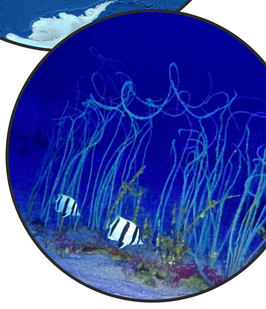
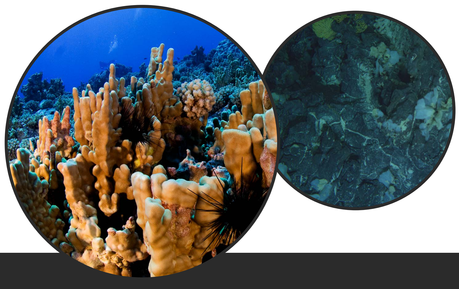
Guiding high seas conservation efforts by modelling coral and sponge habitat

SEAMOUNT RIDGES WITH RICH AND DIVERSE MARINE LIFE

The **Salas y Gómez and Nazca ridges are two seamount chains** off the coast of South America. The ridges contain more than **110 seamounts**, with summit depths ranging between over 3,000 meters to just a few meters below the surface.

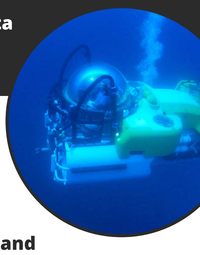
The ridges support an exceptionally rich diversity of marine life, inluding whales, corals and many other ecologically important species. The region also has the highest level of endemism found in any marine environment. For many groups of organisms, nearly half of the species that live there are not found anywhere else on Earth.





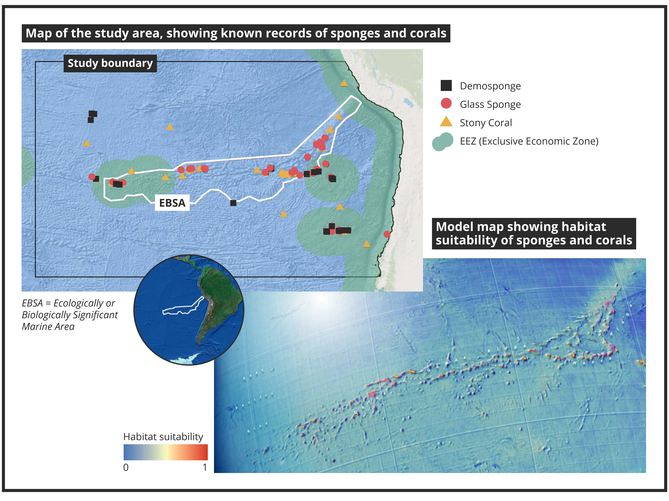
PROTECTING THE PRISTINE SEAMOUNTS

Despite some historical fishing in the region, the seamounts are relatively pristine. They are an excellent conservation opportunity to protect a global biodiversity hotspot before it is degraded. One **obstacle for effective protection is the scarcity of observational data from the region's deeper waters.**



MODELING DEEP-WATER CORAL AND SPONGE HABITAT

As a first step in mapping biodiversity along the ridges, we created **models that predict the distribution of sponges and corals**. These organisms create complex structures where diverse marine life is able to flourish.



Our models predict that the seamounts along both ridges contain highly suitable habitats for sponges and corals. This suggests that the ridges offer widespread suitable habitat for diverse marine life.

Our results strongly suggest that we must act quickly to protect these fragile habitats before they are damaged by human activities.

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The modeled distribution of corals and sponges surrounding the Salas y Gómez and Nazca ridges with implications for high seas conservation
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