

Geography of the Chilean Fjord Region

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General Introduction

The Chilean coastline is rather homogeneous from Chile's northern limit (18°28'S) down to the city of Puerto Montt (41°28'S); located to the north of the Seno del Reloncaví. In this region, Chile possesses a morphology characterised by the Andes mountain range, an Intermediate Depression and the Coastal Mountain Range. From the Seno del Reloncaví south, the landscape of Chile takes a very different form, characterised primarily by two parts: a continental Andean section and an insular section, broken up by fjords, channels and seas (Figs. 1&2); all formed through the action of tectonics, volcanism and quaternary glaciations.

The insular archipelagic sector extends as a projection from the Coastal Mountain Range. Its landscape is defined by fjords, islands and channels (Fig. 3). These emerged lands possess a low elevation and flat topography in the form of terraces. A notable mechanism for the formation of these areas would be earthquakes, such as that of 1960, which accentuated the condition of tectonic subsidence in this region. A special mention should be given to Chiloé, Chile's largest island. A good example of the Coastal Mountain correspondence is found here on the western shores of the island in the form of steep coastal edges, while on the continental coast lower terraces

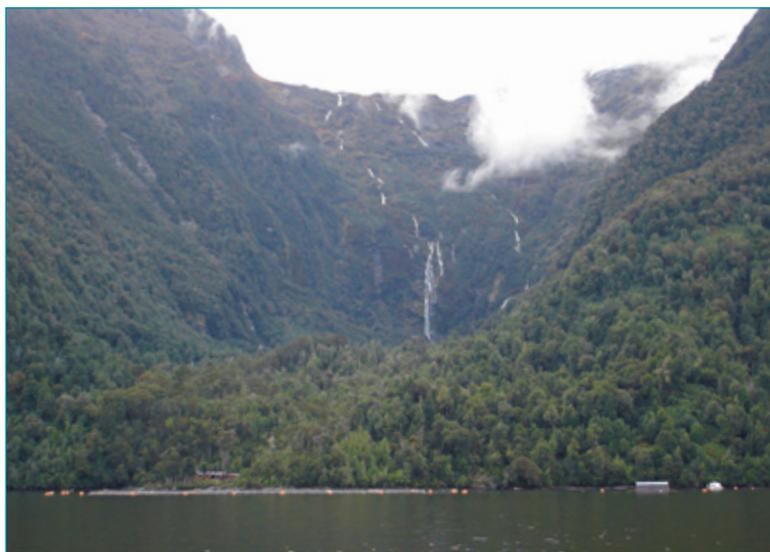
(~100 m) and detritic cliffs with quaternary sediments, and beaches with glacial sediments, lead into the Intermediate Depression. This geographical unit situated in the fjord zone is sunk at its eastern margin forming the Gulf of Ancud (which separates Chiloé and the Andes), the Gulf of Corcovado and the Moraleda Channel.

The Andes mountain range is the unit with the most outstanding relief due to its exceptional heights (with peaks that exceed 2,000 m), steep forms, numerous active volcanoes and remnant glacier bodies.

South of Chiloé the landscape becomes more complex with islands replacing mountains as the more common geographical element (Figs. 4–6).

The shaping and modelling of the southern territory is, so to speak, "genetically" tied with its structure; the orientation of the landscape forms have the same direction as the tectonic lineaments and structural courses. The principal systems in the fjords have developed together with the tectonic lines of the Andes mountain range (Fig. 7).

Fig.3. The steep slopes with dense native vegetation are typical of fjords. Aquaculture farms can be found in all fjords of Northern Patagonia.



