

## **THE SOUTH AMERICA SUBDUCTION ZONE: GEOTECTONIC DOMAINS, PHYSIOGRAPHIC PROVINCES, TECTONOSTRATIGRAPHIC UNITS**

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The Andes Cordillera stretches for nearly 9,000 km from the Caribbean coast to the southern tip of South America in Tierra del Fuego. The Andes show remarkable differences along its length with contrasting plate boundaries and diverse scenarios for each major segment. Modern tools available for geotectonics as diverse as global topography, global bathymetric prediction, satellite gravity of the ocean floor, global seismicity and volcanism, and seafloor ages released recently. It emphasizes the power of Geomorphology in analysing the evolution of orogenic belts through the study of tectonic landforms, Tectonic landforms are structural landforms of regional extent. Landscapes developed on orogenic belts, uplifts, domes, basins and shields can all be thought of as tectonic landforms. We introduce the Conceptual Elements of a Continental Margin Orogenic System composed by Geotectonic Domains (Oceanic, Continental Interior and Orogenic). Our bottom line is based on the genetically related environments concept where we define the Domains The Oceanic Domain embraces the oceanic plates and associated features. The Continental Interior Domain, which is composed by cratonic nuclei and parts of the cratonic foreland. The Orogenic Domain, which is genetically related to the interactions between the Oceanic and Continental Interior Domains is limited to the west by the trench and extends eastward to a diffuse transition zone with the Continental Interior Domain. The Orogenic Domain is subdivided in Physiographic Provinces with respect to the volcanic arcs which are further subdivided into Tectonostratigraphic Units including the Trench, Outer Arc Bulge, Forearc Basins, the Volcanic Arc and related basins (intra-arc, interarc) and the Foreland Basin Systems which include the foldbelt and related basins (Intermontanes, piggy backs and foreland basins). These features and an updated sedimentary basins of South America subduction zone are depicted in a tectonic map and a block diagram of the convergent continental margin.