



Figure 1: A) Adult Pehuenche spiny-chest frog (*Alsodes pehuenche*) in its natural habitat. Photo: Vicente Valdés. B) Landscape of Alto Maule that would be impacted by the transmission project. Photo: Natalia Morata.

International power transmission project threatens the survival of the Critically Endangered Pehuenche spiny-chest frog (*Alsodes pehuenche*)

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With more than 9,000 described species, amphibians are the most threatened group of vertebrates, with 41% of species at risk of extinction (Luettke et al., 2023). The

Pehuenche spiny-chest frog (*Alsodes pehuenche*; Ceí, 1976) is one of 19 species in the genus *Alsodes* (Family Alsodidae), a group of anurans endemic to the southern Andes of Chile and Argentina. Males are distinguished by hypertrophied forelimbs and keratinized spines on their chest and hands during the breeding season (Ceí, 1976; Corbalán et al., 2024). The species is microendemic to high-elevation mountain streams and ponds formed at meadows between 2,150 and 2,825 m a.s.l. in the Pehuenche valley on both sides of the Chile-Argentina border (Fig. 1), where snow cover persists for several months each winter (Corbalán et al., 2014, 2024; Correa et al., 2018; Díaz et al., 2024). The species has an exceptionally prolonged larval period, with tadpoles taking up to 4–5 years to complete metamorphosis (Corbalán et al., 2014).

This species does not occur within any protected area and its extremely restricted distribution, ongoing population decline, and severe habitat fragmentation have led to its classification as Critically Endangered on the IUCN Red List (ASG, 2019). The main threats to *A. pehuenche* include habitat degradation caused by livestock, invasive trout, climate change, and chytridiomycosis, an emerging infectious disease responsible for amphibian declines worldwide (Corbalán et al., 2010, 2014; Ghirardi et al., 2014). However, one of the most significant pressures comes from the Paso Pehuenche International route, which construction has altered stream channels, and where litter accumulation and the application of road salt

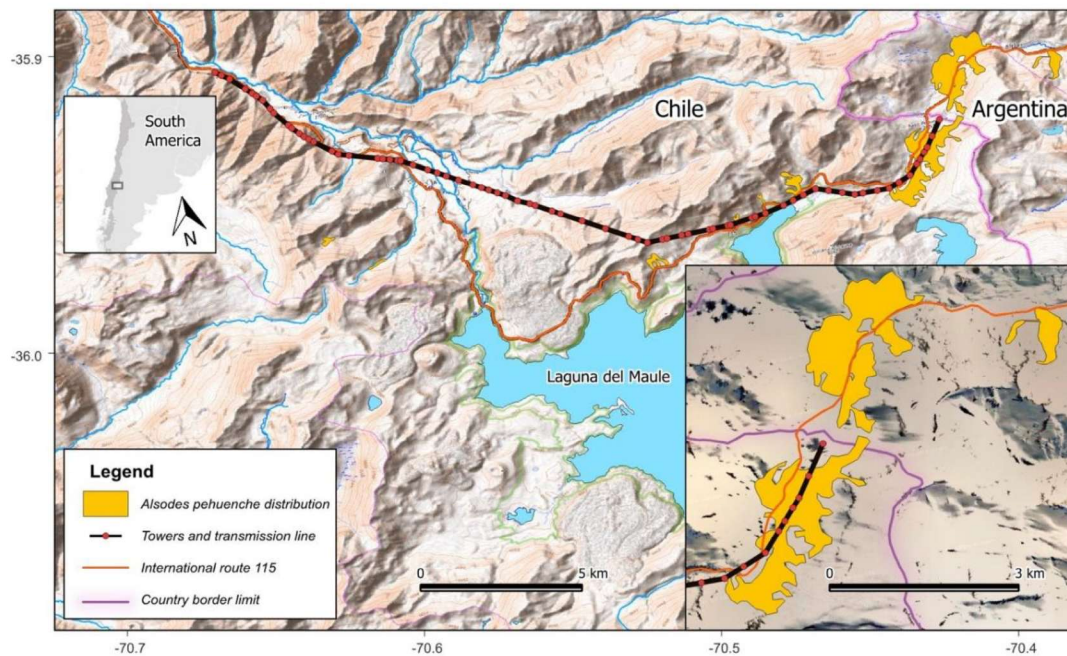


Figure 2: Map of the central Andes of Chile and Argentina showing the proposed alignment of the Los Cóndores-Río Diamante high-voltage transmission line and associated towers on the Chilean side, crossing the highly restricted habitat of the Pehuenche spiny-chest frog (*Alsodes pehuenche*). Data from IUCN SSC Amphibian Specialist Group, Chile Regional Working Group.

during winter continue to degrade water quality and the species' habitat (Corbalán et al., 2024).

Recently, Chile's Environmental Assessment Service (SEA) issued the Consolidated Environmental Assessment Report for the "Los Cóndores-Río Diamante International Electricity Interconnection" project, located in Alto Maule, central Andes of Chile. The report recommends that the Environmental Assessment Commission (COEVA), integrated by government authorities, approves the project. The Commission is expected to issue its decision during the second week of August 2026. The project consists of the construction of a 500-kV transmission line designed to interconnect the electrical systems of Chile and Argentina. On the Chilean side, it includes an approximately 26.7 km overhead transmission line and the installation of 76 high-voltage towers extending to the Argentine border. This infrastructure crosses the habitat of *A. pehuenche*, passing through the core of its main population. A similar situation is projected for the Argentine side (Fig. 2).

It is particularly concerning that the SEA report dismisses the technical observations submitted by the Agricultural and Livestock Service (SAG) and the Biodiversity and Protected Areas Service (SBAP), both

agencies with direct responsibility for biodiversity conservation, which warned about the significant negative impacts of the project on this species. The proposed transmission line would introduce an additional source of habitat disturbance for one of South America's most range-restricted amphibians, further threatening a species already on the brink of extinction. Given its Critically Endangered status, absence from the protected area network, and cumulative exposure to multiple anthropogenic threats, decisions regarding the project should be guided by the precautionary principle and the best available scientific evidence to avoid further compromising its long-term persistence (Cooney, 2004).

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