

UNESCO Must Protect World Heritage Site from Gas Pollution in the Aquarium of the World

Defensa Ambiental del Noroeste



The **Islands and Protected Areas of the Gulf of California** is one of the most biodiverse marine regions on the planet, home to around 8,000 animal species¹, including six of the seven sea turtle species and 39% of the world's cetaceans². This ecologically valuable area was dubbed "the Aquarium of the World" by ocean explorer Jacques-Yves Cousteau. In 2005, the World Heritage Committee designated it a World Heritage Site due to its natural beauty, ecological significance, and vital habitats for biodiversity conservation³. Since 2019, it has been included on the List of World Heritage in Danger due to the imminent extinction of the vaquita (*Phocoena sinus*), a critically endangered porpoise endemic to the region and primarily threatened by illegal fishing practices.

The coastal communities of the Gulf of California (GC) rely heavily on economic activities such as fishing, aquaculture, and tourism, providing employment to thousands of people⁴. The region's indigenous peoples engage in fishing, produce traditional crafts, and practice ceremonies and rituals⁵. The GC contributes over half of Mexico's total fish catch, with its fleet responsible for 57% of shrimp, 72% of tuna, and nearly 100% of sardine production⁶. Furthermore, tourism, particularly whale watching and diving, generates significant revenue, attracting over 4.5 million tourists annually⁷.

Expansion of LNG Projects in the Gulf of California

Since the 2010s, the United States have significantly increased its liquefied natural gas (LNG) production, becoming the world's largest exporter in 2023, and its exports are expected to double by the end of this decade⁸. The Permian Basin, located in Texas and New Mexico, is the primary source of this resource and is increasingly seen as a climate bomb since all the gas extracted there comes from hydraulic fracturing, or fracking⁹. Meanwhile, the liquefaction terminals, where the gas is converted into liquid form for export, are situated on the East Coast¹⁰.

In recent years, the GC has become a key epicenter of the global LNG industry, with a series of projects that promise to transform the region's energy outlook. One of the largest projects is the Terminal GNL de Sonora, known as **Saguaro En-**

ergía, located in Puerto Libertad, state of Sonora, which the project proponent affirms will liquefy 28.2 million metric tons of natural gas annually¹¹. This project is linked to the **Sierra Madre Pipeline (Frontera-Puerto Libertad)**, which will span over 800 km, connecting the Permian Basin in the United States with the GC to export gas via maritime transport¹².



Fig. 1: The Negishi LNG Terminal, Japan, is an example of large-scale LNG infrastructure. It helps visualize the type of industrial development these projects would involve in the Gulf of California. Its capacity is also significantly smaller than that of proposed terminals like Vista Pacífico LNG or Saguaro Energía

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Further south, in Guaymas, the **AMIGO Terminal**¹³ is under design, with a view to becoming a key player in this growing LNG system with an initial capacity of 4.2 million metric tons per year¹⁴. AMIGO plans to supply Asian markets, utilizing existing pipeline infrastructure and exporting the LNG through maritime transport.

Even further south, in Topolobampo, in the state of Sinaloa, the **Vista Pacífico LNG** project, which has submitted its Environmental Impact Assessment (EIA) report for evaluation, consists of a floating liquefaction terminal and a pipeline, named **Corredor Norte**, that will connect the gas to the offshore platform for export¹⁵. Similarly, in Mazatlán, there is another project for the construction of a liquefaction plant, further consolidating the presence of LNG infrastructure in the region¹⁶.

These projects not only reflect the boom of the US LNG industry in the GC but also represent an expansion that would turn

