



The GEF/UNDP/ASEAN Project on Reducing Pollution and Preserving Environmental Flows in the East Asian Seas through the Implementation of Integrated River Basin Management (IRBM) in the ASEAN Countries

Shaping Culture and Harmony in

Nam Tha River Basin



This World Water Day 2024, we highlight how a river basin in Lao PDR cultivates the lives of the communities and catalyzes economic progress both at the national and local levels.

At a very young age, Laotian children play in the riverbanks until their skills are honed to spear fish and trap crabs and shrimps. They grow and learn their ways of life through the rivers and mountains.

The Lao People's Democratic Republic (PDR) is the only landlocked country in Southeast Asia. But it occupies a central position in Mainland Southeast Asia and lies at the heart of the Mekong River. The Mekong River is a transboundary river passing through six countries in East and Southeast Asia, connects major waterways in the region, and drains to southern Viet Nam towards the South China Sea, an important large marine ecosystem. Like in any other countries, water is essential to the life and culture of every Laotian. It drives the economy – from household and grassroots communities to national development. Water resources are the foundation of key sectors in Lao PDR including agriculture, forestry, tourism, energy, and mining.



Communities along the Nam Tha river set-up traps to catch fish, crabs, and other freshwater crustaceans.

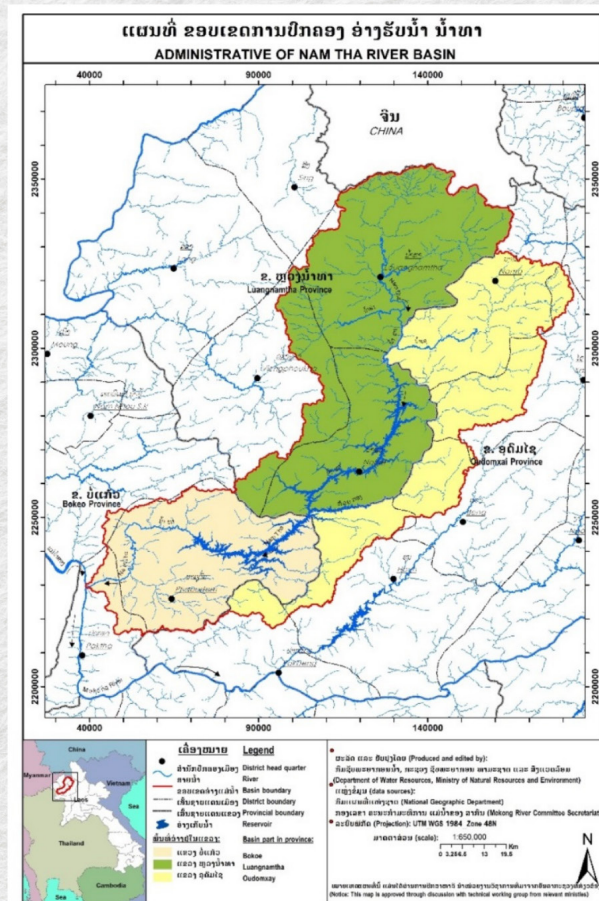
The river nourishes the land and its people. Even the mountains and farmlands rely on the nutrients and water supply from the river. It gives bounty harvest to communities, helping people earn a living. Undeniably, the river is every Laotian's way of life.

Nam Tha River: A priority river basin

Lao PDR has 62 river basins where 14 of these were identified as priority river basins in the natural resources and environment sectors for 2021-2025, including the Nam Tha River Basin. With a total length of 325 kilometers and a catchment area of 8,918 square kilometers, the Nam Tha River Basin flows from the mountainous area of northern Lao PDR and ends joining the Mekong River. It passes through the provinces of Luang Nam Tha, Oudomxay, and Bokeo, supporting over 212,990 Laotian as of 2021.

Nam Tha River Basin

Lao PDR



At a Glance

Nam Tha River Basin

The Nam Tha River Basin passes through the provinces of Luang Nam Tha, Oudomxay, and Bokeo.



Supporting over **212,990 Laotian** (as of 2021). Three major ethnic groups (Khmou, Hmong, and Lao) resides along the Nam Tha riverbanks.



Supports **68,616 hectares** of agricultural land, comprising 7.7% of basin area (as of 2015).



91% of the households have access to safe water supply.



10% of households are connected to the centralized sewerage system.



40% of households have access to the solid waste collection service.

