

Nam Theun 2 dam only hope for wildlife, says US conservationist

Regional and international press have picked up on the strange story of Dr Alan Rabinowitz, an environmentalist who says that a dam in Lao PDR will help save forest and wildlife.

Rabinowitz, of the US NGO Wildlife Conservation Society, worked as a consultant for the Nam Theun 2 dam project assessing the potential impact on wildlife when 447 square kilometres of Nakai Plateau forest is flooded. Rabinowitz's February letter to the International Rivers Network is excerpted here.

“1. There appears to be virtually no area on the plateau, and within the proposed inundation area in particular, which is still pristine habitat. Every area we have visited has been affected by varying levels of hunting, human settlement, live-stock grazing, logging, or some form of forest degradation.

2. Current hunting pressures on the plateau, and in the NCBA (National Biodiversity Conservation Area) as a whole, are extraordinarily severe. These pressures are in the form of unrestricted use of firearms and extensive trapping and snaring of everything from forest rodents to tigers. Although species density is still relatively high, the abundance of almost every bird and mammal species observed is dangerously low.

3. Given the current lack of funds, trained staff, or long-term management planning for the protected area system of Lao PDR, the steady decline of bird and mammal abundance is likely to continue unchecked, leading to species extinctions in the area in the near future.

4. In the course of our wildlife surveys, WCS scientists have uncovered in the NNT (Nakai Nam Theun) NCBA, important populations of new or recently discovered species. These include the saola, the giant barking deer, the small black barking deer, the yellow pig and at least several currently undescribed small bird and mammal species. None of these species are restricted to the Nakai Plateau and, in fact, occur in greater numbers in the watershed area of the NCBA, which would not be flooded. It is our great concern that these species, along with other important species such as tiger, clouded leopard, bear and various primates, will eventually be extirpated from the entire NCBA unless some immediate action is taken to curtail hunting pressures and to provide some form of management and protection to the area.

5. Our surveys of the proposed extension areas to be added to the NNT NCBA as partial mitigation of the NT2

Project indicate that these are, for the most part, important and biologically rich sites that will significantly enhance the biological value of the NCBA.

6. My understanding of the agreement that has been reached between the NT2 Project Development Group and World Bank is that, with initiation of this project, funds will be provided over at least the next 25 years for proper management of the NCBA. Without such funds, I and my colleagues see no hope for the long term survival of much of the wildlife that still exists either on the plateau or in the NCBA as a whole.

As Director for Asia for WCS, I am giving my full support to the NT2 Project as long as the World Bank remains involved and as long as the current plans for environmental protection and mitigation remain intact. After nearly 20 years of working in wildlife conservation and protected area management throughout different parts of the world, I view the currently proposed NT2 scheme as the only way at this point in time to help reverse the rapid decline of forests and wildlife in the NNT NCBA.”

Shortly after Rabinowitz sent this letter, he was interviewed in Bangkok's *The Nation*. He explained, “It's all about money, which will go to train people, hire staff, for vehicles, buildings, for all kinds of things which do not exist in that area one bit now.” The newspaper reported that WCS would be recommending an animal rescue team to be on standby to save individual animals once the waters began to rise behind the dam. “But in case a rescue has to occur, WCS will not be involved with it. There has never been a successful animal rescue programme with dam projects...There will be some things that die, of course...The plateau was probably one of the richest habitats in the world, but it doesn't exist there now. It could come back potentially if somebody wants to say that they could stop the local people from moving in and clearing more land and stop all hunting practices.”

Why the Nam Theun 2 dam won't save wildlife...

Veerawat Dheeraprasart is Chairman of the Thai NGO, Foundation for Ecological Recovery. He was Chief of Thailand's foremost National Park - Thung Yai Naresuan - for fifteen years, and has seen at first hand the impacts of dams on forests in protected areas. Veerawat met Rabinowitz when Rabinowitz was working in the adjacent Huay Kha Kaeng National Park in Thailand. Here, Veerawat critically examines Alan Rabinowitz's claims regarding the Nam Theun 2 dam in Lao PDR.

Rabinowitz: 1) Human activity in the Nakai Plateau area, especially hunting by local people and logging, is leading to the degradation of the forest and wildlife.