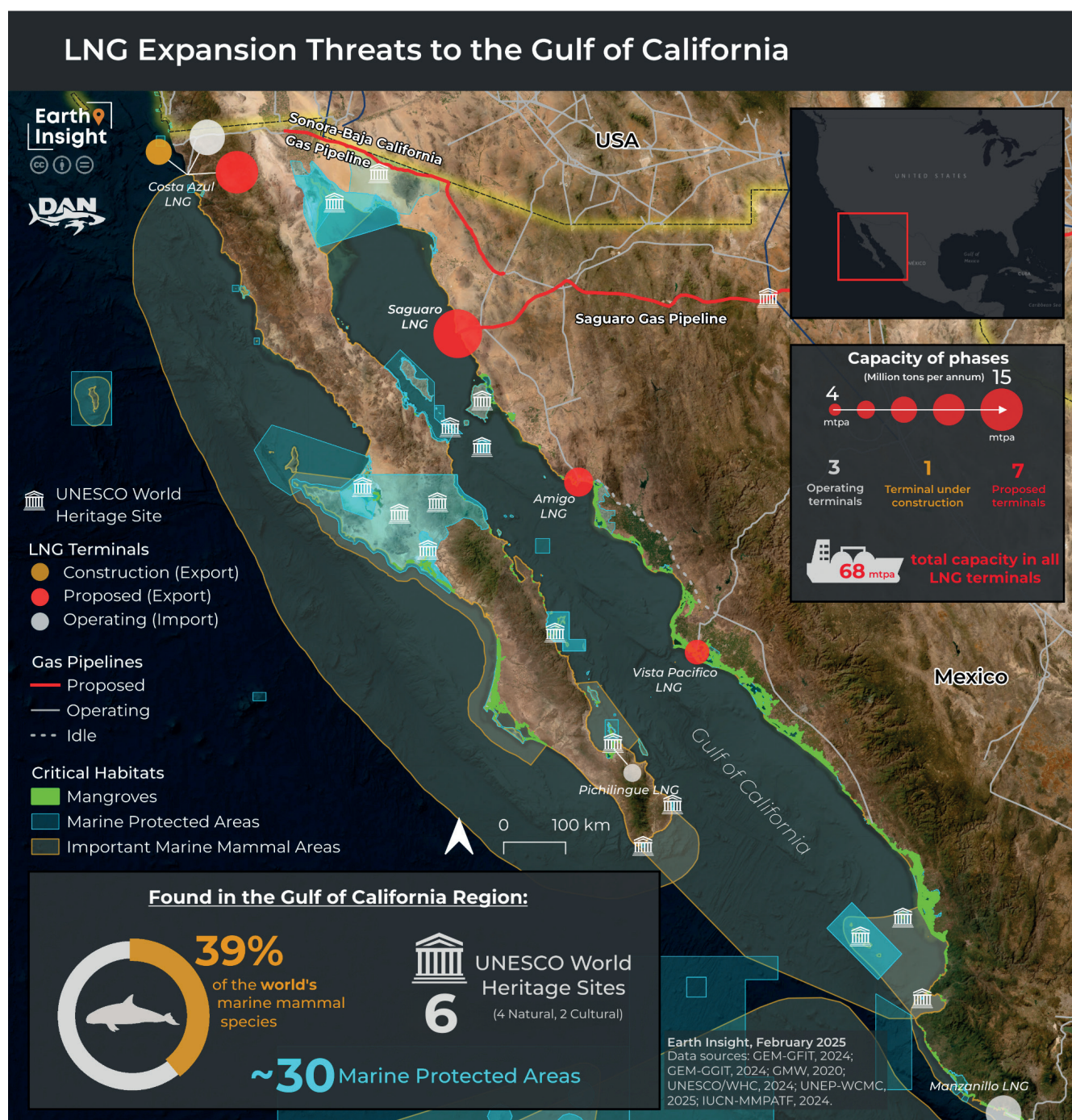


Fig. 2: LNG Expansion threats to the Gulf of California.

Map: DAN / EarthInsight

the region into a global LNG export hub, with significant economic, environmental, and social implications. To date, none of the proposed projects have been built; all remain in the permitting phase, with the exception of Saguaro, which had begun construction but was halted due to a court order¹⁷.

Moreover, there are serious information gaps affecting some of the LNG proposals. In the case of Saguaro Energía, the project, originally authorized for regasification, underwent a significant

modification to liquefaction operations without the submission of a new EIA report. Vista Pacifico LNG submitted an EIA report; however, key data – including maps and geographic coordinates – were redacted from the publicly available version¹⁸. AMIGO has not yet submitted its EIA report. Furthermore, the information currently accessible regarding the navigation routes of LNG carriers within the World Heritage site remains scarce and insufficiently detailed, raising concerns about potential impacts on this sensitive area.



Fig. 3: A typical LNG tanker. Standard vessels of this kind are often over 270 m long and around 45 m wide, while the largest can reach up to 345 m in length and 55 m in width, highlighting the massive scale of maritime traffic associated with LNG export terminals.

Photo: Garry Chapple / Pixabay

Threats of the LNG Industry to the Outstanding Universal Values of the Gulf of California

The expansion of the LNG industry in the GC poses significant threats to the Outstanding Universal Value (OUV) of the World Heritage site. Liquefaction processes and maritime activities introduce chemical pollutants and invasive species, degrade water quality, and disrupt marine biodiversity, including endangered species like the vaquita¹⁹. The resulting underwater noise and increased ship traffic interfere with key behaviors of marine mammals and raise collision risks.²⁰ Despite these pressures and the Gulf's existing vulnerabilities to climate change, Mexico faces institutional and resource limitations in enforcing environmental protection²¹.

The site's inscription on the List of World Heritage in Danger underscores the urgent need for effective corrective measures and international oversight.²²

UNESCO's vital Role in Protecting the Gulf of California

We respectfully urge the World Heritage Centre to request all relevant planning documents and authorizations related to current and proposed LNG projects in the GC prior to the adoption of any decisions that may be difficult to reverse, to help safeguard the site's integrity²³.

We also encourage the World Heritage Committee to provide expert support for these tasks and recommend that Mexico conduct a comprehensive Strategic Environmental Assessment of LNG projects in the GC²⁴. This assessment should fully map the risks and potentially irreversible impacts related to these

projects. Based on the results, UNESCO should consider recommending phasing out production and export of LNG, particularly in World Heritage properties and surrounding areas vulnerable to pollution; to refuse approval for new or expanded LNG projects, to revoke granted authorizations and to withhold support for fossil fuel developments.

As a UNESCO World Heritage site, the GC should be off-limits to LNG projects, which clearly conflict with UNESCO's policies on Climate Change and Sustainable Development, as well as the Convention's obligation for States to take all possible measures to anticipate, avoid, and minimize harm using the best available knowledge and in alignment with global environmental and heritage protection standards²⁵. **The development of fossil fuel infrastructure in such ecologically sensitive and internationally protected areas undermines the very principles of the Convention.**

Additionally, and as part of this comprehensive approach, considering the 2006 Report on climate change impacts, which highlights the importance of regional and transboundary mitigation strategies, we urge the Committee to ensure that state of conservation reports and draft decisions reflect the Convention's obligations, recommending concrete actions that State Parties—particularly Mexico and the United States—should take to protect World Heritage sites²⁶.

Like the cases of Australia's Great Barrier Reef and Germany's Wadden Sea – where major fossil fuel projects are advancing with no regard for World Heritage values – the proposed LNG developments in the GC represent a serious threat to its OUV²⁷. These precedents must serve as a warning, reinforcing the need for strict adherence to UNESCO's obligations and **the application of the precautionary principle.**

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