Northern Lao PDR



With the length of **325 kilometers** and a catchment area of **8,918 square kilometers**, the Nam Tha River Basin flows from the mountainous area of **northern Lao PDR** and ends joining the **Mekong River**.



The Nam Tha River Basin produces **hydropower up to 290.7 megawatts** from the power plant in Bokeo Province that electrifies Luang Nam Tha and neighboring provinces.

Nam Tha river basin hosts **two protected areas** – the Nam Ha and Nam Khan National Biodiversity Conservation Area and the Phu Sam Yord National Protection Forest Area.



Over 125 species of freshwater fish



297 species of birds



37 species of large mammals

Three major ethnic groups can be considered as stewards of the Nam Tha river basin. These are the Khmou, Hmong, and Lao, who live along the riverbanks. The river is their source of food and livelihood, ranging from agriculture, tourism, water supply, and means of navigation. These water services are also shared with other sectors including mining, energy through hydropower, and irrigation. In fact, the source of water supply for more than 4,000 hectares of rice farms in this part of the country comes from the Nam Tha river.



The Nam Tha river is one of the primary sources of food in the northern region of Lao PDR.

Not only the people living along the Nam Tha river are reliant on its water resource. The river itself and the adjacent forests are teeming with life: over 125 species of freshwater fish, 297 species of birds, and 37 large mammals have been recorded. It is considered as ecologically important as it hosts two protected areas – the Nam Ha and Nam Khan National Biodiversity Conservation Area and the Phu Sam Yord National Protection Forest Area. The biodiversity of these two protected areas is also crucial to providing a safe and livable environment for the 22 villages in this part of Nam Tha river.



Both the Nam Tha river and the lush green forests in the area are home to terrestrial and aquatic wildlife.

However, climate-related and other anthropogenic threats continue to put the river and the lives dependent on it in peril.

Increasing water usage, declining water quality

While there was a rise in gross domestic product (GDP) of the three provinces in Nam Tha river basin with a GDP of 1,800 USD per capita in 2019, the increasing population and unsustainable practices related to water resource utilization continue to contribute to the decline of water quality and, potentially, scarcity of water supply in the communities surrounding the river.



Sedimentation is one of the issues in the Nam Tha river basin. The effluents from industrial, extractive, and agricultural activities build on over time, damaging the habitat of aquatic life.

From 2005 to 2015, the population growth was 1.9%, with a total of 33,242 households, as of 2015. In Oudomxay, Bokeo, and Luang Nam Tha provinces, approximately 91% of the total number of households have access to safe water supply. However, on sanitation and hygiene, only 10% of households are connected to the centralized sewerage system while 40% have septic tanks or other on-site sanitation facilities. Moreso, only 40% of the households have domestic garbage collection service. The inadequate dumping sites eventually lead to improper disposal of domestic wastes that pollute the river.



Two wastewater collection ponds or lagoons were established in the Nam Tha river basin.

In 2017, the government of Lao PDR conducted an assessment of the river basin, paving the way for evidence-based action planning and programming to address the key issues threatening the water resource supply in northern Lao PDR. Among the key issues identified were unsustainable agricultural practices, deforestation, overfishing, and mining.



Along the Nam Tha River, small sand mining sites use excavator trucks to slowly dig the riverbeds for sand and also to remove bottom sediments and debris to keep the waterways deeper and navigable.

The use of water resources varies in different sectors. In agriculture, it is mainly used for the irrigation of farms, which is approximately 24,001 hectares. In tourism, the river provides recreational services such as kayaking, tours, and other eco-tourism activities. In the energy sector, the Nam Tha river basin is a source of hydropower. The power plant in Bokeo Province generates a total of 290.7 megawatts.



Rice farming is one of the major agricultural activities in northern Lao PDR. The water used to irrigate the farms is heavily reliant on Nam Tha River.

Over time, the continuous increase in the demand of water supply and the unsustainable practices adversely impacted the water quality and quantity of Nam Tha river. The runoffs from slash and burning, in-stream habitat degradation, pesticides from plantations, sand and gravel mining effluents, and wastewater from factories are among the main factors that pollute the river.

The deforestation in the area has accelerated soil erosion. The sedimentation in the river is aggravated during the rainy season when the river banks are heavily flooded and eroded. Every year, the sediment accumulates downstream towards the Mekong Delta. And with erosion continuously happening, the communities in the riverbanks are more vulnerable to other geohazards.



Rubber tree plantations provide a good source of income for the communities but they replace natural forest cover that contribute to forest conversion and degradation as well as pollution from the use of pesticide.