Alan sees the forest as only wildlife and trees, not as a complete ecosystem - an outlook that is very "American" and "Western." Having an academic background in Zoology, he has a narrow view of ecosystems and ecological processes. Alan is therefore unable to understand that in Southern countries like Thailand and Laos, people and forest have an important relationship - as a single entity that cannot be separated. Over many years, almost every forest area in Thailand and Laos has had communities living in them. These communities and their culture are part of the forest ecosystem. Villagers conserve the forest and wildlife because they know how to benefit from the forest resources without destroying them.

But as an outsider, Alan ignores that forests in the region have humans. Alan's view that hunting by local people is causing the degradation of resources is severely prejudiced against village communities - some of whom have been living in the area probably for centuries. Alan views them as backward and ignorant. In fact, how far does he understand the culture and ways of life of the village communities in the Nakai Plateau? How much is he aware of the history of people in Nakai and those living in the area of the Nam Theun 2?

It is not as if only people with his kind of knowledge are equipped to conserve forests. Moreover, his view is terribly unjust since if it were not for those villagers with their knowledge of the terrain and animals, Northern wildlife scientists like Alan would not be able to make those amazing "discoveries" of rare or newly found animal species.

Alan's view of forests is *kamlaay chiivit* - as profiting life, since Alan wants to use the forest to benefit his status as a wildlife scientist. The villagers on the other hand see the

forest as *reung korng chiivit* or as an entity that cannot be separated from their lives. If villagers destroy the forest, it is similar to destroying their own lives.

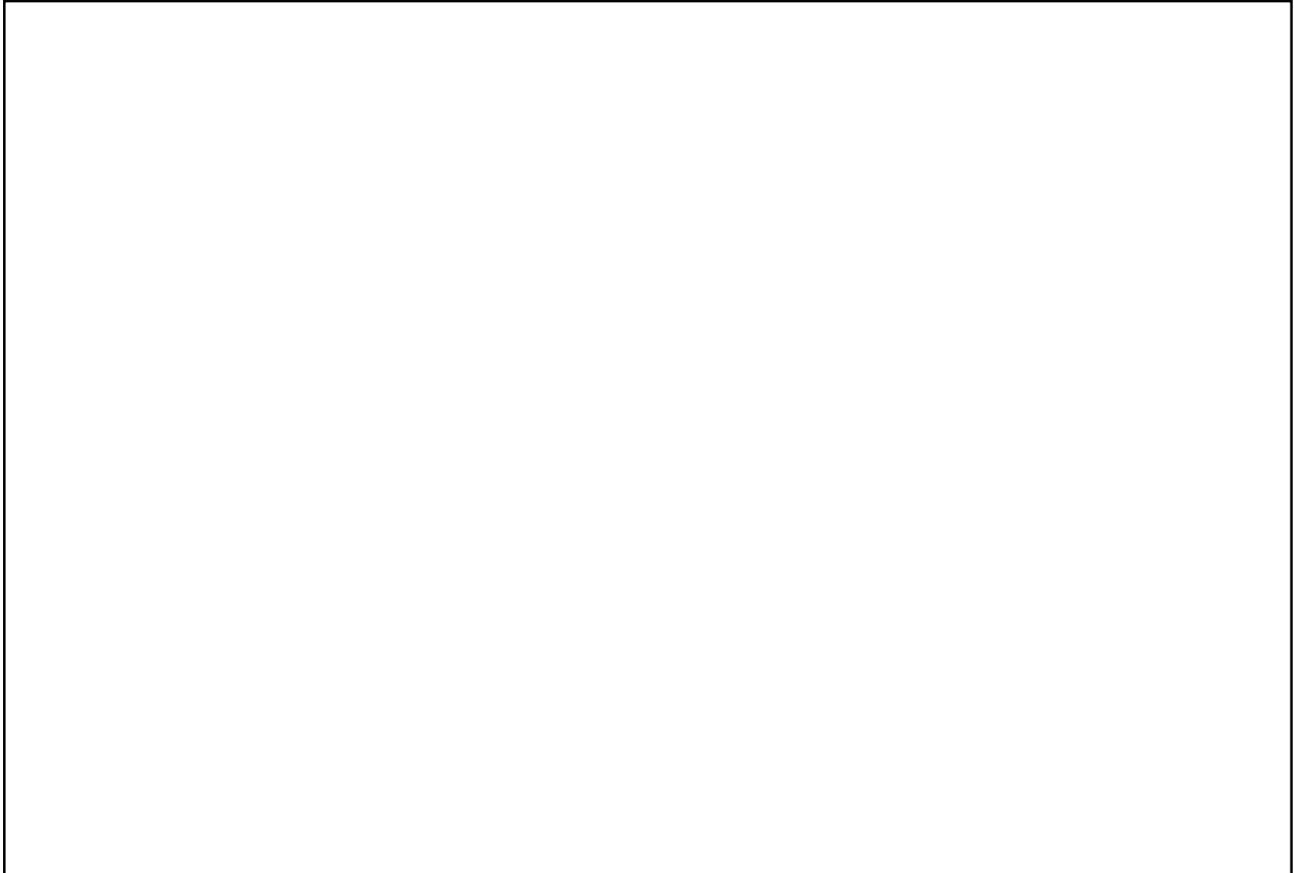
Rabinowitz: 2) In the Nakai, hunting by local people is "extraordinarily severe," using guns and traps that kill both small animals like rats and big mammals like tigers.

