In this paper, two main regions are of concern in terms of government targeting for dam construction. First, the Northern part, predominantly a highland and mountain ranges, generates the four main rivers- *Ping, Wang, Yom,* and *Nan*- which are converged to "the lifeline of the Central Plain," the *Chao Phraya* River. Second, the Northeast, accounting for one-third of the country, is a dry plateau with saline soils problem. Floods and droughts are more severe in this region (Water Environment Partnership in Asia, n.d.).

As for the hydrological characteristics, the country can be divided into 25 river basins and 254 sub-basins (Department of Water Resources, 2006). According to the Royal Irrigation Department (2012), average rainfall is estimated to be 1,574 millimetre (mm) per year with an annual runoff of around 213,424 million cubic metre (m³). Annually, about 183,001 million m³ is accounted for the runoff in wet season while in the summer it is estimated to stand at 30,423 million m³ or 35.6 per cent of the overall runoff water. Around 20,000 million m³ needs to be retained as the dead storage. However, water quantity ranges from region to region depending on geography and local climatic conditions.

Basin No.	Name of River Basins	Catchment Area (km ²)	Average Runoff (MCM.)	Storage capacity (MCM.)	Irrigation Area (rai)	Water Requirement (MCM/year)				
						Domestic Consumption	Tourism Industry	Ecological Balance	Irrigation Agriculture	Hydropower
1 2 3 4 5 6 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 3 24	Salawin Mae Khong Kok Shi Mun Ping Wang Yom Chuarrya Chuarrya Chuarrya Sakackrang Sakackrang Paska Pasak Thachin Mae Khong Prachinburi Bang Pakong Tonglesap East Coast Photchaburi Prachuap Khiri Khan Coast South East Coast	17,920 57,422 7,895 69,700 33,898 10,791 23,616 34,330 20,125 5,191 13,662 23,083 5,191 13,682 30,837 10,481 7,978 4,150 30,837 1,3830 5,603 5,603 5,603 5,603 5,603 5,603 5,603 5,8	8,571 19,362 5,279 8,752 26,655 7,965 1,104 9,158 22,015 1,297 2,820 2,2,300 7,973 3,713 6,297 3,713 1,420 2,3,270 1,420 2,3,270 2,3,271	24.00 1.551.00 30.00 4.246.00 4.245.00 9.619.00 9.619.00 9.619.00 9.619.00 162.00 416.00 26.690.00 57.00 55.00 565.00 5.00 5.00 5.865.00 28.00	188,948.00 1,692,333.00 520,767.00 1,883,173.00 1,843,173.00 994,205.00 994,205.00 994,205.00 994,205.00 994,205.00 994,205.00 904,205.00 661,120.00 2,385,259.00 0,2385,259.00 1,233,263.00 1,233,263.00 1,233,263.00 1,233,263.00 1,233,263.00 1,233,263.00 1,233,263.00 1,235,255.00 1,780,481.00 245,970.00 905,555.00	Consumption 11.96 13.2.57 14.90 195.17 33.7.88 75.26 20.21 33.87 66.29 1,2.490 1,2.490 1,2.490 1,2.490 1,2.490 1,2.490 1,2.57	4.46 1.98 0.43 49.62 94.30 1.00 0.08 0.52 646.05 646.05 22.28 310.25 - - - - - - - - - - - - -	1,027.81 1,145.69 680.00 573.33 956.63 457.27 48,00 315.36 115.00 115.00 315.00 115.00 315.00 357.00 357.00 377.00 946.60 946.60 946.00 94.00 1,577.00 377.00 39.10 161.70 3,085.20 312.00	Agricanate 616.93 4.232.33 4.01.39 3.052.82 2.428.85 2.428.20 487.42 8.59.13 2.870.859 8.70.859 8.70.859 8.70.859 9.70.759 9.70.759	2,156.00 591.30 3,623.00 2,583.00 2,583.00 1.94 79.00 693.00 2,577.00 2,596.00
25	Pattani South West Coast	3,858 21,172	2,738 25,540	1,420.00 20.00	337,878.00 339,273.00	31.20 53.20	2.44 18.90	670.80 74.80	441.11 253.00	1,152.00
	TOTAL	512,066	244,431	70,769.00	31,025,989.00	3,118.14	1,311.51	15,325.90	48,171.92	20,767.24