These threats, compounded with the lack of coordination and effective governance mechanism in place to manage the Nam Tha river basin, can lead to water use conflict among and between various stakeholders in the river basin.

Improving river basin governance with the people and for the people

The government of Lao PDR has an existing national water resources strategy and action plan that includes the river basins. However, national and local partners acknowledge the need for more coordinated approach to rehabilitate and restore the degraded areas of the Nam Tha river.

“The IRBM project is essential for ensuring the sustainable and equitable use of water resources, protecting the environment, and promoting the well-being of communities that depend on rivers and water bodies for their livelihoods. It is beneficial not only for Lao PDR but in improving actions for water resources management in our region.”

Dr. Inthavy Akkharath,

Director General of the Department of Water Resources, Ministry of Natural Resources and Environment and Chair, ASEAN Working Group on Water Resources Management



In partnership with the Department of Water Resources, the IRBM Project facilitated the conduct of the National Inception Workshop in July 2023 to discuss the coordination mechanism and the implementation arrangements for the project.



A High-Level Policy Forum on Integrated Water Resources Management (IWRM) was organized on December 14, 2023 in Oudomxay Province to discuss and raise awareness on the national policies and legislations on IWRM. The forum was attended by His Excellency (H.E.) Mr. Chanthanet Boulapha, Vice Minister of the Ministry of Natural Resources and Environment (MONRE); H.E. Mr. Khammuan Zomsihapanya, Vice Minister of the Committee on Economy, Technology and Environment, National Assembly; H.E. Mr. Onkeo Ounarlom, Vice Governor of Oudomxay Province; Dr. Inthavy Akkharath, Director General of Department of Water Resources and high level officials from the eight provinces in northern Lao PDR (Oudomxay, Bokeo, Luang Namtha, Phongsaly, Houaphan, Xiengkhuang, Luangprabang, and Xaiyabouly).

The Integrated River Basin Management (IRBM) Project includes Nam Tha river basin as one of the priority sites in the Southeast Asian region. Together with the United Nations Development Programme, Global Environment Facility, and the Association of Southeast Asian Nations (ASEAN), Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) is working with the national government of Lao PDR and the local governments of Bokeo, Luang Nam Tha, and Oudomxay to strengthen the governance mechanisms and improve management responsiveness and capacities in IRBM and IWRM.

The IRBM Project will contribute to the implementation of the Nam Tha River Basin Action Plan 2021-2025, which translates the provisions of the 2017 National Law on Water and Water Resources and priorities of the 5-year Action Plan on Natural Resources and Environment into actions at the river basin level. It will also contribute to the larger policy agenda at the regional level (i.e., Mekong River Strategic Action Plan) and at the global level, particularly Sustainable Development Goal 6: Clean Water and Sanitation.

Integrated River Basin Management Project

Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) implements the IRBM Project, with support from the United Nations Development Programme and the Global Environment Facility, and in collaboration with the ASEAN.

Project Components

Baseline Assessment of Source to Sea Management Continuum

Improved Governance and Management in Nam Tha River Basin

Knowledge Management and Capacity Development

Monitoring and Evaluation

Priority Issues to Address in Nam Tha River Basin

Sanitation and Hygiene

Only 10% of households are connected to the centralized sewerage system while 40% have septic tanks or other on-site sanitation facilities.

Waste management

Only 40% of the households have domestic garbage collection service. The inadequate dumping sites lead to improper disposal of domestic wastes.

Deforestation

The deforestation in the area has accelerated soil erosion. The sedimentation in the river is aggravated during the rainy season when the river banks are heavily flooded and eroded.

IRBM Governance

The lack of coordination and effective governance mechanism in place to manage the Nam Tha river basin.

Coordination Mechanism

Regional Steering Committee

National Level:
National Project Steering Committee

- Department of Water Resources, Ministry of Natural Resources and Environment (NPCU)

River basin level:
Provincial Project Steering Committees

- Bokeo Province
- Luang Nam Tha Province
- Oudomxay Province

The IRBM Project intends to address the sustainable management of forests and the reduction of pollution in the river through an integrated approach in the planning, design, and implementation of water resource management. This includes the conduct of baseline study through the State of River Basin, capacity building of national and local leaders and practitioners, and establishing pilot projects to demonstrate approaches in addressing the key challenges in Nam Tha River Basin.

With a more effective governance mechanism forming in the horizon, the culture and tradition shaped by the Nam Tha river will continue to live on, with its communities living in harmony with nature.

For more information on the project, please visit
www.pemsea.org

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