This emphasises his preconceived bias against villagers living in the Nakai Plateau. Where are these areas and how severe is the hunting? What kind of evidence can Alan show to clearly prove it is "severe"? What kind of studies has Alan done on the number of wildlife in the area? Many years of study are needed to obtain reliable information on number and kinds of species, migration patterns, population trends, and the threats - including any impacts from hunting by local people.

At the same time, Alan states that the area still has high species density. This contradicts his view that there is severe hunting, because an important relationship between wildlife species and the forest ecosystem is that if one species is hunted down, there will be a corresponding decrease in the numbers of several other species over time. Carnivorous animals will decrease in numbers if herbivorous species are continually hunted and decrease in numbers. However, in this case, Alan accepts that wildlife diversity is still high.

I believe that hunting by local people is not a recent phenomenon. So if there is still high wildlife diversity, it shows that the way of life and resource use in the area is sustainable. We will definitely need more detailed information on village communities and their means of livelihoods before deciding that hunting is "severe" and that they should be kept out of the forest.

I also cannot understand why a wildlife scientist like Alan is not at all concerned about conservation of the Nakai habitat. He ignores the destruction of wildlife habitat by the dam but



Chiew Larn dam: rescue workers save a stranded monkey; other animals were not so lucky, drowning in the rising waters of the dam's reservoir.

is more concerned about local people and their hunting. The Nakai is a fertile lowland forest area and, typical of lowland tropical forest ecosystems, is rich in food and habitat for wildlife. The destruction of this food source and habitat by the dam is equivalent to the destruction of the Nakai wildlife population in the future.

3) (Rabinowitz cites) a lack of funds, trained staff, and the lack of long term management planning for the protected areas as the main reasons for the decline of wildlife and species extinctions in the future.

This is a mainstream conservationist view: that Southern countries have neither knowledge nor conservation initiatives - so funds for conservation and other "development" projects are given as "gifts" from so-called developed to the lesser-developed countries. However, in Thailand we have come to know that most of these so-called development aid projects have hidden agendas and benefit motives. For example, under forest conservation programmes, scientists come to study Thailand's biological diversity, learn about properties of medicinal plants and then allow transnational companies to patent them as drugs. So we have to look closely when dam builders state that they can give money for wild-

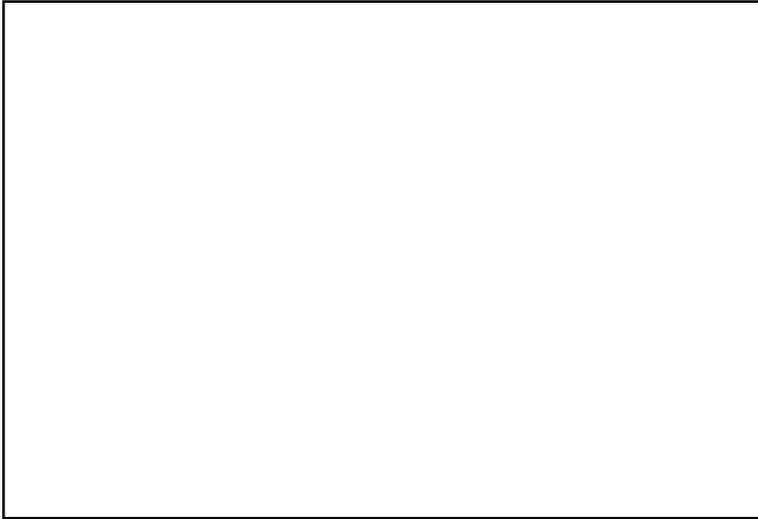
life conservation, because this is simply a method of hiding their real agendas - dam builders come purely to profit from building a dam and not out of any ecological awareness.