Figure 1. The description of 25 major River Basins in Thailand

Source: Department of Water Resources, 2005

In general, climate in Thailand is dominated by the southwest monsoon (mid May-mid October) and the northeast monsoon (mid October-mid February). The former brings heavy rainfalls whereas the latter involves dry and cold conditions. Under these two influences, three seasons can be identified: rainy, winter and summer. The recent report by the Water Resources System Research Unit of Chulalongkorn

^{1 6.25} rai = 1 ha

University (2013) suggests that global climate change will directly affect the supply of water in Thailand due to higher temperatures, tropical storms and rising sea levels. It also projects that such a threat will massively destroy cultivation and Bangkok, the capital city, might be submerged within twenty years. Additionally, the El Niño event, characterized by an extended period of dry and drought, as well as La Niña, which exacerbates heavy rainfalls, have both increased in it scale and sequence in the region. At present, Thailand is facing even more severe climatic variability. Heavy floods and prolonged droughts have affected wider areas throughout the last thirty years (TRF- Climate Change, 2008). These on-going phenomena tend to increase and will put great pressures on water management in Thailand.

Map 1. Total Area of 25 basins in Thailand



1.2. Floods and Droughts

Due to its physical features and Monsoon occurrences, Thailand has experienced both floods and droughts every year. Thai people have learned to adapt and live with this cycle for more than hundreds of years. Bangkok, used to be known as "the Venice of the East", was once filled with canals which served as the main commuting method, as well as natural flood ways in the rainy season (Penchom, 2012). However as the city began to be influenced by the modern western style, urbanization has expanded and the traditional way of life has rapidly changed. Canals were replaced with concrete roads; industrial factories were built on plains near river basins. Unplanned housing estates blocked flood plains (Poapongsakorn, and Meethom, 2012). Around 20,000 *rai* (approximately 3,400 ha), once a low-lying swamp serving as an effective catchment area in the eastern side of Bangkok, was turned into the main Bangkok International Airport, *Suvarnabhumi* Airport (OK Nation, 2011a). Gradually, floods become more severe. The Great Flood in 2011 stood as one of the most recent catastrophic example.

Meanwhile during the dry seasons, despite the abundance of water resources, the problem of water supply is pronounced in rural areas and affects the agricultural sector. As part of economic development, sustainable agricultural methods have been transformed to a cash crop economy. In this regard, Thai government has then implemented more centralized control over water resources in order to feed agricultural and industrial demand for water consumption. Consequently, irrigation

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areas have expanded and dams receive more and more justification as a necessary step towards national development. Constructing dams and reservoirs have been an important part of the Government's National Economic and Social Development Plan since 1961 (Mooksong, 2013).

However, large dams can only partly solve minor problems and in most cases generate negative outcomes. The growing number of dams may actually aggravate environmental and climate change problems. In 2010, the northeastern region of Thailand experienced "the worst drought in twenty years", particularly in the Mekong sub-region where the water level decreased to the lowest point in the past 50 years. Some critics claimed that this was caused by the impact of an operation of dams in China located in the upper Mekong region (Marks, 2011). This claim was later supported by recent evidence from the Thai Department of Water Resources, Ministry of Natural Resources and Environment. The data showed that the Mekong's water level unnaturally fluctuated from 4 metres to over 8 metres within a few days in December 2013 severely impacting the local people living along the river. This situation was related to the fact that China had released a large amount of water preparing for a dam reconstruct in February 2014 (TCIJ, 2014).

1.3. Water Management and the 2011 Great Flood

In Thailand, dams help retain water in the wet season and provide water supply during droughts (RID, n.d.). The country is ranked within the top ten for the best capacity to provide irrigation. Later dams were also built for other purposes such as providing water for industries consumption, for hydropower as well as flood prevention. Currently, there are 682 dams across the region in which 33 are categorized as large dams, each having more than 100 m³ storage capacity; 463 dams as medium capacity account for 5,325 m³ storage in total; and 4,262 are as small reservoirs (RID, 2010; Chanjula, 2009). Two main agencies, the Royal Irrigation Department and the Electricity Generating Authority of Thailand (EGAT), are responsible for dam management.

