

**Mandates of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes; the Special Rapporteur on the human right to a clean, healthy and sustainable environment and the Special Rapporteur on the human rights to safe drinking water and sanitation**

Ref.: AL OTH 51/2026

(Please use this reference in your reply)

28 July 2026

Dear Mr. Rae,

We have the honour to address you in our capacities as Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes; Special Rapporteur on the human right to a clean, healthy and sustainable environment and Special Rapporteur on the human rights to safe drinking water and sanitation, pursuant to Human Rights Council resolutions 54/10, 55/2 and 51/19.

We are independent human rights experts appointed and mandated by the United Nations Human Rights Council to report and advise on human rights issues from a thematic or country-specific perspective. We are part of the special procedures system of the United Nations, which has 59 thematic and country mandates on a broad range of human rights issues. We are sending this letter under the communications procedure of the Special Procedures of the United Nations Human Rights Council to seek clarification on information we have received. Special Procedures mechanisms can intervene directly with Governments and other stakeholders (including companies) on allegations of abuses of human rights that come within their mandates by means of letters, which include urgent appeals, allegation letters, and other communications. The intervention may relate to a human rights violation that has already occurred, is ongoing, or which has a high risk of occurring. The process involves sending a letter to the concerned actors identifying the facts of the allegation, applicable international human rights norms and standards, the concerns and questions of the mandate-holder(s), and a request for follow-up action. Communications may deal with individual cases, general patterns and trends of human rights violations, cases affecting a particular group or community, or the content of draft or existing legislation, policy or practice considered not to be fully compatible with international human rights standards.

In this connection, we would like to bring to your attention new information we have received concerning **alleged human rights violations and abuses against the populations in and around the Tsumeb Smelter (“Smelter”) in Tsumeb, Namibia, and the risk of increased violations. In September 2024, Sinomine Resource Group Co., Ltd. became the owner of the Smelter. Previously, through its subsidiary in Namibia, Dundee Precious Metals Tsumeb (Pty) Limited, the Canadian company Dundee Precious Metals Inc. owned the Smelter from 2010 until 2024, after purchasing it from Weatherly International Plc (based in the United Kingdom).**

The **Smelter in Tsumeb, Namibia**, was the subject of a previous letter sent by Special Procedures mandate holders, in which we communicated the concern that the

Dundee Precious Metals Inc

Smelter had released hazardous substances into the air, soil, and water in Tsumeb. This contamination was allegedly the result of the Smelter releasing toxics into the surrounding environment, poor handling of chemical waste, and the Smelter's recycled wastewater being shared for public consumption without the public's knowledge. Pollution from the Smelter's operations was reportedly correlated to health symptoms experienced by workers and community members. Examples of adverse health impacts reportedly suffered by the Smelter workers and Tsumeb community members include infertility, miscarriages, skin rashes, allergies, upper respiratory problems, and lung disease.

The previous communication was sent to the Governments of Namibia ([NAM 1/2025](#)), Canada ([CAN 5/2025](#)), China ([CHN 7/2025](#)), and the United Kingdom ([GBR 6/2025](#)), and to Dundee Precious Metals Tsumeb (Pty) Limited ([OTH 53/2025](#)), Dundee Precious Metals Inc. Canada ("DPM") ([OTH 52/2025](#)), Weatherly International Plc ([OTH 55/2025](#)) and Sinomine Resource Group Co., Ltd. ("Sinomine") ([OTH 54/2025](#)).

We thank you for the replies received to the communication. We note the [reply](#) from Sinomine to OTH 54/2025 of 21 July 2025 in which the company expressed an intention to ensure the protection of the Smelter workers and Tsumeb environment. We regret, however, that none of the replies received sufficiently addressed with substance, the issues and questions raised in the communication.

According to the information received:

Tsumeb is currently threatened by arsenic contaminated water, and Sinomine's proposed operations for the Smelter will likely further expose the workers and Tsumeb's community to toxic chemicals in the air, soil, and water. This new information indicates that the Tsumeb community is still endangered by the Smelter's past activities and presents the need for remediation measures. Additionally, in a meeting on 4 March 2026 between the Chief Executive of the Sinomine Tsumeb Smelter, Logan Lou Yonggang and the Deputy Minister of International Relations and Trade for Namibia, Honourable Jenelly Matundu implored Sinomine to expand their operations, however, the current and future environmental harms to the Tsumeb region were not raised.

