A Community-Based Study of the Downstream Impacts of the Yali Falls Dam Along the Se San, Sre Pok and Sekong Rivers in Stung Treng Province, Northeast Cambodia

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By

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Executive Summary

Between 26 December 2001 and 7 January 2002, a community-based study of the downstream impacts of the Yali Falls Dam located in Viet Nam was conducted in 29 villages along the Se San, Sre Pok and lower Sekong Rivers in the Stung Treng province of Northeast Cambodia. Approximately 30,000 people are living adjacent to these rivers in Stung Treng Province.

Among the villagers surveyed, the study found that the vast majority believed the dam had had significant negative effects on their environment and livelihoods. It was found that flooding patterns had changed and that the water quality, health of livestock and the environment had declined since 1996. It was generally believed that the changes to the rivers' ecosystems were a direct consequence of the irregular hydrological conditions brought on by the dam.

Methodologically, the largest number of men and women able to represent the various ethnic groups were sought to participate. As such, local people from 29 villages (30 locations) covering 10 communes and two districts were surveyed. A total of 1,913 village residents became involved in the study, with rural representation higher than urban. Members of ten different ethnic groups were present and men and women were interviewed in separate groups. Over 62 percent of the villagers interviewed were women. Half the people surveyed were heavily dependent on farming and other river-based livelihoods.

The problems Cambodians have experienced with the dam began with the lack of transparency and information regarding the construction of the dam. Although the Yali Falls Dam is in Viet Nam, it is situated on the Se San River approximately 70-80 kilometers from the Cambodian border and flows directly into Cambodian rivers. Yet no Environmental Impact Study for Cambodia was ever conducted, nor were the Cambodian Government or people originally made aware of the construction of the Dam.

The villagers claim that the dam's largest physical impact has been on the flooding patterns of the Se San River. The changes were first noticed in 1996 when with no prior warning to the villagers, large amounts of water were reportedly released from the dam's 64.5 km2 reservoir, causing massive downstream flooding in Ratanakiri and Stung Treng Provinces. In different parts of the river, villagers suspect that rainy season flooding has been at least partially exacerbated by water releases from the dam for the last three to six years.

The flooding has had devastating effects. At least four people living in the affected areas along with numerous domestic livestock have drowned because of flooding. Flooding has also severely damaged rice and vegetable crops in all the villages, and has inundated all but two of the villages along the Se San and Sre Pok Rivers, and the lower Sekong River, in Stung Treng province each year. When water levels are high in the Se San River, water backs long distances up both the Sekong and Sre Pok Rivers, with the back-up effect being particularly noticeable when water levels are also high in those rivers. The irregular water level fluctuations, both in the dry and rainy seasons, have also

reportedly caused damage and riverbank erosion downstream. Some dry season gardens have been partially flooded, and a number of other dry season activities, including fishing and foraging for food, have been severely disrupted. The rising waters, which come up without warning, have washed away large numbers of fishing gears and boats. Wood for making houses, stored rice, and various other household items have been lost during rainy season flooding. Roads and paths, especially in urban areas, have also been badly impacted.

Water quality has also been affected by the irregular water fluctuations. Villagers state that water quality in the Se San River has deteriorated, and that it is generally more turbid than it was a decade ago. They say that the river is more turbid and red in color when water levels rise and now carries a repugnant stench, particularly in eastern parts of Se San district and after rainy season floods. Changes in water quality and hydrology are noticeable down to the point at which the Sekong River meets the Mekong River.

Villagers also hold the deteriorating water quality responsible for some human health problems because villagers bath in and often drink the river water. Whilst exact numbers remain inconclusive, many villagers along the rivers, and especially along the upper part of the Se San River, have reported an assortment of ailments. The most commonly reported illnesses associated with water contact in the upper part of the basin include itchiness, bumps and eye irritation. Stomach problems are reportedly common among those who drinking the river water during periods when water levels rise. Reports of health problems occur with less frequency in the lower parts of the basin.

Locals believe that the dam has generated changes in the ecology of the Se San. They say that the changes in the hydrological regime and water quality have severely impacted on the rivers' aquatic life, although they recognize that illegal fishing practices have also contributed to declining fish stocks. Changes in water levels have been unusual, and the changes appear to have profoundly affected riverine vegetation, water birds, reptiles and various forms of aquatic life whose lifecycles are dependent on the natural rhythm of the Se San River. Locals also believe that increased turbidity in the river may have reduced the amount of algae, an important food source for many fish, growing on rocks in the river during the dry season.

The overall conclusions reached by this study were that the downstream impacts of the Yali Falls Dam have not only upset local ecosystems, but have severely disrupted human livelihood systems along the Se San River. Local people have had to increase wildlife trading, woodcutting and non-timber forest products collecting. Many people have also cleared forests to move their rice paddy fields to higher non-flooded ground. People living in Stung Treng town have also had their businesses disrupted and damaged by increased rainy season flooding.

The villagers from Stung Treng themselves say that they would like the dam to be decommissioned, and not a single villager interviewed for this study felt favorably about the presence of the dam. The primary concern of all the villagers was for the Se San River to return to normal and that they should be fully compensated for the difficulties they have experienced because of the dam. Additionally, the villagers were vociferous that compensation should be forthcoming and continuous as long as the dam remained.

They objected strongly to plans to build other dams on the Se San, Sre Pok, and Sekong Rivers, specifically the Se San 3 Dam, planned to be built 20 kilometers downstream from the Yali Falls Dam. They are eager to participate in the Se San River Community Protection Network that is presently being organized in Ratanakiri and Stung Treng provinces.

More research undoubtedly needs to be conducted with regards to the effects of the Yali Falls Dam on water quality and human and animal health. Further research must also consider the complex hydrological relationships between the Se San, Sre Pok, Sekong and Mekong Rivers in Stung Treng province, as it is not exactly clear how water levels in each river affects flooding in the others. In addition, more studies regarding the impacts of the dam on wildlife and fisheries need to be conducted.