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Sri Lankan drinking water heavily contaminated, concludes NCI

A typical well in the Jaffna area of Sri Lanka. Although the surface looks shiny, the water is not polluted by oil. The area's geology causes a thin layer of lime to be formed on the surface, which makes it appear to be oily. (Photo: NCI)

For many inhabitants in Jaffna, Sri Lanka's Northern province, the quest for clean water has made every day life difficult the last few years. The water in the area's open wells has been polluted and foul looking. Locals and environmentalists have complained to the authorities, leading to various investigations and the closure of a power station accused of causing oil leaks.

However, there was no oil in the wells, concludes NGI.

The situation turned politically difficult early this year, with various allegations regarding the quality of the water and the causes of the pollution. Many inhabitants depend on the open wells for water for domestic use as well as irrigation of farm land. Local and regional media took interest in the polluted water, as people no longer had access to drinking water and agriculture is very important in the area.

The Sri Lanka National Building Research Organisation, NBRO, and NGI, the Norwegian Geotechnical Institute, have previously signed a memorandum of cooperation. Based on that agreement and funded by the Norwegian Embassy in Colombo, two experts from NGI were commissioned to evaluate the situation in early June this year. They undertook field investigations in the Chunnakam area of the Jaffna peninsula, where they also met local residents and experts.

“We did not observe mineral oil in the wells. However, there were several other types of pollution,” explains Thomas Pabst, who visited Sri Lanka together with colleague Paul S. Cappelen, an expert on contaminated soil and water.

Following extensive observations and sampling, they concluded that the water in the wells was heavily contaminated by traces of pesticides and various bacteria.

Pabst and Cappelen from NGI cooperated closely with NBRO, and travelled together with their representatives to Jaffna. NBRO has recently done geophysical investigations, using GeoRadar that was a gift from Norway a few years ago. In Jaffna, they met local experts from the University of Jaffna and other specialists appointed by the Government to assess the status of the wells.

Cappelen and Pabst also did field testing in the area surrounding the disputed power plant. Further, they had a constructive meeting with the provincial minister of agriculture, Mr. P. Ayngaranesan, and Norway’s ambassador Grete Løchen, to go through and discuss reports and conclusions from local experts.

”We observed that the soils and the surfaces were less polluted than we had expected, based on pictures and descriptions that we had studied beforehand,” explains Paul Cappelen. “We cooperated very well with the local experts, and we concluded that the report from the investigation commission and the collected data all were of high quality.”

NGI recommends that more investigations are undertaken. Specifically, it is recommended that the areas between the wells are analyzed further, in order to establish whether there are traces of pollution in the ground.

NGI was commissioned to collect data, observe the situation and write an independent technical report on environmental pollution and possible leaks. NGI was also asked to consider further investigations and propose measures. The work was financed by the Norwegian Department of Foreign Affairs.

The Norwegian Geotechnical Institute (NGI) is a leading international centre for research and consulting within the geosciences. NGI develops optimum solutions for society, and offers expertise on the behaviour of soil, rock and snow and their interaction with the natural and built environment.

NGI works within the markets Offshore energy; Building, construction and transportation; Natural hazards, and Environmental Engineering.

NGI is a private foundation with office and laboratory in Oslo, branch office in Trondheim, and daughter companies in Houston, Texas, USA, and Perth, Western Australia. NGI was established in 1953.

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