

## **Thailand: Deadly lead mines poisoning ethnic communities**

Lead mines are killing ethnic communities and contaminating water sources in the Thung Yai Naresuan Wildlife Sanctuary complex, a World Heritage site, in eastern Thailand.

Several Karen ethnic villagers particularly at Lower Klity village have already died from lead contamination while many dozens of people particularly women and children are suffering from acute lead poisoning from drinking, fishing and washing in the Klity stream near the village. Nearly 100 cattle have died and the villagers cannot drink from the stream because it makes them sick. Some forest rangers in Thung Yai believe that wildlife is also suffering as they have seen deer and mousedeer dying in the same way as the cattle.

The lead mines that have been operating over the last 40 years are a major threat to western Thailand's forest ecosystem being located right in the middle of a large tract of pristine, tropical forest complex that includes the Thung Yai Naresuan Wildlife Sanctuary whose unique ecology and biodiversity earned it a listing as a World Heritage site.

Although the lead mines are located outside Thung Yai Naresuan Sanctuary, the effects of contamination from toxic discharge is spreading far beyond the mine concession areas. Untreated waste discharge containing lead waste is contaminating the sanctuary's water resources and wildlife habitats. Mineral-transporting trucks disturb the wildlife by regularly plying through the sanctuary.

At least six mines run along the sanctuary's borders: to the north in Kanchanaburi province are Phu Jue, Phu Mong and Kao Lee mines, on the southern side are the Klity, Bo Ngam, Kanchanaburi Exploration and Mining Co., Ltd. (KEMCO or Song Thor) and a number of other small and large-scale lead mines together with lead separation plants. Bhol and Son Co. Ltd or its subsidiaries, KEMCO and Lead Concentrate Co., Ltd, own most of the mines. The Klity mine operator, Bhol and Son Co, has links to a powerful local village leader and a politician in Thailand's Democrat Party.

In April 1998, villagers in Lower Klity village, downstream from Klity mine and lead separation plant, filed a complaint with Thailand's Pollution Control Department. The villagers protested that wastewater from the mine has polluted their only water resource, the Klity stream. The villagers' cattle and chickens fell ill or died after drinking water from the stream.

A subsequent investigation by the department revealed that the mine failed to treat its wastewater and has illegally dumped it into the stream. An early study in 1995 by the Department of Mineral Resources found that the mine excavated sediment from its wastewater pond and dumped it outside the concession area. The department warned that the possibly lead-laden wastes could be washed away by rainfall and contaminate waterways and aquifer in the area.

Following the villagers' complaints, Kanchanaburi's mineral resource office ordered the Klity mine temporarily closed until its wastewater facilities were improved. The

Pollution Control Department dispatched a team to check the water and sediment in the Huai Klity area.

Every one of Klity Lang's 221 inhabitants suffers from lead poisoning by drinking water from the Klity stream. "The whole village is dying," says Yasoer Nasuansuwan, the deputy village chief, who suffers from chronic fatigue and muscle pain.

Yasoer said villagers began suspecting something was wrong a decade ago when everybody started suffering from the same symptoms: muscle and joint pain, fatigue, loss of appetite, chronic headaches, swelling and blindness.

For Karen ethnic communities, the loss of their subsistence resources has been slowly wiped out. Fish now float on the surface belly up. Shellfish and shrimp, which used to be in abundance, have almost disappeared completely. "There were so many fish in the past that we would start boiling rice before setting out to fish. Before the rice was done, we would have enough fish for a meal. Now we could sit all day and not hook even one fish," Mr. Yasoer said. The villagers have also lost their livestock to lead poisoning. More than 50 cattle that drank from the stream or ate grass growing near the water's edge got sick and died. A few years back, a whole flock of ducks dropped dead after entering the stream.

According to the Mineral Resources Department's 1995 study, lead contamination in and around the mining areas is very high with tens of thousands of tonnes of lead still settled in the bottom of Klity stream.

