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## [Laos: The Nam Theun 2 Dam - WWF Thailand's position](#)

The planned Nam Theun 2 (NT2) dam on the Nakai Plateau in central Lao People's Democratic Republic would be 48 m high and 320 m long, with a capacity of about 1000 megawatts. It would create a 450 km<sup>2</sup> reservoir with volume of 3 billion cubic meters. Water from the reservoir would be driven through 40 km long tunnels to a powerhouse located at the base of the Nakai plateau on the Xe Ban Fai River. The size of the project and its location will have a substantial impact on regional biodiversity and people. This short paper summarizes some of these likely impacts and explains the position of WWF-Thailand on the dam.

Over the past decade, perceptions of biological diversity have expanded to encompass the distribution patterns of biota, associated ecological processes, and the (often large) regional landscapes over which these interactions occur. Long-term conservation of biodiversity, and the security of local human livelihoods, requires a shift in focus to large spatial scales and, within these, a proactive identification of conservation opportunities. The Nam Theun 2 dam violates these emerging principles by treating parts of a broader ecosystem in isolation.

The Nakai Plateau consists of a gently undulating 1200 km<sup>2</sup> basin at an elevation of about 600m, and is part of the ecological system of the Annamite Mountains. About one third of the Plateau is within the Nakai-Nam Theun National Protected Area, a globally significant protected area for the future of rare and endemic fauna such as the Large-antlered Muntjac and Saola. The Nakai Plateau is not pristine. As in most significant conservation areas in the world, people have altered its landscapes for subsistence agriculture, fished its waters and hunted its forests over thousands of years. This does not detract from the conservation significance of the area, however, either for biodiversity or local livelihoods. About one third of the Nakai Plateau would be flooded by the reservoir of the NT2 dam, securing the destruction of habitats and wildlife populations that presently maintain a significant role in the ecological functioning of the region.

From the traditional perspective of species richness, the Nakai-Nam Theun protected area ranks among the most important in the world. Over 400 species of birds occur there, one of the highest totals for any protected area in mainland SE Asia. These include over 50 species of birds that are threatened with extinction. As part of the Nakai-Nam Theun protected area, the Nakai Plateau has a special role for these threatened species: 35% occur only there, including globally important populations of white-winged ducks and fish eagles.

Until recent dam-related logging began, the Nakai Plateau supported the most extensive stands of old-growth pine forest in the region, with unique variations in tree species composition. One of the most endangered habitats in SE Asia is lowland slow flowing rivers with adjacent forest. The Nakai Plateau, despite habitat degradation, still represents one of the best examples of such habitat in Lao PDR; almost all (180 km) would be lost after inundation if the dam were constructed.

The diversity of habitats on the Nakai Plateau also includes deciduous forest, semi-evergreen forest, secondary forest, seasonal wetlands and permanent streams, which, together with the gentle terrain they rest on, provides excellent physical conditions for high densities of large mammals --a situation

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that is becoming increasingly rare elsewhere in Lao PDR and the region. Though these densities have been markedly reduced through hunting, they remain significant relative to other forested areas in Lao PDR. More importantly, the Plateau's large mammals reside within one of the largest and least fragmented expanses of forest in the region, which increases their chances of persistence and recovery. Gaur and Elephants for example, are central to, and interact with larger regional populations through intact links to forested areas that surround them. The central role of the Plateau in ecological functioning is exemplified by this intact large mammal community, whose members are able to maintain widespread seasonal movements on a landscape scale.

A relatively abundant prey base of Sambar, Wild Pigs and Indian Muntjacs on the Plateau supports endangered Tigers. The Nam Theun river supports at least 80 fish species, 16 of which are endemic to it. The dam would disrupt hydrological functioning and fish migrations, causing many of these species to disappear. The water diversion scheme of the dam means that, in addition, another water basin would also be disrupted (the Xe Bang Fai).

Every international NGO that has worked on the Plateau recognizes the outstanding conservation significance of the area. Opportunities to care for extant biodiversity and local livelihoods on the Nakai Plateau exist, but need to be developed through collaboration of local people with their government, protected area staff and conservation organizations. This has not happened. Activities such as logging and infrastructure development over the past decade in anticipation of a dam that may never be built, have already had far-reaching and negative ecological and economic consequences. To invoke the very source of so much disruption to the Nakai Plateau as the solution to these problems is clearly invalid. What stands to be lost, both in ecological and cultural terms, can not be mitigated. The Nam Theun 2 Dam is not inevitable. Lao people and the conservation community need not accept a hydropower fate that leaves them with ecological scraps to make the best of --there are positive opportunities on the Nakai Plateau that are much more attractive.

WWF also notes that the case underpinning Nam Theun 2 is unclear. The economic viability of the project is dubious and the demand for the dam's power is also highly questionable, given Thailand's declining projected power demand (the market to which NT2 will export). In addition, there are significant alternative energy options available both in Thailand and Laos, including renewable energy and energy conservation. These have been ignored and insufficiently evaluated.

In short the deleterious impacts of the project on local ecosystems are clear; the justification for the dam and its superiority to available alternatives is not. WWF Thailand is therefore opposed to its construction.

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