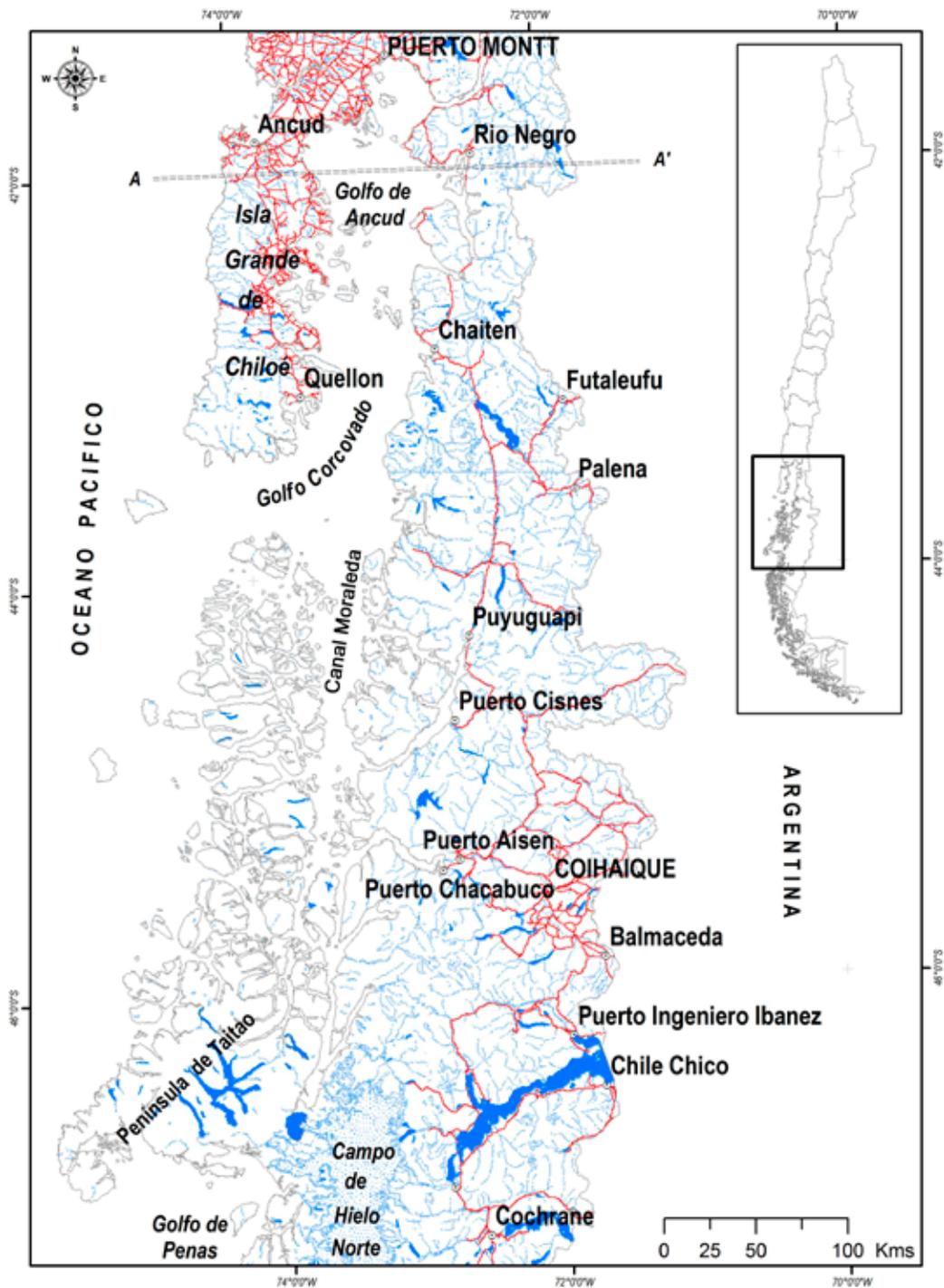


Fig. 1. Chilean Fjord Region (based on IGM), Puerto Montt (41°28'S) to Golfo de Penas (47°S).