Although the presence of large dams in Thailand has yielded positive results especially in providing a modern and systematic way of managing an abundance of water resources, there is always a possibility for mismanagement which could cause equal or more harm than a natural disaster. The Great flood in 2011, "the worst flood in modern Thai history" (Poapongsakorn, and Meethom, 2012), demonstrates this claim. Although the government portrayed that the flood was caused by massive rainfall and various tropical storms, many experts in the environmental field believed nature was a minor attributable factor of the damage. Research by Poapongsakorn, and Meethom (2012) indicated that mismanagement due to political influence and competition in irrigation and water management largely accounted for this catastrophe. Some areas where influential politicians took control experienced less damage at a cost of the other's area massive devastation. Also, an untimely discharge of massive water flow from three to four major dams to the already flooded area, making up to 12,000 million m³ of water, inundated the central plain. This implied the lack of cooperation between the different authorities in charge (OK Nation, 2011b). Additionally, an unclear line of government agencies managing water resources led to the confusion and overlap of command as there are 30 agencies spanning 9 ministries in change of water resource development (Department of Water Resources, 2006). All the previously mentioned factors result in the critique that apart from unavoidable environmental causes, mishandling of dams and a lack of cooperation between the authorities exacerbated the 2011 flood. Consequently, a large number of people were displaced.

However, the government has never admitted its mismanagement nor launched any investigation to determine the actual factors that led to the flood. Instead, it has proposed and outlined a 3.5 billion-baht (USD 11 billion) mega plan, to which many experts see as a short-term and ineffective solution, in response to the recent flood disaster. Constructing more large dams are once again on the government's agenda. The scheme will mostly affect many local communities in the Northern region. Even though Thailand experienced a number of social problems as a result of building dams, the possible negative outcomes have not been seriously considered. Significantly, at most steps of water management, the people, especially those in the rural areas without politician support, have no voice in a decision-making process. Unfortunately these people are often most affected by the government's centralized water management policy.

2. DAMS: THE LOST VOICE OF THE DISPLACED PEOPLE

According to World Commission on Dams (WCD, 2000: 1-2), "conflicts over dams are more than conflicts over water. They are conflicts over human development and life itself." Economically, dams undeniably profit people. On the other hand, it also reflects the idea that the State owns this national resource as the State is the one that has the duty to provide water to the population. This has an indirect impact on the rights of local communities in that the State can claim control over people's assets on behalf of the majority. Forced displacement and relocation as well as expropriation in the case of constructing dams emerge as a justification for the common good.

Even though there are many other methods for managing water resources, large dam construction often stands out as the most cost-effective mechanism in the Royal Irrigation Department (RID)'s agenda. This is due to the fact that the National Development Plans are based on expanding the irrigation area with the fear of water shortage for extra farming in the dry seasons (RID, 2010). As a result, dams were widely constructed with no clear assessment on environmental outcomes, let alone the socio-cultural consequences. After the publicizing of the Enhancement and Conservation of National Environmental Quality Act B.E. 2535 (A.D. 1992), it is now harder to obtain national approval and begin the process of dam construction. This law requires an Environmental Impact Assessment (EIA) which is a formal process to measure and predict environmental consequences. This assessment is also a guideline to minimize any negative outcomes as well as determines whether a project will be approved (Environmental Impact Bureau, n.d.). At the same time, a growing civil society and more open political environment is providing a platform to discuss community rights, which were first articulated in the 1997 Constitution. Any development project that will immensely affect local communities needs public consultation. In other words, infrastructure programs built before that period mostly ignored public opinion. Forced relocation and unfair compensation was widely practiced. Many cases below will illustrate why environmental assessment and public opinion are crucial before constructing any large dam project in the future.

2.1. Dams and the voice beneath the water

More than sixty years since the first large dam was constructed, dams have often been portrayed as advantageous for national development. However for the local people whose lives are immensely attached to land, water and natural resources, forced relocation is greater than the lost of financial assets, such as their traditions, culture and communities. Unfortunately, at the time when there were many large dam projects, local communities affected by forced displacement had no political power to protest. The stories of their grievance were kept untold and resemble the folktale worth no attention. In many cases, the government had no clear strategy on helping the locals with resettlement. No official record was found and government agencies were not able to provide evidence of the numbers of people affected by large dams' construction (Trekkingthai, 2004). As Nehru, the first Prime Minister of India, once said to justify the Hirakud Dam project that "[i]f you are to suffer, you should suffer in the interest of the country" (Khan, 2012: 197). In the name of development, migration is merely the byproduct of constructing infrastructure for the common good. Nevertheless, for the affected people, migration created by development projects should not only be viewed as a sacrifice for the common good. Rather, it should point to the lack of strategy and suppression of a community's rights by the state. This paper will attempt to explain those stories, in the least to bring them to light and remind the next generation of what society has traded off for economic gains.