4) (Rabinowitz says) that there are many new species that are not restricted to the Nakai Plateau but actually occur in larger numbers in the watershed area which would not be flooded.

Protecting the watershed area alone will not solve the problems faced by the wildlife in the Nakai plateau from the flooding of the lowland areas.

First, some animal species will not be able to either migrate or live in upland ecosystems. For example, South Thailand and Malaysia have 30 species of birds that inhabit lowland river banks and forests but which are not found in upper mountain ecosystems. When the Nam Theun 2 dam floods more than 440 square kilometres of lowland riverbanks and forests, many lowland wildlife species will drown. The upland conservation areas will not benefit these animal populations.

Second, we can look at the evacuation programme to rescue animals drowned by the Chiew Larn dam in Southern Thai-



Dead barking deer: Chiew Larn dam.

land. The 240 megawatt Chiew Larn dam was built in 1987 in Surat Thani, and flooded an area of 168 sq km. The wildlife rescue and evacuation programme was headed by Seub Nakhasathien, former chief of Huay Kha Kaeng Wildlife Sanctuary, and highly respected for his commitment to protecting wildlife. In his report, Seub stated that mitigation of impacts on wildlife populations threatened by flooding was not possible because the impacts from the dam were a process of destruction of biological resources, of loss of habitat and food source for animals. The flooded lowlands were irreparably lost and animals could not be successfully removed to live in another area.

Third, it is a well-known scientific fact that wildlife populations have specific territories or “home ranges.” When animals are evacuated because their home ranges are flooded, they have to trespass on new home ranges leading to conflicts between and among animal species.

Fourth, during the evacuation of animals at Chiew Larn, many animals died of shock while being rescued. Apart from the animals who died during the rescue program, those who were rescued faced problems of home range conflicts. Moreover, those animals that escaped on their own to upland dry areas were not able to survive in that unfamiliar habitat.

Apart from the loss of wildlife, several hundreds of thousands of rai of undisturbed lowland forest in and around the Chiew Larn reservoir area were clearfelled by loggers, about two and half years before the dam was built. Moreover, trees outside the reservoir area were felled and mixed with the logs inside the reservoir area through collusion between officials and logging companies. In the Chiew Larn case, Seub reports several cases of loggers cutting forests outside the demarcated reservoir areas. Even at present, at many dam

sites - including Chiew Larn, Khao Laem and Srinakharin - even though the dams were completed a decade ago, logging still goes on mostly of forests outside the reservoir area. The Nam Theun 2 situation will not be different from Chiew Larn.

Rabinowitz: 5) The proposed extension areas to be added to the Nakai Nam Theun area after the flooding of forest areas will increase the biodiversity value of the Nakai Plateau.

The proposed extension of forest area is not a realistic solution because the low-lying areas near the river are to be flooded. The lowlands are ecologically the most important in terms of ecosystem and biological diversity. I find this *thalok* - farcical - that, as a wildlife scientist, Alan is talking of destroying large forest areas

and then proposing new areas to preserve biodiversity, rather than suggesting ways of conserving the whole Nakai Plateau ecosystem and its wildlife by opposing the Nam Theun 2 dam and the destruction which will be caused by flooding these ecosystems.

Also, Alan views that the extended area can replace the forest ecosystems flooded by the Nam Theun 2 reservoir. This is not true, since the Nakai has many different ecosystems, and some wildlife species can live only in certain parts of the Plateau; for example, some species of birds that cannot live in upland areas or animals whose home range is disrupted. And yet Alan thinks that after the floods, the animals can simply move to live in another area.

At Chiew Larn, the area near the reservoir was demarcated as a National Park (Khao Sop) on one side and on the other side as a Wildlife Sanctuary (Klong Saen) to increase the protected area lost to the dam. There are many cases of extending protected areas around dam reservoirs, but ecological impact studies are available only for the Chiew Larn dam.

The experience from Chiew Larn shows that amphibian and reptile species are the most affected by flooding of lowland and riverine habitat. Lowland wildlife species that flee to upper dry areas soon die since they find it difficult to adapt and find food in upland ecosystems. Many animals are stranded on small islands formed when the reservoir floods the mountain foothills. Carnivorous animals soon slaughter most of the herbivorous species, while those unable to find food die. Hunting by outsiders increases, since hunters know that animals are stranded on small pieces of land and cannot escape. At Chiew Larn, the rescue team reported many instances where they came across bands of hunters and carcasses of animals.