#### *Arsenic Contaminated Water*

According to information received, four locations in Tsumeb have arsenic contaminated water. Water from these four locations was found to contain arsenic above Namibia's guidelines (>10 micrograms/l), that are legally binding.<sup>1</sup> The most severely contaminated location was a creek west of the Tsumeb Smelter, followed by an industrial site directly south of the Tsumeb Smelter. The other two locations were the Matara Market Tap and a public tap in Kuvukiland.

The contaminated creek presents the potential for spread of arsenic contamination to other areas of Tsumeb, including into Tsumeb's groundwater.

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<sup>1</sup> Government Gazette of the Republic of Namibia, No. 8187, 29 Aug. 2023, available at <https://www.lac.org.na/laws/2023/8187.pdf>.

Since arsenic does not decompose, it would permanently settle into the sediment of rivers, lakes, and creeks. The information shows that the creek is not currently in use, but nothing prevents individuals or wildlife from accessing the creek. The creek currently has little water, but use of the creek may increase as the water level rises throughout the year. Neither the Smelter nor the Municipality of Tsumeb have provided sufficient information on threats that the contaminated creek poses to Tsumeb's fragile water system, community members, or its workers. As of 28 April 2026, there is no public information confirming that the water testing results conducted by public health researchers have been reported to the community by the municipality.

Tsumeb is dependent on groundwater stored in underground aquifers and delivered to the surface via boreholes. Surface water seep into the ground and enter aquifers, allowing groundwater to flow to other areas in Namibia. Specifically, Tsumeb's groundwater flows towards the Etosha Pan, with Etosha National Park being important for Namibia's wildlife and tourism industry.

Arsenic contamination of Matara Market Tap and Kuvukiland public tap both threaten residents from Tsumeb and beyond. The Matara Market is a popular market frequented not just by residents of Tsumeb, but people from neighboring towns for water, produce, food, and other goods. Roughly one third of Tsumeb's community resides in Kuvukiland and many residents drink directly from communal taps due to a lack of residential plumbing and rising water costs. These contaminated locations expose many Tsumeb community members to arsenic contaminated water.

Exposure to arsenic occurs via ingesting or coming into contact with contaminated water or inhaling polluted air. Following the World Health Organization's guideline, exposure to water contaminated with 10 micrograms/L of arsenic gives rise to many negative and often irreversible health outcomes. The risks of those outcomes are only exacerbated as increased contamination results in heightened frequency and severity of cancers and neurological symptoms. Additional outcomes include myocardial infarction, gastrointestinal diseases, cardiovascular diseases, diabetes, and higher infant and young adult mortality. The new information received confirms that Tsumeb community members are still being exposed to unsafe levels of arsenic, even though the Smelter has not been operating since 2024 when Sinomine stopped the copper smelter in preparation for its new projects discussed below.

### *Sinomine's Proposed New Operations*

Sinomine has proposed two new operations at the Tsumeb Smelter: the Multi-Metal Recycling (MMR) project and the Alkali Metal Salts (AMS) project.<sup>2</sup> In February 2025, Sinomine commissioned Environmental and Social Impact Assessments which outlined these prospective projects. The MMR process

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<sup>2</sup> Tortoise Environmental Consultants, ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) FOR THE PROPOSED MULTI-METAL RECYCLING (MMR) PROJECT, SINOMINE TSUMEB SMELTER, TSUMEB (14 Feb. 2025) [hereafter MMR ESIA]; Tortoise Environmental Consultants, ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) PROPOSED ALKALI-METAL SALTS PROJECT, AT SINOMINE TSUMEB SMELTER, TSUMEB (13 Feb. 2025) [hereafter AMS ESIA].

involves extracting valuable materials like zinc, germanium, gallium, and lead from the leftover slag produced by historic copper smelting. Additionally, the AMS process entails the import and processing of cesium ore powder to be converted into lithium carbonate, rubidium alum, cesium sulphate, and various cesium salts.

#### *Potential Harm from Sinomine's Proposed Activities*

The information suggests that the project would pose several risks with significant potential for irreversible harm to the Tsumeb region's population and environment. For MMR, the primary concerns are the iron-arsenic (FeAs) sludge residue, the waste from the heavy metals removal and defluorination processes, and the zinc oxide (ZnO) dust product. For AMS, the primary concerns are the coal ash residue and the heavy metals dust. These byproducts also pose a threat to the region with similar potential for severe and often irreversible harm to human health and the surrounding environment. According to the Environmental and Social Impact Assessments, MMR and AMS will result in the production of wastewater containing non-biodegradable and carcinogenic pollutants. Both proposed operations will produce a large quantity of hazardous wastewater (~600,000 m<sup>3</sup>/annum total).

