



ETOs 4/2568

Subject: Additional Submission Following the Official Visit to Thailand: Severe Transboundary Health Impacts from Mining-Related Toxin Contamination in the Mekong River and its Tributaries Originating from Shan State, Myanmar

To: Your Excellency **Tlaleng Mofokeng, UN Special Rapporteur on the Right to Health**

Reference: Meeting between the Special Rapporteur and representatives of the ETOs Watch Coalition in Bangkok between February 18-28, 2025.

Attachments: Related news reports on environmental and health impacts.

July 30, 2025

Your Excellency,

On behalf of the ETOs Watch Coalition and our network of civil society organizations working on human rights, health, and the environment, we would like to express our sincere gratitude once again for your time and for the attention and dedication you have shown to the issue of the right to health in Thailand during your official country visit this past February 2568.

We, the ETOs Watch Coalition, find it urgently necessary to submit this additional information. Following the conclusion of your visit, new and alarming scientific and empirical evidence has emerged, confirming an unfolding transboundary health and environmental crisis that is directly impacting the people of Northern Thailand. This crisis stems from toxic contamination from mining operations in the headwaters of the Kok, Sai, and Ruak rivers, located in a region under the influence of the Wa Army in Shan State, Myanmar. This information was not widely available at the time of our meeting.

This submission aims to provide you with additional information on the following key issues:

- 1. Empirical and Scientific Evidence Confirming Transboundary Toxin Contamination**

In recent months, clear evidence from multiple sources has converged, identifying the source and extent of the transboundary pollution:

- **Satellite Imagery by the Shan Human Rights Foundation (SHRF):** High-resolution satellite imagery has revealed a massive expansion of rare earth elements (REEs) and other mining activities, such as gold mining, in the mountainous region along the Thai-Myanmar border, which constitutes the headwaters of major rivers flowing into Thailand. The images show significant topographical changes, large-scale deforestation, and large, improperly managed tailings ponds situated in close proximity to water sources, all of which fail to meet international standards.
- **Water Quality Test Results by Thailand's Pollution Control Department (PCD):** Following complaints from local communities in Chiang Rai Province, the PCD collected water samples from the Kok, Sai, and Ruak rivers for analysis. Preliminary results have confirmed contamination by several heavy metals—including Arsenic, Lead, Manganese, and Mercury—at levels exceeding Thailand's national surface water quality standards. These substances are well-known by-products of mining processes.
- **In-depth Research by the Thailand Science Research and Innovation (TSRI):** A Thai research team has employed an advanced methodology they term "Participatory Environmental Forensics," which utilizes Environmental DNA (eDNA) analysis to identify the unique "chemical and biological fingerprints" of pollutants in the rivers. The research has scientifically and significantly confirmed that the heavy metals and hazardous chemical contaminants found in the Kok River and the northern Mekong River in Thailand possess a specific compositional profile that corresponds to the rare earth and gold mining activities in Shan State, Myanmar. This serves as the clearest evidence linking the source of the pollution to its impacts.

2. Existing and Foreseeable Health and Environmental Impacts

The detected levels of toxic contamination infringe upon the right to a clean, safe, healthy, and sustainable environment, which is an essential component of the right to health. The impacts, both existing and those expected to worsen, are as follows:

- **Existing Impacts:** Communities along the Kok, Sai, Ruak, and Mekong rivers in Chiang Rai Province, who depend on these waters for consumption, agriculture, and fishing, have begun to experience acute health problems such as skin rashes, with some individuals developing dark spots on their skin, diarrhea, and other unexplained illnesses. Furthermore, fish species, such as the Siamese tigerfish (*Datnioides pulcher*), have been observed with ulcerative sores and lesions on their skin and fins. Some heavy metals have also been found at levels exceeding safety standards in their

intestines, partly due to exposure to environmental heavy metals. This directly affects the food security, income, and livelihoods of local fisherfolk.

- **Long-term Health Risks:** Continuous exposure to and bioaccumulation of heavy metals, even at low concentrations, pose a risk of serious long-term diseases, including cancer, neurological disorders (especially from the effects of lead and mercury on children's brain development), and chronic liver and kidney failure. The most vulnerable groups—children, pregnant women, the elderly, and small-scale farmers—face the highest risk from these impacts.
- **Ecosystem Degradation:** This contamination is destroying the biodiversity of the Mekong River and its tributaries, one of the world's most vital freshwater ecosystems. The contamination of soil and river sediment will persist for decades, making remediation extremely difficult and causing cascading effects throughout the entire food web.

3. State Responses and the Call to Address the Root Cause

Despite the clear evidence, actions to resolve the problem remain slow and limited:

- **The Thai Government:** The response from Thai authorities has been limited to domestic water quality monitoring and issuing public warnings to avoid using the water. These are merely palliative measures that fail to address the problem at its source and are insufficient to protect the public's right to health in the long term. There has been a lack of serious and concrete diplomatic action to demand accountability from the source of the pollution.
- **Myanmar and Wa Authorities:** As the mining activities are located in an area under the influence of the United Wa State Army (UWSA), coordination with the central government of Myanmar may be insufficient. It is imperative to establish channels for direct communication and pressure on the de facto authorities in the area to halt these uncontrolled activities and urgently implement environmental oversight mechanisms.
- **The Chinese Government:** There is credible information suggesting that the capital and technology for most of these rare earth mines are linked to China, which is the world's largest buyer of the final products. Therefore, the Chinese government holds a significant role and responsibility to ensure that its corporations' extraterritorial investments adhere to international human rights and environmental principles.

4. Recommendations and Expectations for the Special Rapporteur

In light of this crisis, the ETOs Watch Coalition respectfully urges Your Excellency to undertake the following actions:

- **To include this transboundary pollution issue as a key case study** in your final Country Visit Report on Thailand, detailing the scientific evidence, the impacts on the Thai people's right to health, and the failure of the involved states to manage the problem at its source, in order to build international pressure for action.
- **To use your mandate to issue Official Communications** to the Governments of the Kingdom of Thailand, the Republic of the Union of Myanmar, and the People's Republic of China, expressing grave concern over the situation and urging them to engage in urgent negotiations and cooperation to stop the pollution at its source and remediate the impacts.
- **To recommend concrete measures** in your report, such as the establishment of a joint transboundary water quality monitoring mechanism among the involved countries; demanding that investing and purchasing companies conduct supply chain due diligence; establishing a fund for environmental restoration and health-related compensation for affected communities; and halting the operations of the rare earth and other mines at the source.

The ETOs Watch Coalition is confident that your intervention and the attention given to this issue by United Nations mechanisms will be key to driving a meaningful resolution and protecting the fundamental right to health and life for millions of people in the Mekong sub-region.

We stand ready to provide any further information you may require and look forward to your response.

Respectfully yours,

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