Vajiralongkorn Dam or *Khao Laem Dam*, is a concrete rock-filled dam located in the western region. The reservoir covers the area of 3,720 square kilometres with a maximum storage capacity of 8,860 million m³ (EGAT, 2013). Apart from generating hydropower, *Khao Laem* Dam is also known as a tourist destination. Due to the severe drought in 2010, tourists were surprised to see debris of temples and building emerged from under water. The Tourism Authority of Thailand (TAT) then proclaimed it as one of the sites "Unseen in Thailand." However, the real 'unseen' story was retold by *Weerawat Theeraprasat*, Chairman of the Foundation for Ecological Recovery (TERRA) and the former Superintendent of Wildlife Sanctuary in the region. He described that the dam and catchment area had submerged the whole district of *Sangkhla Buri* and many historic areas for twenty-seven years. Local people were relocated and settled in low quality agricultural land that yielded little productivities. Some were moved and packed in a housing estate. Meanwhile, the World Bank, the main financial supporter of the dam construction, claimed its success as the people's standard of living was improved and they earned more income (Trekkingthai, 2004).

Conversely, Mr. *Theeraprasat* strongly disagreed since the World Bank Report had excluded twenty per cent of the relocated persons as well as a large number of undocumented local communities in the area (WCD, 2000a: 105; Trekkingthai, 2004). The situation also worsened for the ethnic minority groups, the *Mons* and the *Karens*, who were community locals but failed to acquire the citizenship. As a result, they received no compensation and were forced out of the area. Also, cited in Watershed Magazine in 1998, a displaced person said "it was true he gained more money. Because with no money, he had no life here. Meanwhile, in the past, he had no money but he had every thing he needed" (Trekkingthai, 2004). These situations are familiar for displaced people in other large dams such as *Bhumipol* Dam, *Sirikit* Dam, *Sirindhorn* Dam, *Sri Nakarin* Dam, along with many others that have been built to the detriment of the communities. This was due to the fact that at that time, about sixty years ago, the locals did not dared to resist the State's authority. Also, the local and indigenous people had no political channel to voice a complaint and no concept of community rights existed.

2.2. Rasi Salai Dam

This irrigation dam is located in the Northeastern region on the *Mun* River. It is 17 metres in height with a large reservoir area. The construction was completed in 1994 and cost around USD 26.7 million, nearly six times of its original budget plan (EJOLT, 2014). No environmental impact assessment or public hearing was arranged. At first, there was no resistance from the local communities since the authorities had assured that it would be a small reservoir and would rarely affect the local. However in reality, it turned to be a large concrete dam. When the dam was completed, water flooded into local communities' agricultural area and inundated the seasonal flooded forests.² Apart from destroying the natural resources that were the sources of income

^{2.} Seasonal flooded forests, found near the Mun River's floodplans, are very abundant in natural resources such as aquatic animal, vegetables and medicinal herbs. These forests are the vital sources of food and the well being of the local people.

for the local communities the flood caused more than 3,000 families to lose their home and farmlands. The dam has generated a wide range of environmental disasters such as an expansion of saline water, meaning that the water in the reservoir cannot be used for irrigation due to the fact that the rock underneath is actually salt deposits. This leads to a problem of soil salinity in a wider area (EJOLT, 2014; SEARIN, 2000). Furthermore, the specific area limited for the reservoir was identified five years later after the construction, creating many overlapped territorial claims (Chusakun, n.d.). More than 141 villages were affected. It is rightly claimed that "far more productive land has been lost to the reservoir than has ever been irrigated by water from the dam" (Blake, 2013).

More than twenty years, the people's life has been degraded in many aspects. This includes poverty, community conflict, loss of traditional lifestyles and broken families to name a few. Younger generations have had to move away from their homes to find a job in an urban area and remit money to their elderly parents at home (Silarak, 2010). Problems of compensation, property rights and unfair treatment by the State have ignited the protests since the Rasi Salai dam was completed. In some case, their lost properties have never been identified, meaning that the affected people would receive no compensation (Prachathai, 2013). Some protesters refused to migrate and willingly stayed near their inundated lands. One of their leaders drowned into the water. Self-relocations were established near the dam site in 1999 as people refused to move out (SEARIN, 2000). In 2000, there was a big demonstration at the Rasi Salai dam requesting for the opening of the dam's gates. As a result, the protest leader was arrested and sentenced to prison. More problems followed. In February 2013, villagers gathered near the dam requesting answers to the same issues that had persisted for the past twenty years. Once again their voices were ignored and no adequate solution was reached. In this case, it can be seen that devastation of the environment at the hand of the State has driven the affected people out of their land. Labour migration seems to be one of the methods to cope with the situation at home. Even though migration has never been the main concern in the case, it is worth noting that remittance generated by the young workers is used for both feeding the family and supporting the ongoing protests.