The harmful pollutants of the MMR and AMS processes could impact the Tsumeb environment and population significantly. The pollutants from these processes would spread into the Tsumeb environment through water contamination and soil degradation, further aggravating existing and unremediated contamination. Moreover, direct human exposure can occur via inhalation, ingestion, and dermal absorption, which may leave the population in or near Tsumeb susceptible to these toxic byproducts.

Exposure to all previously mentioned byproducts pose threats to the Tsumeb region's environment. Potential effects include the inhibition of photosynthesis, environmental reproduction, and growth for the Tsumeb region. These harmful byproducts contaminating the water could also result in unsafe water for agriculture. In addition, the harmful pollutants can cause soil degradation with the residues damaging soil structure and inducing nutrient depletion. Similarly, there is potential for these residues to destroy vegetation and inhibit growth of trees and plants, with severe impacts to biodiversity.

Moreover, there is potential for serious harm to the Tsumeb population from the toxic pollutants produced by the MMR and AMS processes. Exposure to these pollutants can result in skin lesions, various cancers, developmental and reproductive disorders, cardiovascular diseases, respiratory illnesses, neurological disorders, diabetes, and organ damage.

Due to the processing technique of the MMR and AMS projects, metal fume fever is of concern as inhaling zinc or arsenic during smelting can lead to adverse health effects. These effects include fever, chills, nausea, muscle aches, anemia, and hypercholesteremia (high cholesterol) that can contribute to acute coronary syndrome and stroke. In addition, there is potential for severe harm in the extraction processes of germanium and gallium with effects of exposure

including anemia and damage to the liver, kidneys, lung, and nervous system. Gallium exposure can also induce burning of the skin and eyes when there is dermal or ocular contact.

The information suggests that should Sinomine not properly contain the coal ash residue, zinc oxide (ZnO) dust product, and other heavy metal dust from air exposure in the Tsumeb region, the workers and community could be severely harmed.

### *Sinomine's Proposed Mitigation Measures*

Sinomine proposes mitigation measures in the Environmental and Social Impact Assessments conducted by Tortoise Environmental Consultants in February 2025. However, information suggests that the mitigation measures would not be sufficient to mitigate the risks posed by Sinomine's activities. In the assessments, Sinomine refers to Personal Protective Equipment (PPE) for workers which has been inadequate in the past due to low grade material and PPE design. Furthermore, both Environmental and Social Impact Assessments conclude that the PPE requirements state workers should wear "suitable protective clothing" for skin and body protection, absent any further elaboration.

Other proposed mitigation measures concern the storage of hazardous waste. Sinomine's long-term storage methods distinguish waste by its degree of leachability. The category designated for hazardous materials mandates that storage be offsite in an area less likely to impact the environment and water supply of the Tsumeb region and surrounding areas. However, Sinomine does not currently classify any of its waste products in this category.

Additionally, Sinomine proposes to store hazardous wastewater in control dams with two mitigation methods. One method involves Sinomine evaporating the wastewater. The other method involves treating the water for reuse. Both methods reportedly leave the Tsumeb region vulnerable because of the wastewater's toxic makeup. The treatment for evaporation could harm the region's air because of the wastewater's toxic composition. While the treatment of water for reuse appears technically feasible, limited information is available on Sinomine's treatment process. Moreover, the control dams are open, which leaves the air exposed. Additionally, there is potential for leachability of the toxic substances. Therefore, the toxic wastewater could spread toxicity into Tsumeb's air and ground for an extended period of time.

In the Environmental and Social Impact Assessments, Sinomine refers to its intention to institute monitoring programs for MMR and AMS. The assessments enumerate a range of proposed methods, employing reassuring language about routine examinations and detection systems. However, historical patterns suggests that the economic leverage stemming from the region's reliance on the employer has resulted in inadequate enforcement of monitoring programs.

