



**IGCP PROJECT 725:
FORECASTING COASTAL CHANGE
ANNUAL MEETING 2023:
FLORIANÓPOLIS, BRAZIL**

**MEETING ITINERARY &
ABSTRACT BOOK**



Meeting Organizers: Jessica Pilarczyk (Simon Fraser University) & Christopher Hein (Virginia Institute of Marine Science, William & Mary)

Meeting Host: Antonio H. F. Klein (Federal University of Santa Catarina)

Meeting Support Staff: Carina & Nicole Guzzi (Guzzi Eventos, Florianópolis, S.C.)

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Holocene coastal plains of Argentina: From the Rio de la Plata to Tierra del Fuego

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The Holocene sea-level fluctuation modified the coastal plains of Argentina with responses that differ. The responses were different in relation to the accommodation space, climate, tectonics and dominant processes. This coast spans from microtidal ranges in Buenos Aires, to tidal ranges of about 10 m in San Sebastián Bay, Tierra del Fuego.

At the Rio de la Plata, beach ridges extended along the present coast, while plains of beach ridges and cheniers were deposited in relation to the growth of the Paraná River delta, at the headlands of the Río de la Plata. The longshore drift from south to north along the Buenos Aires coastline delivered a plain of recurved spits at Punta Rasa. The touristic pressure to these beaches has increased the erosive trends caused by extra-tropical storms arriving from the south.

The Mar Chiquita coastal lagoon progressively enclosed during the sea-level drop of the last 4000 years. Silting increased after the construction of a bridge in 1971.

In a similar way, the silting evolution of the tidal channels surrounding San Blas Bay (Southern Buenos Aires) was also recorded, mainly conditioned by the dominant westerly winds.

Patagonian cliffs are up to 100 m height and retreating at rates over 0.5 m/yr. Estuarine records from Northern Patagonia were preserved at the outlets of allochthonous rivers flowing from the Andes. Diatom analyses of sediment samples showed the mixing of fresh water and marine taxa indicating the variations and they allowed studying the coastal evolution during the Holocene sea-level regression.

At Northern Tierra del Fuego, the gravel ridges and chenier plains of San Sebastián Bay are indicating the effects of storms across the sand flat open to the Atlantic Ocean. The bay gradually enclosed by the southward growth of the El Páramo gravel spit. By comparing the altitudes of these deposits, it was possible to estimate the differential uplift to the north and south of the Fuegian Cordillera.

Several field meetings were held at these areas organized by IGCP projects 61, 200, 274, 367 and 437.