2.3. Pak Mun Dam: the voice to be heard

The *Pak Mun* dam is located on the *Mun* River in *Ubon Ratchathani* province, Northeastern region. The dam is 5.5 kilometre (km) away from Mekong and *Mun* confluence. It is approximately 17 metres in height and 300 metres in length with a capacity of 225 million m³. The construction cost around 6.5 billion THB, (USD 260 million) funded by the State and the World Bank. Under the responsible of the Electricity Generating Authority of Thailand (EGAT), the initial purpose of the dam was to serve as a run-of-the-river hydropower plant with other possible advantages such as irrigation and fisheries. However, in reality, these outcomes are yet to be realized.

The *Pak Mun* case stands out as one of the notorious conflicts between the State and the local people over the unfair treatment of the displaced communities and newly created environmental migrants. The resulting impacts included the destruction of the entire community in regards to its socio-cultural identity. This explains why the case is among the longest running protests in the world. The study from the WCD also confirms that the dam brought utter destruction to the community's livelihoods and the dam "should not have been built" at the first place (Jenkins, McGauhey and Mills, 2008). The consequences of *Pak Mun* Dam point out that dam-induced environmental migration is also closely related to social and cultural breakdowns in local communities.

Prior to the construction of the dam, people along the *Mun* River considered themselves fishermen (Jenkins, McGauhey and Mills, 2008). Even for the women, fishing was the main mode of nurturing their family and source of income. Their

harmonious relationship with the river was seen through a large amount of fishing instruments based on indigenous knowledge to which women learned how to use and made them. Interestingly, all the tools they used for fishing were well adapted to the nature of each kind of fish and the flow of the river. Also, religious practices and ceremonies were arranged on the *Mun*'s Rapids each year. For the people along the *Mun*, the river is not just a source of income, but also a sacred place (Living River Siam Association, 2012). Any harm to the River *Mun* means harm to their spirit. In other words, the ecology of the *Mun* River has been well preserved by the local tradition and practices.

The *Pak Mun* dam was built without the villagers' participation in the decisionmaking process. Even though their struggle had started early before an approval of the project in the late 1980s, their voice was not heard. Despite little knowledge of the dam, the local based their objection on a deep sense of environmental awareness in that the dam's gate would bar the free flow of the river as well as the migration of fishes from the Mekong River. From village to village, their struggle against the *Pak Mun* dam intensified from the environmental issues which were closely related to their livelihood. Unfortunately, their hope of protecting the river flow was not taken into account by the government and the local authorities. The project continued and started its operation in 1994.



Map 3. Pak Mun Dam, Ubon Ratchathani province

Source: http://www.Livingriversiam.Org/3river-thai/pm.Htm

As a result, migration occurred in two patterns. The first was in the form of daminduced migration where 1,700 households were displaced. This Figure was drastically different from the initial estimation of 241 households (WCD, 2000b: V). The destination prepared by EGAT was 40 km away from the former village and houses were too small to accommodate traditional extended families. This resulted in some self-resettlement in either a reserved forest or public property as the compensation from the State was inefficient for buying land or building a new home (Dash, 2009: 24-25). The second form of migration can be considered 'environmental migration' as more than 6,200 households were largely affected due to a decline in fish diversity. Because the dam blocked fish migration, it was estimated that the upstream fishing catching experienced around a 60 to 80 per cent decline (WCD, 2000b). Many of the fishermen had to move to other sectors as migrant laborers in urban areas to feed their families (Living River Siam Association, 2012; Jenkins, McGauhey and Mills, 2008). Even though EGAT spent nearly 200 per cent above its budget on compensation and relocation cost, protests against the operation of the dam have continued for more than 20 years. Even so the devastating impacts on the ecology of the River *Mun* and lost livelihoods could hardly be compensated by cash.