At Chiew Larn, the rescue team found not less than 338 species of wildlife, which was three times higher than the figure reported in the Environmental Impact Assessment (EIA). Either the wildlife survey in the EIA was not done properly or they simply did not see many of these animals. Seub has stated that this happens because some animal species are hard to find in the forest, but that once the flooding begins, they flee and are easier to spot.

After evacuation, the animals were released into the nearby forest areas which are similar to the conservation area proposed by Alan. Seub insists that this was extremely unsuccessful, simply because the rescue program was not intended to solve any of the problems affecting the wildlife, but merely to ensure that the animals survived for a period of time after the floods. After the rescued animals were released, no follow-up was done to see whether any of them survived. At present, there is no information on whether any of the 300 species of animals that were rescued actually survived because no studies were done.

Seub states clearly that the impacts on wildlife cannot be mitigated once the forest is flooded. In the Chiew Larn case, the money used for rescue and conservation activities after the dam was built was about four million baht (US\$160,000) over a period of three years and 10 months beginning in September 1985. But as Seub has stated, the impacts of large-scale destruction of forest habitat cannot be solved no matter how much money is spent. If lowland forest habitat is destroyed it cannot be recovered. Also animals that were rescued from upland areas and those stranded in the flooded islands were those species that were used to travelling up and down for food. So when the floods came, they were able to flee to dry upland areas. But those species with lowland habitats drowned immediately.

Of all the mammals that were rescued, most died after rescue due to shock and wounds. Many animals like the barking deer, schomburg deer and mouse deer died from lack of food or weakness after being stranded for many days on small islands.

The experience with dams in forest areas in Thailand shows that the forest areas around dams are also destroyed, because the areas near reservoirs are taken over for resorts, and logging continues outside the reservoir area. At all the dams - from the Bhumiphol and Srinakharin to Chiew Larn - large areas of forest were cleared for transmission lines, golf courses and resorts near the reservoir, offices and other infrastructure, leading to the formation of small cities that gradually replaced the extension forest areas.

Many species - especially primates - do not cross forest areas once roads are built and the forest is fragmented. When

groups of animals cannot freely migrate as before, it leads to increased inbreeding, weakening of the gene group, shortened life spans and increased vulnerability to disease. The sudden influx of vehicles, increased logging, and the transmission infrastructure prevent the movement of larger animals such as elephants and deer for food. Moreover, the formation of a small and noisy city disturbs many species of wildlife. The more sensitive species are forced to flee to other areas, but then face conflicts with other species occupying those areas.

Alan views the Nam Theun 2 dam purely in terms of wildlife. But the dam also destroys ecosystems and fisheries. Tropical forests are frequently called "living museums" of life, a laboratory for ecologists, and the source of evolution of plants and animals.

Forest areas are genebanks, which can evolve and develop new kinds of animal and plant life. Moreover, science is increasingly aware of the invaluable benefits from tropical forests for food and medicine. If the Nam Theun 2 dam is built, this life source is irrevocably lost.

6) Alan suggests that there is an offer from the World Bank to allocate a budget for conservation in the NBCA for 25 years. Alan says that if the World Bank is not involved, wildlife conservation will not happen.

I disagree with Alan that the only one way to solve the problem is to get money from World Bank by building the dam. Alan as the director of WCS with an office in Laos must work towards protecting all forest and wildlife in Laos, not bargain with the World Bank that more than 440 sq km of prime forest can be flooded in exchange for funds from the Bank. It is like allowing the World Bank to cut off both your legs so that they can give you money for a bottle of medicine.

I also find it very surprising that, although he works in Laos, Alan is expressing views in place of the Lao people. Instead, the most important contribution would be to support and build the sustainable forest use and conservation movement in Laos with the Lao people, rather than to accept development that destroys natural resources.

One more thing is I find it difficult to understand is what Alan is thinking. When there is global concern for rainforest including the forests of Southeast Asia, I cannot understand why Alan is thinking of going against the global mainstream. I feel that he is concealing something in his heart: Alan agrees with the building of the Nam Theun 2 dam which will destroy the habitat of many endangered species. Alan - as director of WCS - expressing his support for the Nam Theun 2 makes me feel disappointed, especially since I met and got to know him in Thailand.