

## EXTENDED ABSTRACT

# BASIC KNOWLEDGE FOR THE DEVELOPMENT OF SCIENTIFIC TOURISM IN CHILEAN PATAGONIA<sup>1</sup>

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The fact that tourism is one of the fastest growing activities worldwide has been clearly established, according to data of the World Tourism Organization. The growing expansion tendency of this activity has been held since the sixties in the XX Century, reaching 1,322 million of international tourists in 2017. Regarding the American Continent, arrival of international tourists grew 3% during 2017, reaching 207 million. This growth was even higher in South America, where increasing during 2016 was 7% (Barometer WTO).

Chile is a minor participant in a worldwide tourism concert, contributing with only 0.3% of international arrivals. Nevertheless, for the country, it has become a relevant economy area, generating 3.2% of GDP and national employment. When considering indirect effects, this share rises to 8.6% (Chile, Tourism Undersecretary, 2015). According to information from the Tourism Undersecretary for 2016, the arrival of foreign tourists into Chile increased 28% in 2015 and 26% in 2016, which sets a clear tendency towards the increasing of the activity.

An important aspect to consider when characterizing the present situation of tourism is related to changes in tourist's behavior; for example, preferences regarding a specific destiny. Regarding this, a search for exotic destinies where adventure is implicit can be appreciated. This has been accompanied by a growing tendency of attraction to those destinies considered as tourism of special interests (Chile, Tourism Undersecretary, 2015). Among the types of special interests tourism or alternative tourism, feasible to be developed in Chile, are nature tourism, indigenous tourism, astronomy tourism, scientific tourism, wine tourism, business tourism, maritime tourism and sport tourism. This work will specifically analyze scientific tourism.

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<sup>1</sup> Projects ECOS-CONICYT C15H01. Geo-bibliography of scientific reaserch as a tool for touristic mediation. Main researcher Francisco Mena (CIEP).

The concept “scientific tourism” started to appear in specialized literature by mid-nineties in the twentieth century and it mainly seeks for involving tourists in the work developed by researchers in different disciplines; basically in contact with nature and in places that, furthermore, present some important degree of attraction to be visited (Bourlon and Mao, 2011). Thus, making the public getting closer to scientific researchers or to places directly associated with science, such as museums, natural parks or places possessing high scientific interest (García and Martínez, 2017).

According to Bourlon and Mao (2011), the name scientific tourism is used to refer to different types of activities, therefore it could be classified into four big categories: adventure tourism of scientific dimension; cultural tourism of scientific content; scientific eco-volunteering; and tourism of scientific investigation. García and Martínez (2017) do not consider the first type mentioned before as being part of scientific tourism. There are also some authors who include tourism of scientific congresses within scientific tourism (Sieber et al, 2015; Cynarski and Kubala, 2017).

Adventure tourism of scientific dimension and tourism of scientific research, according to Bourlon and Mao (2011), imply important participation of the actors in the touristic product, this is not the same regarding the other two types. The position taken by the scientific issue in these practices is also different, as appropriate. Thus, in scientific research tourism and in eco-volunteering, the interest for scientific aspects takes a central position, whereas in the other two types, it is rather peripheral (Bourlon and Mao, 2011). Antarctic tourism, for example for Pardo and Nieto (2016), presents a double perspective; on the one hand, leisure as ecotourism centered on Antarctic nature, and on the other hand, scientific tourism centered on research developed inside the facilities of the different states present there.

García and Martínez (2017) indicate Chile as one of the countries presenting high potential for the development of scientific tourism, due to its landscape diversity and the existence of important areas of interest for research. In this regard, Aysén Region arises as one of the outstanding territories in this area, concentrating high demand of visits to protected wild areas, from both national and foreign tourists.

Aysén Region is located between 43°38' and 49°16' South latitude and possesses a surface of 108,494 km<sup>2</sup> sheltering a little over 100 thousand inhabitants. Its set of attributes transforms it into a privileged area for nature and adventure tourism. Given its variety of landscapes, pristine environment and high biodiversity, plus enormous scenic beauty, it has become particularly attractive for visitors. Almost half of its territory is included in the National System of Protected Wild Areas (SNASPE by its Spanish acronym), which adds higher value to its attraction offer. For all reasons previously stated, tourism has been taking the position of one of the basic pillars for the regional economic development (Chilean Government (b). s.f)

A central idea indicated by various authors is the necessary information availability to support scientific tourism projects. Following that logic, this article analyzes scientific production of Universidad Austral de Chile, through degree theses made in the University. The goal is to contribute by providing antecedents available in the theses of under- and post-graduate students and putting them to the service of the development of scientific tourism projects.

The theses repository of the library system of Universidad Austral de Chile has been reviewed to analyze its content related to Aysèn Region. Specifically, attention has been given to theses contribution to knowledge helping scientific tourism. Information has been geo-referenced to identify territories possessing enough information and those over which specific research should be started.

Methodology consisted of reviewing degree papers and theses, made by under- and post-graduate students of Universidad Austral de Chile carried out within the administrative limit of Aysèn Region. The goal was to classify them according to thematic groups and georeference them for their cartographic representation. This way, contribution made by these investigations to scientific tourism development of the Region may be assessed.

From the analysis of the 107 analyzed theses, 25 have been classified as having potential to support scientific tourism projects, either because they provide the necessary antecedents to begin or continue research, or because they are studies developed in some of the protected wild areas of the region. Tendency to concentration in the central and eastern sectors is observed, leaving some relatively "empty" spaces --from this perspective-- in the coast and in the south part of the Region. Another detected deficit is associated with theses over Earth Sciences. For example, no study on basic sciences, such as geology, meteorology, hydrology or geomorphology, was found. Not even in the area of archaeology, although it is an important topic for scientific tourism.

This concentration observed in the central sector makes --on the one hand-- clear that there are enough studies about this area to support scientific tourism projects, nonetheless, with the limiting factor that there may possibly be some topics already exhausted. On the other hand, the lack of studies about the littoral and south leave a wide spot where possible future theses may be carried out. In general, it may be concluded that the effort of students and professors to develop these studies mean a significant contribution to the existence of information and knowledge about this territory.