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The Mekong River

The Mekong River, which runs through six countries, including China’s Yunnan Province, Myanmar, Laos, Thailand, Cambodia, and Vietnam, is one of the world’s larger river systems in terms of the population which uses it (Viet). At an approximate length of 4,900 kilometers, this is the world’s twelfth longest river and the seventh longest in Asia. The source of the river begins in the Tibetan Plateau and its mouth is the Mekong Delta in the South China Sea (Boer). The Mekong River retains the region’s largest potential source of water and supports continual economic developments such as irrigation and agricultural production, hydropower, forms of transportation, industrial water supply, commerce, and tourism, making it the most important international river in Southeast Asia and Southwest China (Li). About 60 million people reside in the Mekong River Basin, and especially those living in Vietnam, rely on the river for nearly half of the water used to irrigate their crops (Viet). The river also serves as a significant transport channel for the Vietnamese people, supporting their trading centers or “floating markets.”

The Mekong plays an extremely important role in sustaining the Vietnamese economy as 20% of its population resides near the river, where about half of its food staples are cultivated. These products include rice, maize, and fruits. Approximately75% of aquaculture production, which is the farming of aquatic organisms such as fish, crustaceans, mollusks, and aquatic plants, come from this area (Smith). Fishing is an essential part of the lives, culture, and food security of the population. Inland fisheries of the Mekong basin are among the largest in the world, responsible for 38% of the world’s marine fishery production. The Mekong’s estimated 1,300 different fish species makes it the world’s second most bio diverse river basin, behind the Amazon. Studies suggest that 2.6 million tons of fish and other aquatic animals are caught per year in the Mekong, accounting for 20% of the global wild freshwater catches (Boer). According to recent estimates, Lower Mekong Basin fisheries alone are valued at approximately $17 billion a year, contributing three percent to the combined GDP of Vietnam, Cambodia, Laos, and Thailand (Hunt). The inland fisheries are an extremely important component of life in the Mekong because they are one of the main employers in the area and fish provide people with their primary source of protein.

Compared to most of the world’s large river systems, the Mekong, until recently, was relatively underdeveloped. It was not until 2012 that construction of the first dams began (Boer). Geopolitical conflict is largely responsible for this underdevelopment, including the Vietnam War, turmoil and conflict in Cambodia, and the Cold War, which separated the Mekong region. Development in this area has been contentious, but the desire for a rapid increase in electricity to generate economic growth and eradicate poverty is strong. Claims have been made that the Mekong has a momentous advantage over other less developed areas in that it is able to produce electricity through hydroelectric power without releasing carbon emissions (Li). Hydroelectric power is derived from the energy of falling, fast running water that is harnessed for useful purposes.

The largest threat to conservation ideals for the river system is from the series of dams and other hydroelectric projects that are being planned for construction in the near future. A huge debate has been focused on concerns about the influence of these dams on the social and economic systems of the Mekong. Supporters claim that the dams will have a positive effect on navigation, pollution, flood control, and irrigation, while opponents believe they will obstruct fish migration resulting in decreased bio diversity and food supply (Li). An increase in the development of hydropower and irrigation systems in the basin has stemmed from the potential of dams to store water during the dry season (Viet). The governments of Cambodia, Laos, Vietnam, and Thailand plan to construct a series of “mega dams” across the Mekong to generate electricity and encourage development in these regions.

People in the region, however, were not aware of the social, economic, and environmental risks that could occur when construction of the dams was first proposed. Social and environmental impacts of the dams have attracted considerable concern, as well as the economic impact this will have on the basin’s fisheries. These dams will have significant effects on the river and its fish, as the altered flow of the water will disrupt the breeding and feeding habits of that fish as well as the physical barrier which will halt fish migration (Dugan). Four of the world’s largest giant freshwater fish species are found in the Mekong River, including the Mekong giant catfish. Some experts say it would be wiser for the lower Mekong to meet their energy needs through other sources, suggesting that ~~i~~nstead of constructing the dams on the main stream, building them on tributaries (Bradbury). According to the Strategic Environmental Assessment published by the Mekong River Commission, dams would reduce fish species by an estimated 26-42%, and more than one hundred species would be at risk of extinction. This would result in monetary losses of 500 million each year (Viet).

Recently, Thailand committed to increasing its production of renewable energy to 25% of its output by 2021. One of its strategies to accomplish this goal, is through hydropower to help service the growing demand for energy while reducing its dependency on fossil fuels (Goichot). The government plans to build eleven dams which will be made possible by the Energy Generating Authority of Thailand (EGAT), which will purchase 90% of its power from the Xayaburi and Don Sahong dams. The issue with the construction of these dams, is that the Don Sahong dam will block the Hou Sahong channel, which is a main passage for dry-season fish migrations (Fuller). Millions of tons of rock would have to be excavated using explosives, which could kill dolphins located within two miles of the explosions, as a result of the strong sound waves. If these eleven dams are built on the lower mainstream of the Mekong, there is a very high likelihood that adverse consequences will result. Dams have extreme effects on key economic sectors and environmental resources. They would significantly weaken fishing grounds by creating conditions that are not suitable for fish to maintain a healthy breeding and feeding lifestyle (Goichot).

Not only could the dams have negative effects on the fish, but it could also damage the lives of the thousands of people who rely on the river for their income and primary mode of transportation. Villagers are dependent on the boatmen who use the river to take their produce to the markets, children to school, and relatives to cultural ceremonies or festivities. The dam building could greatly affect the livelihood of a great number of people, as seen in the case of the Pak Mun Dam built under the authority of the EGAT. Construction of the dam began in 1991 and continued until 1994. During this process, 200 homes were displaced, suggesting that nearly 1000 people had to move from their villages (Osbourne). Agriculture would also be greatly affected, as the dam’s reservoirs would flood over half of all the riverbank gardens. The dams would block nutrients and sediments that flow down the river, which would have adverse effects on the fertility of the agricultural land (Viet). The Mekong is also threatened by non-damn related factors, such as climate change and salt contamination from the rising sea levels (Hunt).

The Mekong River has been the primary source for food, transportation, and income for residents of the Mekong region of Vietnam for generations. It provides water necessary for agriculture along the river and its plentiful fish and other sea life provide a major source of food, and through river related industries, a primary source of income for the Vietnamese people. While the development of hydroelectric power has enabled the regional governments to spur economic growth and has helped to reduce poverty in the region, the construction of the power plants and dams necessary to generate this power threatens to significantly reduce the fish and sea life living in the river, damage agriculture along the river and disrupt and damage not only the income of those who rely on the river for their livelihood, but the way of life of those in the Mekong region as well. Hopefully the Vietnamese government and those of other countries in the region will work with the conservationists and environmentalists to strike a balance that will enable economic growth and the eradication of poverty to continue, while still preserving the Mekong River as the fishing rich source of food, income, and transportation the people of Vietnam have always enjoyed.

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