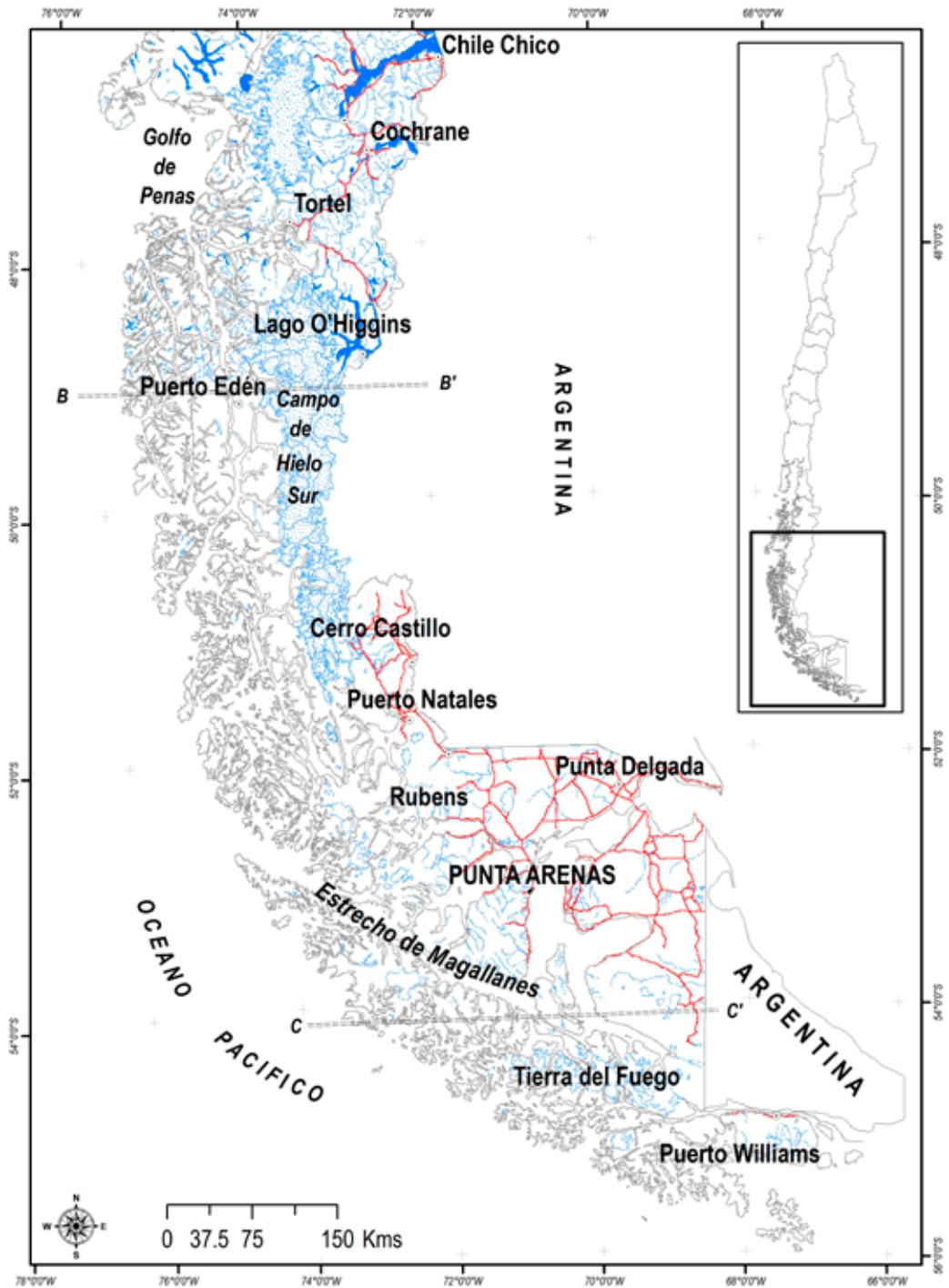


Fig. 2. Chilean Fjord Region (based on IGM), Golfo de Penas (47°S) to Cape Horn (56°S).

