

Climate change and its impact on the Lao and Cambodian people

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When we refer to climate change, we immediately think of the impacts it has on the livelihoods of large numbers of people, and the habitats of aquatic species on all continents.

As climate change intensifies, so do the threats to the environment and ecosystems because they are affected by variations in the weather such as temperature, rainfall and river flow. In recent years these have led to widespread flooding and drought, especially in the Mekong Basin countries.

Among the lower Mekong Basin countries, Laos and Cambodia have been identified as the most vulnerable, in part because of their limited capacity to cope with climate related risks.

Climate change is affecting the sustainable development of most developing countries in Asia. It compounds the pressures on natural resources and the environment, which in turn have profound effects on people's health, safety and livelihoods - especially where poor people are concerned.

"Recently, researchers have told us that the most noticeable changes in the weather have been the increasing number of hot days, with higher temperatures, whereas the numbers of cold days have been decreasing. This will have an effect on ecosystems, especially the lives of animals and plants, as well as leading to an increase in disease," said Dr Robert Mather of the International Union for Conservation of Nature (IUCN) Southeast Asia.

He said that while Laos is considered to be vulnerable to the impacts of climate change, the situation here is not as serious as in coastal countries like Thailand, Vietnam and Cambodia.

The IUCN runs a project to strengthen the ability of local governments and communities to prepare for and adapt to future climate risks in some coastal provinces, especially in the Mekong Delta region, which is one of the areas of the world that is predicted to be most affected by the rising sea level.

According to the National Disaster Management Office, for decades Laos has been experiencing small-scale weather extremes, which affect over 10 percent of the population. Recurrent floods and droughts are considered to be the main natural hazards in addition to fires, landslides, erosion, tropical storms, and disease epidemics, while floods mostly occur during the



Larger boats that ply the Tonle Sap Lake in Cambodia are having trouble making the crossing because of the low water level.



A Cambodian fisherman helps his family to prepare their nets for the next day's catch. They say it's getting more difficult to catch large amounts of fish because of the lower water level in the Mekong and competition from large-scale fisheries.

Whenever it turns very hot or cold, the lives of the inhabitants of Tonle Sap's floating village get even more difficult. This photo shows a woman washing her face in dirty water taken from the lake.



monsoon season from May-September.

People became especially aware of the impacts of climate change in 2008 when the Mekong River rose and Vientiane suffered flooding not experienced since the city was inundated in 1966. In the dry season, the Mekong was so low it was easy to cross the border to Thailand.

In 2009-2011, several typhoons struck Laos, notably Ketsana, Haima and Nock-ten. They brought torrential rain, high winds and widespread flooding, which took the lives of many people. Furthermore, thousands of people were left homeless and large numbers of livestock died, while many hectares of crops were severely damaged.

This has led the government and Non-government Organisations to set up projects that address planning, coping and raising awareness among local communities, to help them adapt to climate change.

One of the major ongoing projects in Vientiane is riverbank protection. Sand is being taken from the exposed Mekong riverbed to build up the riverbank along Fa Ngum Road, to prevent further flooding of the city.

According to the World Fish Centre, climate change

is directly affecting fishery production along many pathways. Fish reproduction, growth and migration patterns are all affected by temperature, rainfall and hydrology. Changes in these parameters will therefore shift patterns of species abundance and availability.

Mrs Chanthone, a 57 year old fisherwoman living on Khone Island in Champassak province, says that in the past she could catch more than 30-40 kg of fish per day, but now it's hard to catch just 7 or 8kg per day.

"I don't know what 'climate change' means, but I do realise that the weather is getting hotter every day and the rain sometimes comes at the wrong time. The level of the Mekong is falling rapidly, especially in the dry season, which is affecting fish breeding because fewer fish can migrate upstream to the places where they traditionally breed."

Mr Sitthisone, who works on a fish farm in Sikhay village, Sikhottabong district, Vientiane, has similar concerns about the fluctuating level of the Mekong, because the poor quality of the water is causing fish to die.

Just across the border, Cambodia is considered to be more affected by climate change than Laos, because it

has a coastline. According to the Cambodian Ministry of the Environment, the direct impact of climate change is reflected in changes to the natural rainfall pattern, higher temperatures and the rising sea level, which result in flooding or drought.

Extreme weather conditions can harm fish production in Cambodia by depleting stocks, and destroying fishery and aquaculture infrastructure. Changes in fishery production are likely to have the greatest impact on the people who depend on fishing because it is their primary livelihood activity.

As these people are often poorer and more marginal than those who own land and have other primary sources of income, the effects of climate change on fisheries can harm those who are least equipped to cope.

Two boatmen named Bmoby and Vanna said they grew up in the Chong Kneas floating village, just 20 minutes drive from central Siem Reap. They can clearly see environmental changes in the floating village on Tonle Sap. In the past the water in this huge lake was fresh and there were plenty of fish that they could easily catch.

However, the water level has now fallen, which makes



Mrs Chanthone says that in the past she could haul in 30-40 kg of fish every day but now her daily catch has dropped to just 7 or 8kg.



During the high heat of summer, boys cool off in a waterway that pumps run-off from the Mekong River to a canal in Kaoliew, Sikhottabong district.

it difficult for larger boats to cross the lake. The dirty water results in smaller fish stocks, and the larger species are increasingly difficult to catch.

The men said that rising temperatures made the lives of people in the floating village harder, since they depended on

the lake for their livelihood. The future impact of climate change in Laos and Cambodia will depend on the readiness of the two countries to adapt, including reducing vulnerability and building their capacity to cope with the risks.