For instance, the amount of lead in sediment in Klity stream, downstream from the mine, is 165,720 to 552,380 ppm (parts per million). Thailand's safety standard is 200 ppm. The Pollution Control Department said lead in the bloodstream of 39 children in the Klity village was found to be nearly twice the level sufficient to cause permanent brain damage. Medical tests in 1999 revealed that villagers' blood contained 110 times the lead found in an average person. Since 70 percent of lead contaminated water can enter the food chain, water from the Klity stream is not only undrinkable, it cannot be used even to water plants. The accumulation of lead in the human body, even at close-to-zero amounts, can, in the long run, damage brain cells and the nervous system.

In 1998, the government ordered the closure of the Klity mine and its ore cleaning plant and fined the company about US\$47. In April 1998, the company gave about US\$23,000 to the villagers in compensation, which activists and victims dismiss as inadequate and an evasion of responsibility.

Thailand's environmentalists have protested that the temporary suspension of a single mine falls short of ensuring the long-term health of Thung Yai Naresuan forest area. Narong Jangkamol, a researcher at the Bangkok-based environmental group Seub Nakhasathien Foundation, pointed out that sink holes, that are a typical feature of the province's limestone topography, are abundant in the mining areas so that wastewater in sedimentation ponds easily leaks out into surface and underground water resources expanding the area of lead contamination.

The voluntary group, Karen Studies and Development Center, announced that it has begun gathering evidence against the company for a planned lawsuit. It says closing the mine was not enough and the company should remove the polluted silt, which it had dredged from the creek and buried right on the bank.

“Klity’s days are numbered unless action is taken immediately. Years of poisoning is taking its toll on the villagers’ genetics,” said Surapong Kongchantuk, director of the Karen Studies and Development Center.

All children born during the last six years have suffering from mental disabilities. They have stunted growth and suffer muscle coordination problems. Two girls were born without vaginas while others have abnormally big heads.

“Never before have I seen such deformities,” said Surapong, who has worked with the Karen communities for over 20 years.

Thirty-year-old Manumia Thongpaphumcharerd says she started limping in 1993 and often found herself dropping into a dream world. “It was like everything was blurred and I was losing myself all the time,” said the mother of five children, four of whom have motor skill problems. Her father and younger brother are among the 23 people who have died in the past eight years. Thirteen of the dead were children. Doctors said the deaths were caused by kidney failure, the result of lead poisoning.

But the government has not offered any substantial remedial or other assistance to the affected villagers. The villagers have received medicines only once from a donation by a philanthropist. Surapong’s group and others point to the mine owner’s political connections, which for a long time prevented the company from being investigated.

The Thai Karens in Western Thailand Group, a network of mostly forest-dwelling ethnic Karens in western Thailand, have declared that the Klity lead mine must be shut down. The group is mobilizing support from environmental groups and Karens in other parts of the country in order to get the Klity mine closed. “Every time the villagers complain, the mine manager promises to turn over a new leaf but they never live up to their words. The only way to solve the problem once and for all is to stop the mine,” said the network’s secretary Wuth Boonlert.

The Thai Karens network is also urging health authorities to examine the health of Lower Klity villagers. Prolonged use of lead-contaminated water damages people’s central nervous systems. The Klity stream flows into Kwaie Yai River in the eastern region of Thailand. This means that villagers downstream in Kanchanaburi and Ratchaburi provinces are also subject to health damage.

The villagers have also refused to be relocated. “Our ancestors tried all other areas in the forest before deciding on this place. We can’t move,” Yasoer said. (By: Noel Rajesh, WRM Bulletin N° 71, June 2003).

## **Vietnam: Unique biodiversity threatened by World Bankfunded cement plant**

Vietnam's karst landscapes are world renowned. Perhaps the country's most famous limestone scenery is at Ha Long Bay, which has been declared a World Heritage Site. In 1962, the karst landscape at Cuc Phuong in northern Vietnam became the country's first national park.

As well as producing spectacular scenery, limestone is the main raw material for cement manufacture and many karst landscapes are under threat. Vietnam is no exception.

In 1998, a new cement plant called Morning Star Cement, started operation in Hon Chong, in Kien Giang province in the southwest of Vietnam, near the Cambodian border. The project is a joint venture between a Swiss cement company, Holcim (65%), and Vietnam's Ha Tien I Cement Company (35%). Morning Star has since been renamed as Holcim (Vietnam) Ltd. The International Finance Corporation (IFC, the private sector arm of the World Bank) provided a US\$30 million loan to build the 1.7 million tonnes a year cement plant.