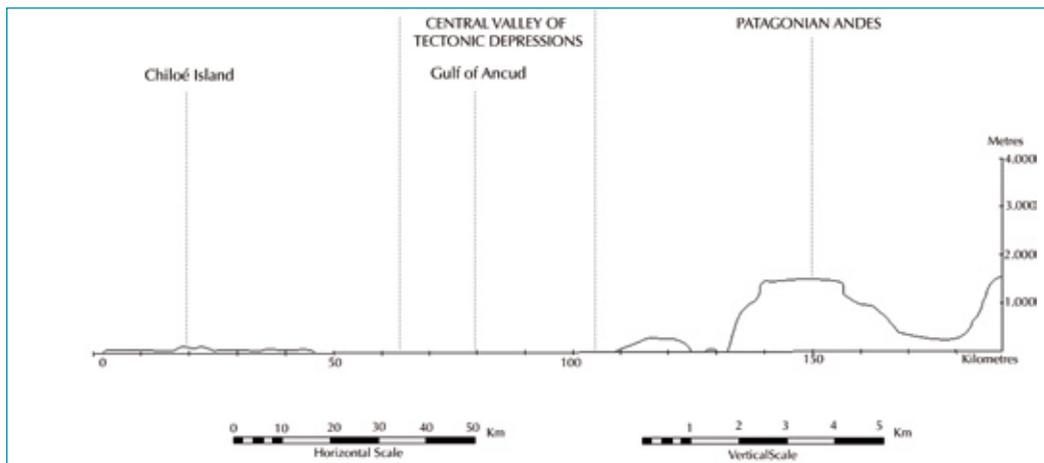


Fig. 4. Topographical profile E-W, at the latitude of Chiloé Island and Canal Cholgo (42°S), showing a landscape composed of islands, tectonic depressions, inner seas and Andean mountains. Latitude of topographic profile indicated by line in Fig. 1. Source: Geomorfología, Instituto Geográfico Militar, 1985. Graphic design: Joselyn Arriagada González, 2008.

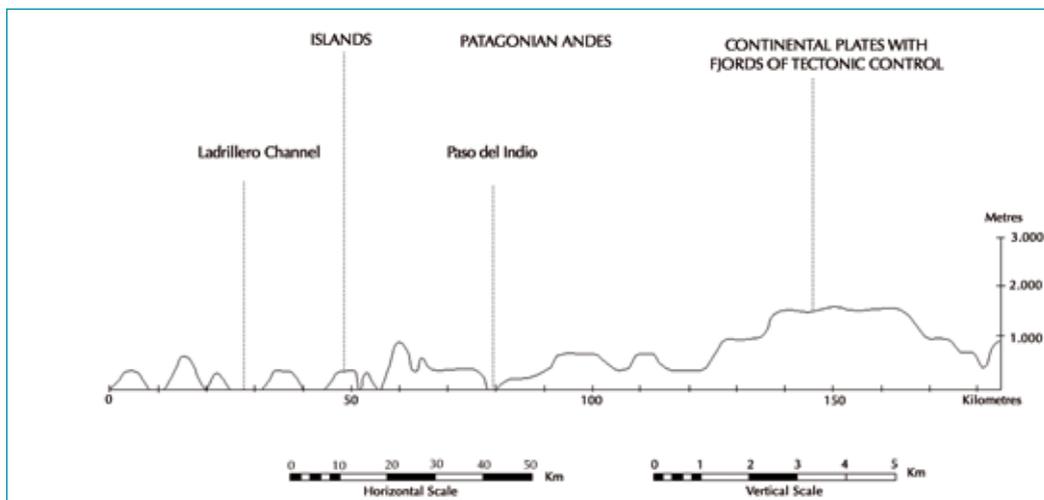


Fig. 5. Topographical profile E-W, north of Puerto Edén (49°S), which shows a highly complex landscape with numerous islands, channels and fjords. Latitude of topographic profile indicated by line in Fig. 2. Source: Geomorfología, Instituto Geográfico Militar, 1985. Graphic design: Joselyn Arriagada González, 2008.

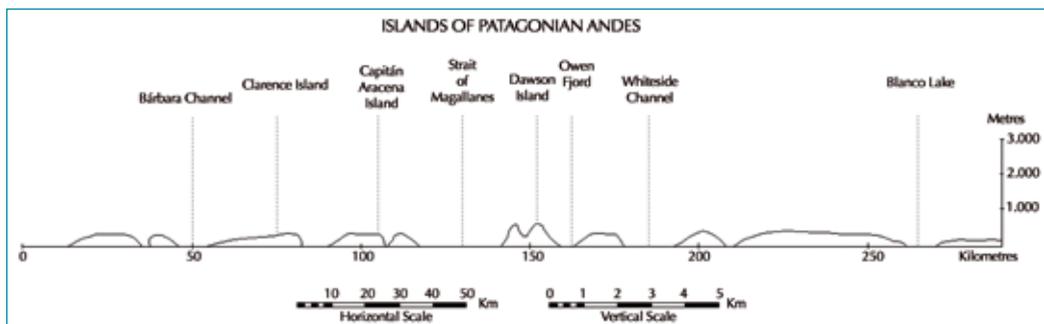


Fig. 6. Topographical profile E-W, at the latitude of the Strait of Magellan (54°S), which shows the large amount of islands and the low and homogenous level of the summits of the Andes mountains. Latitude of topographic profile indicated by line in Fig. 2. Source: Geomorfología, Instituto Geográfico Militar, 1985. Graphic design: Joselyn Arriagada González, 2008.