Without prejudging the accuracy of the information received, we express serious concern that the new information received indicates that Tsumeb community members are still being exposed to unsafe levels of arsenic, **in violation of their human rights**

**to clean and safe drinking water, food, health, and a clean, healthy, and sustainable environment**, notwithstanding the cessation of Smelter operations in 2024. In light of the newly received information concerning reported historical contamination and Sinomine's proposed activities, the projects present heightened risks, and do not detail clear and adequate safeguards for PPE use, wastewater management and control of air emissions. This gives rise to serious concerns of renewed allegations of violations of international human rights law.

In connection with the above alleged facts and concerns, please refer to the **Annex on Reference to international human rights law** attached to this letter which cites international human rights instruments and standards relevant to these allegations.

As it is our responsibility, under the mandates provided to us by the Human Rights Council, to seek to clarify all cases brought to our attention, we would be grateful for your observations on the following matters:

1. Please provide further information on Sinomine's prevention methods and treatment regarding respiratory care for Smelter workers and Tsumeb community members.
2. Please provide further information on the type of PPE Sinomine intends to offer as well as whether it will be compliant with industry best practice standards.
3. Please provide further information regarding the classification of waste with severe risks and potential for permanent damage to the Tsumeb environment.
4. Please offer additional information on the waste classification system based on leachability and whether Sinomine would reconsider classifying waste in the category which would mandate having to store the waste offsite.
5. Please provide information on areas and mitigation approaches for storing hazardous waste offsite.
6. Please offer additional information on how Sinomine intends to safeguard against the erosion of waste storage facility liners.
7. Please provide information on whether Sinomine will replace the liners of hazardous waste storage facilities or add new liners, and, if applicable, the location of these liners.
8. Please offer additional information on how much hazardous wastewater Sinomine estimates will be evaporated. Please provide this information with context as to how much hazardous wastewater Sinomine intends to treat for reuse.
9. Please offer the anticipated duration the hazardous wastewater will be remaining in these control dams and whether Sinomine expects there

will be any instance in which the control dams will not contain hazardous wastewater.

10. Please provide information on how Sinomine intends to foster an environment that allows for transparency regarding health and safety concerns from the Smelter workers without feeling apprehensive of employer retaliation, given past alleged instances. Please offer this information with a particular focus on the monitoring programs Sinomine intends to utilize.
11. Please provide information regarding any environmental, social and human rights due diligence undertaken prior to the transfer of ownership of the Tsumeb Smelter to Sinomine, including any assessments of historical contamination, environmental monitoring, remediation obligations, occupational health and safety risks, and concerns raised by workers and affected communities. Please also provide information on any relevant information, findings or documentation shared with Sinomine as part of the transfer process.

This communication, and any response received from you, will be made public via the communications reporting [website](#) at the 60 days mark. Should you respond within 60 days, both the communication and the response, may be published before the 60 days mark. The communications and responses will also be made available in the subsequent periodic report to be presented to the Human Rights Council.

While awaiting a reply, we urge that all necessary interim measures be taken to halt the alleged violations and prevent their re-occurrence and in the event that the investigations support or suggest the allegations to be correct, to ensure the accountability of any person(s) responsible for the alleged violations.

Please be informed that a letter on this subject matter has also been sent to those business enterprises that are involved in operating the Tsumeb Smelter, as well as to the home-States, i.e. Canada, China, Namibia, and the United Kingdom of Great Britain and Northern Ireland.

Please accept, dear Mr. Rae, the assurances of our highest consideration.

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Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes

Astrid Puentes Riaño  
Special Rapporteur on the human right to a clean, healthy and sustainable environment

Pedro Arrojo-Agudo  
Special Rapporteur on the human rights to safe drinking water and sanitation

## **Annex**

### **Reference to international human rights law**

In connection with above alleged facts and concerns, we wish to draw to your attention the obligations under international human rights instruments.

As highlighted by the Human Rights Committee in general comment No. 36, the duty to protect life also implies that States parties should take appropriate measures to address the general conditions in society that may give rise to direct threats to life or prevent individuals from enjoying their right to life with dignity, including degradation of the environment (para. 26). Environmental degradation, climate change and unsustainable development constitute some of the most pressing and serious threats to the ability of present and future generations to enjoy the right to life. Implementation of the obligation to respect and ensure the right to life, and in particular life with dignity, depends, *inter alia*, on measures taken by States parties to preserve the environment and protect it against harm, pollution and climate change caused by public and private actors (para. 62).