Holcim will quarry three limestone mountains near to its cement plant for raw material to produce cement. According to the company's website, Holcim Vietnam aims "to achieve first class environmental performance of our operation and assets. Holcim Vietnam recognizes that raw materials, soil, water and air are finite resources which we must handle carefully and responsibly."

Yet the environmental impact assessment for the project made almost no mention of the impact on biodiversity caused by Holcim's limestone quarries. The EIA, produced in 1995 by the Environmental Protection Centre in Ho Chi Minh City, simply reported that "Very little wildlife has been seen in the area – only a few monkeys and there is a remarkable lack of birdlife. The EIA did not identify any protected or endangered species of wild life in the area."

According to the Karst Waters Institute, a US-based non-profit organisation, the Ha Tien-Hon Chong Karst has a "unique compilation of plant and animal species due in large part to its geographical isolation." The area is habitat to bats, reptiles, birds and small animals. Endangered leaf monkeys have also been reported in the area.

In 1997, the Institute reported that "Protests by locals, provincial authorities and scientists from Ho Chi Minh University have, so far, all been ignored by the Hanoi government" and added that Holcim "has proved especially insensitive to environmental issues involving karst." The Institute included the karst landscape of Ha Tien - Hon Chong, where Holcim is operating, in its 1998 list of the ten most endangered karst landscapes in the world.

In October 1999, the World Conservation Union (IUCN) Working Group on Caves and Karst reported in its newsletter that in the late 1990s, "The World Bank became concerned about the impact on both biodiversity and cultural heritage which was occurring as a result of limestone quarrying for cement manufacture in the East Asia region." The Bank hired Dr Jaap Vermeulen of the Natural History Museum, Leiden in the Netherlands to "establish a process of inquiry."

In January 1999, the World Bank and IUCN organised a workshop on karst in Bangkok, and in September the Bank published the result of Vermeulen's work. Vermeulen and co-author Tony Witten (of the World Bank) confirmed that the EIA of Holcim's operations "did not review the biodiversity of the limestone hills in any detail."

The authors commented cautiously that "It was considered prudent to revisit the question of the biodiversity of these limestone hills to determine if additional management interventions are needed in this particular case, and to examine how the IFC and potential future sponsors should address these issues more generally."

Using Australian Trust Funds, IFC hired Sinclair Knight Merz, an Australian-based consulting firm, to produce a "study of the limestone resources in southwestern Vietnam" which would "delineate their potential uses for limestone production, biodiversity conservation, forestry production (timber and nontimber), tourism, groundwater recharge, and so forth," according to Vermeulen and Witten.

Four years later, this study is not available. In response to a request for the study in March last year, Richard Caines, Coordinator for East Asia and Pacific at IFC, replied, "We have only recently received a final draft. Once the report has been reviewed and approved, our intention is to make it publicly available."

In June 2003, Caines stated, "The various issues which slowed its progress related to team selection and gaining the appropriate approvals for the study to be undertaken. These approvals needed to be secured from the funders, IFC management, Holcim management and various Vietnamese government Departments/People's Committees. Consensus decision making amongst such entities is not a fast-track process, I'm afraid." He added that "the report has not been publicly released."

A source close to the study reported that the Vietnamese Army ordered that the limestone hills along the Cambodian border be excluded from the Sinclair Knight Merz study. Shortly afterwards, the Kien Giang Provincial Government refused to allow the study to continue.

IFC is now working with Holcim and the International Crane Foundation on a project entitled "Sustainable Development and Biodiversity Conservation of Wetlands in the Ha Tien Plain." In 1998, the endangered Eastern Sarus Crane started to use areas of grassland near Hon Chong as an early season feeding ground. The project aims to preserve these grassland areas. Of course, this biodiversity project will in no way affect Holcim's quarrying activities. IFC and International Crane Foundation are allowing Holcim to greenwash its activities by deflecting attention from Holcim's quarries. By not insisting on an adequate EIA, IFC is in breach of the World Bank's safeguard policies. Meanwhile, Holcim continues to quarry 4,000 tonnes of limestone a day from the mountains near Hon Chong. (By: Chris Lang, WRM Bulletin N° 71, June 2003).