

Marine ecosystems are under increasing stress of natural and anthropogenically induced climate variability. IAI's multinational, multidisciplinary network VOCES in the Americas assesses the impact of climate variability, both natural and anthropogenic on the Humboldt, Patagonia, and South Brazil Large Marine Ecosystems. These ecosystems are among the most productive of the southern hemisphere, sustain more than 20% of the global fish catch, host unique biodiversity and absorb CO₂ at rates comparable with the most significant uptake regions in the ocean.

Through international coordination and cooperation, scientists, educators and students from Argentina, Brazil, Chile, Peru, Uruguay and the United States are working together to provide tools to understand ocean variability. These tools will allow them to better map the relationship between the physical and biological variability, from primary production to fisheries in the Humboldt Large Marine Ecosystem after 2015-2017 El Niño impacts.

The very intense 2016-2017 El Niño is the ideal scenario to illustrate how regional climate research data and information derived from the Patagonian Large Marine Ecosystem can contribute to better understand the Humboldt Large Marine Ecosystem. There is increasing evidence suggesting that decadal oscillations of marine ecosystems are correlated to similar climate variations. Knowledge generated by VOCES on the physical, biological and bio-geochemical mechanisms that regulate these complex ecosystems will serve to guide political decision-making in the region.