States have a duty to prevent exposure to hazardous substances and wastes, as detailed in the 2019 report of the Special Rapporteur on the human rights implications of the environmentally sound management and disposal of hazardous substances and wastes to the General Assembly (A/74/480). This obligation derives implicitly, but clearly, from a range of rights and duties enshrined in the global human rights framework, under which States are obliged to respect and fulfill recognized human rights, and to protect those rights, including from the consequences of exposure to toxic substances. These rights include the human rights to life, health, food and safe drinking water, a healthy environment, adequate housing, and safe and healthy working conditions.

We would like to remind you that, under international law, including the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, ratified by Namibia in 1995, States have obligations regarding the control and transboundary movement of certain toxic substances and wastes. One such obligation is contained in article 4 of the Basel Convention: “Each Party shall require that hazardous wastes or other wastes, to be exported, are managed in an environmentally sound manner in the State of import or elsewhere.”

Gender- and sex-related health harms from exposure to hazardous substances include infertility, miscarriage, stillbirth, premature birth or low birthweight, cancers and metabolic disorders across society, with grave implications for the rights to health, to family life, to physical and mental integrity and to a clean, healthy and sustainable environment. In his report on the impact of toxics on gender (A/79/163), the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes recommends, among other, that states increase awareness about sexed and gendered harms from toxics and provide community-specific, accessible information and actionable advice on exposures as well as ensuring that the long-term health and financial impacts of preterm birth, low birthweight and other adverse birth outcomes are included in assessments of



the danger posed by an industry, facility or chemical, together with health and wellbeing costs of other reproductive health impacts such as subfertility or infertility.

We wish to refer to Human Rights Council resolution 48/13 of 8 October 2021 and General Assembly resolution 76/300 of 29 July 2022, which recognize the right to a clean, healthy and sustainable environment as a human right. These resolutions underscore that all States have a duty to respect, protect, and fulfill this right.

In addition, the International Court of Justice, in its Advisory Opinion on the Obligations of States in respect of Climate Change of 23 July 2025, in its article 393 clarified that the human right to a healthy environment is a precondition and essential for the enjoyment of all human rights, and therefore fundamental for States in order to fulfill their obligation to guarantee the enjoyment of all human rights.

We would also like to bring to the attention to the Government of your Excellency, the Framework for environmental, social and human rights impact assessments on the human right to a healthy environment, presented to the UN General Assembly in October 2025 (A/80/187). According with this Framework, all States, have the obligation under international law, to prevent environmental harms, including transboundary harms. In connection with such obligation and also recognized as an obligation of all States under international law, is the obligation to regulate and undertake comprehensive environmental, social and human rights impact assessments prior to any proposal authorization or the commencement of any activity that might cause significant environmental, social or human rights impacts (ESHRIA). Such ESHRIAs must be comprehensive therefore including direct, indirect, domestic, transboundary, cumulative, long-term, short-term, climate, biodiversity, environmental, health, cultural, social and human impacts must be considered; integrally evaluate climate impacts including consideration of scope 1, 2 and 3 emissions from projects; comply with international law principles of precaution, prevention, proportionality, best-available science – including Indigenous science, maximum disclosure and equity and non-discrimination; be prepared by independent, qualified experts; ensure access to information, public participation and access to justice and remedy, in all steps of the process; and, guarantee special measures for the protection of the rights of marginalized people and groups.

“States have the obligation to guarantee clean air as one of the elements of the right to a healthy environment and make sure that there are adequate regulations, monitoring and enforcement. In relation to activities that might be harmful to human health or the environment, States must also implement health assessments to identify and implement protective measures. In addition, businesses also have the obligation to prevent avoid and stop worsening are pollution and subsequent health risks, especially in relation to workers and population that might be more vulnerable, by among others, protect workers from unhealthy air by installing appropriate technologies and personal protective equipment and ensuring healthcare and social security (A/HRC/61/47)”.

We would also like to remind you of the explicit recognition of the human right to safe drinking water by the UN General Assembly (resolution 64/292) and the Human Rights Council (resolution 15/9), which derives from the right to an adequate standard of living, protected under, inter alia, article 25 of the Universal Declaration of Human Rights, and article 11 of the International Covenant on Economic, Social and Cultural

Rights. In its general comment No. 15, the Committee on Economic, Social and Cultural Rights (CESCR) clarified that the human right to water means that everyone is entitled to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses.