

Today marks **World Water Day**, an annual event celebrating the most precious resource for people and nature. The same day, governments, including the EU, are meeting for the opening of the first UN Water Conference in nearly 50 years, during which they will discuss prevailing issues and make commitments to meet the water-related targets set out in the UN Sustainable Development Goals. The **extraction of lithium** is one such issue, whose exploitation, if done in an unsustainable way, can lead to devastating consequences for water and precious wetland ecosystems. If action is not taken, these issues are only set to grow over the coming years, due to the importance of lithium in battery technologies for electric vehicles.

During the conference, the [EU](#) will present a list of voluntary commitments for the Water Action Agenda, where, among other things, the 27-country bloc “commits to continue improving the integration of water into the EU’s external action and finance in the field of climate change mitigation and adaptation, as well as through the Sendai Framework for Disaster Risk Reduction.” If the EU is serious about this commitment, it needs to prioritise the conservation and restoration of wetlands in its investment plans in and outside of Europe. Wetlands, which occur wherever water meets land, provide many vital services for people and nature, including water purification, water storage and groundwater recharge, as well as regulating water availability.

We appreciate that the EU recognises that the extraction of raw materials can impact nature and people, for example in its recently published proposal for a **European Critical Raw Materials** Act (published 16 March). In the proposal, the EU commits to taking measures to minimise and mitigate adverse impacts arising from extracting, refining and/or processing activities. Reducing impacts on the environment is not enough. There is a need to invest in research and innovation on alternatives to damaging practices like energy generation involving the use of [lithium](#) derived from evaporation-based lithium brine mining methods. This should not be categorised as “renewable” nor “sustainable”, given the impact on water resources and on wetlands.

In the proposal, the EU makes the welcome step of supporting more research into and innovation for the application and deployment of new technologies. However, we expect the EU to promote operations and supply chains free from wetland degradation and ecosystem conversion, giving this equal importance to commitments on zero deforestation.

The dark side of lithium

The Puna and High Andes area in Argentina, Bolivia and Chile, an area commonly known as the “**Lithium Triangle**” is one example of the impact of lithium brine development on water resources and wetlands. The Lithium Triangle comprises a series of enclosed basins

more than 10,000 feet high in the Andes. Rainwater from the surrounding mountain peaks has flowed into the basins for thousands of years, forming lakes, wetlands, and salt pans, as well as accumulating underground. The water has brought with it large quantities of lithium carbonate and salts of sodium, boron, potassium, and magnesium that are eroded from the mountains. However, its extraction now poses a significant threat to [water](#) resources and wetlands in the area.

This threat mainly relates to the fact that exploitation is mostly carried out via lithium brine extraction and deposition in evaporation pools. The resulting concentrate is then removed for processing into lithium carbonate. Each tonne of lithium requires around **2 million litres of water** to be evaporated, resulting in enormous quantities of water being lost every year and putting underground freshwater reserves in danger of salinisation by getting in contact with brine. The consequences of this “water mega-mining” are demonstrated by a fall in the water table, the salinisation of freshwater and a reduction in underground water available. This results in the drying up of surface water bodies and the damage to wetland ecosystems, with direct impacts on [biodiversity](#) and climate, as vast quantities of securely stored carbon are released into the atmosphere as **CO2** and reduces their resilience – making local communities and Andean countries more vulnerable to the adverse effects of climate change.

We are not against lithium use as a key mineral for the energy transition. However, evaporation-based **lithium** brine mining methods are unsustainable. We welcome that in the Critical Raw Materials proposal the EU refers to a shift towards a sustainable and circular economy to enable critical raw materials to be re-used and recycled in new products. This should reduce the demand for minerals necessary for the [energy transition](#) and the pressure that this places on ecosystems. However, we expect the EU to take the lead internationally by embedding into the proposed law the respect for labour rights, human rights and environmental protection.

The European Parliament and Council will discuss the proposed Regulation before its adoption and entry into force. Given the voluntary commitments on water the EU intends to present at the UN Water Conference, we expect that it takes the lead on the international water agenda, in addition to the international climate and biodiversity agendas as laid out in the **EU Green Deal**, and becomes a champion for operations and supply chains free from wetland degradation and ecosystem conversion.

Source: [Wetlands](#)