Since the first protests of the *Pak Mun* dam began in 1989, the lives of affected villagers has all been affected in almost every aspect. Unfair treatment, unreasonable compensation and lost occupations have pushed members of the communities, especially the younger generation to seek better opportunities in big cities. In other words, strong social ties within the local communities have been destroyed by economic stress. Nevertheless, remittances sent home by urban workers help sustain the struggle of the local protesters (Promun, 2014). The various benefits from the *Pak Mun* dam have ruined social unity between the authorities, headmen of villages and the grassroot organizations; as those who opposed the dam were often mistreated. Discrimination against the opposers by excluding them from the decision-making process "created tremendous bitterness and negative perception" (WCD, 2000b: VIII-IX). Furthermore, decreased interaction with the river means less continuity

Picture 1. Life at the confluence of the River Mun

Picture 2. Life behind the Pak Mun Dam



Source: Living River Siam Association

Picture 3. Protest against the Pak Mun Dam





Source: TCIJ, 2000

of traditional and cultural practices as the indigenous wisdom and knowledge are inextricably linked to water, fish and the *Mun* (Jenkins, McGauhey and Mills, 2008). Additionally, the previous role of the women who carried out traditional ceremonies and religious practices has been changed dramatically. The majority of them have become breadwinners and many more have turned into political activists (Living River Siam Association, 2012).

Importantly, it is worth noting that the Figure ht over *Pak Mun* dam is the first in modern Thai history in which the struggle against the State's authorities strengthened a grassroots movement; the Assembly of the Poor³ (AOP) eventually brought the case to national politics and international attention. More than 20 years of the peoples' appeal for fair compensation and Figure ht for justice over environmental concerns, the River Mun's ecology has never been off their agenda. Acknowledging the negative outcomes of the state's project and demolishing the Pak Mun dam may revive the life of the River Mun. However, the demolition of the dam could lead to the failure of the State's control over energy supply involving politicians and some influential companies (Promun, 2014). In this regard, the government and EGAT offered some leaders of the AOP an opportunity to help disintegrate the Pak Mun protesters. Likewise, whenever there was a protest over the opening of dam's gate, there would be an anti-protest movement afterwards.⁴ In August 2013, the EGAT allowed the eight gates of the dam to be opened until the government establishes a commission to ease and resolve the problem (Isranews Agency, 2013). However just a few months later, the gate was closed again. For 25 years, the government has accomplished little to meet its obligations to the community. In parallel, the people will continue Figure hting for the free flow of the Mun River with the hope to return to their sustainable and cultural way of life, or at least a fair compensation (Promun, 2014). Therefore, migration for them is seen as mostly temporary as a way to adapt to economic constraints.

The results of the *Pak Mun* provides evidence against further dam construction, but also is a demonstration of how local awareness can contribute to a Figure ht for livelihood. In such cases, dams are not merely related to displacement or relocation, but also create thousands of environmental migrants. Still it seems to be an unfortunate societal norm that the minority must sacrifice for the good of the majority.

3. LESSONS NEVER LEARNED: THE 3.5 BILLION BAHT PROJECT AND THE VOICE FROM THE AFFECTED AREAS

CAN YOU HEAR US? ... What if we take away your home and replace it with dams, how would you feel? You live in a city. You have a higher education than any of us here but it is a pity ... you have no single knowledge of the relationship between men, water and forests. You want water but you do not take care of its origin. You prevent floods but you let us drown. This forest... this land... is our home. Our ancestors have taken good care of it and we continue in the same path. We want no dams here... Do you hear us? We want no dams! ⁵

(The voice of Pakayor children in Mae Kan district, Chiang Mai, 2014)

^{3.} AOP emerged in 1995 as a rural based and non-governmental organization with the main purpose to struggle over the rights to resources of land, water, and forests. See more in Chris Baker, 2003, "Thailand's Assembly of the Poor: background, drama, reaction", South East Asia Research 8(1): 5-29.

^{4.} Such activities tend to be seen as a "politically arranged anti-movement" against the AOP's protest. See more in: Bangkokbiznews, "Mob Against the AOP Pak Mun", Bangkokbiznews http://www.bangkokbiznews.com/home/detail/politics/20110223/378530/news.html (23 February 2013) consulted on 30 April 2014.

^{5.} The voice from Mae Kan village to express their concern over the dam construction project in the area (via Spring Report, the Thai TV programme)

Despite the government's rhetoric of constructing dams for irrigation and hydropower, preventing floods and droughts are also used to justify their further construction. The Great flood in 2011 marked another watershed in which the Thai government passed the mega-project of water and floods management involving constructing more large dams. However, unlike in the past, local communities, environmentalists, scholars, human rights defenders together with a large number of NGOs are rising against the project. They publicly questioned problems surrounding previous dams as well as the possible negative consequences for the local communities.

3.1. The water management project plan

The Government's 3.5 billion-baht (around USD 11 billion) water management project was initiated in response to the government's incapability to manage the 2011 flood. According to Office of the National Policy and Management of Water and Flood (NPMWF), a new agency responsible for water management, the project was divided into nine modules that will need to be linked as one system. Merely in the Northern region, the projects aim to build up to sixteen dams and reservoirs with the purpose being to prevent the central *Chao Phraya* plain from floods. In this regard, it seems that the government did not acknowledge its mismanagement of the 2011 flood but instead pointed to the failure of national water management system. The controversy lies with the very high estimation of Government budget over the project, the effectiveness of the plan and the Design-build approach (D-B approach). The shortened construction plan means that all the public hearings, environmental impact assessments, or even the procedure of providing compensation will be the responsibility of the private construction companies who succeed in a bid.

These will all directly impact the local people as companies will seek the highest profit, often paying little in compensation. Additionally, public participation has not been part of the decision-making process. The locals have little access to the details of a project's as no information is publicly provided. However in June 2013, the Administrative Court issued an order for the government to conduct public hearings and environmental impact assessments before signing any contract with the construction companies. All projects were to be suspended until the hearing and assessments were completed. However, such tasks were done in an urgent manner while the majority of the affected people were again left out. Furthermore, the hearing in each province was propaganda in nature. Local people were informed by the 15-20 minutes video presentation of the overall project in which there were only up to 2 minutes concerning each possible affected community. Meanwhile, only 800-1,200 locals were able to participate due to the Government limiting the numbers of participants (Thaipublica, 2014). This mega project has been a controversial issue in Thai society, especially within the ethnic minorities in the Northern region, where their homeland and community forest preserve indicated in the mega plan will be largely replaced by dams.

3.2. The voice from the possible affected areas

Although no decision has been made as to which area will be chosen for dam construction, the local communities are now living in fear, particularly those of ethnic groups who might be displaced from their homeland. Local NGOs and many other civil societies are now acting as the main engine to provide the people with information of dam and its impacts. Two cases which have encountered strong resistance will be presented.

Mae Chaem Dam is one of the sixteen dam projects planned in the *Mae Chaem* district, Chiang Mai. The planned reservoir will have the capacity of 134.7 m³ and will cover around 12,628 *rai*. According to the cabinet resolution in 1985, the zone and use of the area was prohibited in any case since it was the abundant forested watershed. However, in 1989, *Mae Chaem* was targeted as the site for a multipurpose dam and

the resolution seemed to be interpreted in a flexible manner ever since. An environmental impact assessment was conducted in 1989 but it was kept unpublished. The project has then revived again in 2010 after the Great flood as a solution to expand the irrigation area and prevent a further overflow of water.

According to the main local NGO in *Mae Chaem*, the *Orphya Institute* (2013a), it is estimated that at least six villages will be affected by the presence of the dam. Among these at least three villages will be uprooted and many more local communities will lose their fertile land. Also, building dams and reservoirs in these abundant forests will mean a devastation of the environment in the long run as *Mae Chaem* is the forested watershed and rich in natural resources. There will be an impact on the supply of water if the forests are destroyed. Food security will be immensely affected. As the locals depend largely on the forest to make a living, this means that their livelihood will be abruptly altered. This will have the most pronounced effects on the local people, specifically the *Karen* ethnic groups. Even worse, despite approving the project to build dams, the government is yet to propose a future plan for the affected people in terms of suitable relocations. Also, compensation is almost impossible to request because the people have no official land tenure documents; meaning the problem of forced displacement and environmental migration will become unavoidable.

For the *Karen* people, the forest and river are their life and spirit. Their home is not limited merely to the residential area but the entire forestland. Their deep sense of interconnection with the environment is part of their traditional way of life and spiritual beliefs inherited from generation to generation. Folktales and community rules are all used to instruct the younger generation to respect and feel gratitude to their motherland. This emotional attachment explains why the project ignites an outcry among the local communities.

