

# **HUMAN OCCUPATION EVOLUTION IN THE CHILEAN SEMIARID COASTAL ZONE, BY GIS**

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## **Introduction**

The geographical features of the coastal zone in the semi-arid zone of Chile, located between 32 and 33° S are presented. This area is experiencing a gradual increase in human occupation, expressed in the population growth of major urban centers and new towns in recent years. The current urban development is similar to that observed in the mediterranean coast of central Chile (33-35° S), characterized by the loss of natural habitat, increased pressure on land use, an urbanization along and parallel to the coastline and the development of urban conurbations. For the semi-arid coastal zone it is still possible to perform management aimed at a sustainable human occupation, implementation of activities and land uses without compromising areas of interest from an environmental point of view.

The semi-arid coast appears as a zone of separated areas of human occupation. The towns are mostly rural and have sometimes arisen spontaneously. Its current growth is due partly to a seasonal housing occupation, also to the expansion of the currently most-populated localities. The major urban centers are, from north to south, Los Vilos, Cachagua-Zapallar, Papudo, Quintero, Concon and Vina del Mar. The last-named city runs into the urban edge of the city of Valparaiso, the regional capital and one of the major port cities in Chile.

## **Objectives**

To help the public understand the geographic dynamics of this coastal zone and the forms of human settlement, with a view to aiding the territorial management of this area.

## **Methodology**

By means of a geographic information system, the urban area boundaries over time were digitized, from the first rough outlines of the initial settlements on this coast to the present, using aerial photographs from different years (1954, 1974, 1980 and 2001) and satellite images (2003), enabling the determination of the features that characterise the evolution of human occupation in the semi-arid coastal strip of Chile. The mapping has been completed with the statistical study of the census data for the population of each of the localities in the same area. The poster presents a graphic summary of this process.

## **Results and Conclusions**

The tendencies in the growth of human settlement were identified, considering their size, speed over time, location, and direction, these being of importance to any future territorial management.