From fear of losing their homeland, the local civil society becomes stronger in the possible affected areas. Seminars and talks have been arranged to equip the local communities with details of the project and possible methods to voice their opinion as well as suggest other solutions instead of constructing dam in the Mae Chaem district. Moreover, other civil society groups who have been previously affected by the dam join the protest and share their experiences. With the assistance of many local NGOs, the press and university students, the Karen have been able to voice their concern to the public through online resources and social media such as on TV programmes, facebook pages and youtube. Disappointment and confusion are reflected in the local people's expressions. They mostly ask what they have done to harm the country and why the government needs to take away their home for this what they perceive to be an unnecessary and large dam. By attending talks and community meetings, the Mae Chaem people have learned from many experts that the dam will be less likely to prevent the flood. In fact, the lands are overflooded from time to time and there is little concern. Either way, it is a natural cycle and they have learnt to adapt (Orphya, 2013b). Most of their concerns reflect their fear and injustice they feel on that part of the government. For more than 50 years they have been waiting for the state authority to grant them the land tenure as promised. However, the initiation of the new dam project will mark the beginning of a Figure ht for their land.

"We were born here, we live here and we will die here. We will Figure ht here for our land" (Orphya, 2013b). This will loudly echo from village to village of the *Mae Chaem* district. They only hope that these concerns will reach the government in time.

Kaeng Sua Ten Dam now known as Yom Bon and Yom Lang, this dam is also part of the 3.5 billion baht project. The planned location is on Yom River, *Phrae* Province, in the Northern region. The EGAT planned to construct the dam in response to a national strategy to develop the *Ping-Wang-Yom-Nan* basin in 1991. However, more



Map 4. The areas impacted by Mae Chaem Dam

Source: Orphya Institute, 2013, adapted by Author

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than twenty years ago, there have been strong resistances from the local communities, civil society and environmental groups. The project then has to be postponed until the government revises it again as part of the mega-plan to prevent floods and droughts. This time it comes with the new name of *Yom Bon* and *Yom Lang* dams with a smaller reservoir capacity but with the same possible devastation to the forests and the lives of the locals (Sa-leab Love the Forest Group, 2013).

Map 5. Yom Bon and Yom Lang Dams viewed as the successor projects of Kaeng Sua Ten Dam



Source: ThaiPBS TV channel

Picture 4. Ordain the Forest and Bless the River Yom



Source: http://www.vvoicetv.com/knowledge-id866.html, 2012

The dam and reservoir will cover the area of four villages accounting for more than 3,500 families spanning the two provinces of *Phrae* and *Phayao*. The concerns for the local are attributed to the government's failure to solve the problem of displaced people in many other areas, especially after the large dams construction in Pak Mun and Rasi Salai district (Living River Siam Association, 2013). Up to this point, they have also learned that protesting alone might not be enough since the people who support the construction of dams will politically coerce the locals to accept the project one way or another. The communities and NGOs have been working strategically to use the communities' wisdom to bring to determine how best to protect the forests. Religious ceremonies as well as local traditions are performed as a symbol of the interrelationship between human and the forests. "Ordain the Forest and Bless the River Yom" is one of the examples the villagers have performed for twenty years (Prachathai, 2011). It contains the meaning that the forest and river are now part of their religious life to which they have to pay respect. As a result of these important ceremonies, the issue of dams attracts a wide range of public attention. Additionally, the local civil society has become united with the same purpose to protect the forest and their traditional way of living.

4. CONCLUSION

Water management in Thailand has been developed to stimulate economic growth. Dams support irrigation and provide hydropower as well as a solution to floods and droughts. As seen from the presented case studies, constructing large-scale dams have many uncontrollable and negative consequences, and have not been identified as an effective long-term water management system. The local communities bare the burden, especially in terms of socio-cultural losses and environmental disasters. Displacement and environmental migration are inevitable results once sustainable livelihoods are destroyed. Faced with economic stressors, socio-cultural devastation and conflicts in the communities, demonstrations have taken place in an attempt to verbalize these difficulties.

However for more than twenty years these attempts to be heard have been futile. This is evident in that the government still presents large dams as a solution to water management in the country. The national mega-project for instance lists more sixteen dams and reservoirs to cope with floods and droughts. However, unlike in the past, the political context in Thailand has changed and local people are now able to employ political channels to express their disagreement. Civil societies, academic scholars, specialists in water management and NGOs also participate and play an important role in the movement against building dams. The centralization of water management should shift to the hand of local communities or in the least include them in the management process. It is hoped that these community concerns will signal to the government that a large-scale dam is not the answer for effective water management in Thailand. \blacklozenge

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INTERVIEW

 Interview and discussion with Mr Teerapong Pomun, Director of Living River Siam Association, conducted from 1 April - 6 May 2014 via
 Facebook's personal message. Official website: http://www.livingriversiam. org/index-eng.html OR Facebook page: https://www.facebook.com/ livingriver.siam?fref=ts