

Biodiversity and Cultural Conservation in Sierra Nevada de Santa Marta, Colombia

Proyecto de Conservación de Aguas y Tierras (ProCAT)



View of the Sierra Nevada de Santa Marta mountains. Photo ProCAT

Proyecto de Conservación de Aguas y Tierras (ProCAT) is an international non-profit organisation with the purpose of improving the knowledge of tropical Meso and South-American mountain ecosystems and species using an interdisciplinary approach, making a contribution to scientific knowledge to help management and conservation decision-making. The project's initial focus was tropical mountain forests and the jaguar as a key species in Costa Rica, but the continual advance of conservation problems made the study move to a wider range of terrestrial species and marine ecosystems. Currently, one of the focus areas of ProCAT is the Sierra Nevada de Santa Marta (SNSM) in Colombia, a critical area for conservation because of its important hydrological resources, its high levels of endemic species, variety of ecosystems and richness both biologically and culturally. Due to historical, political, social and economic problems in Colombia, the SNSM has faced a chaotic, uncontrolled process of land usage and unsustainable natural resource exploitation that has led to a decrease of 80 percent of the natural ecosystems (ProSierra, 1997; Pro-Sierra, 2000; Vilorio de la Hoz, 2005; Rodríguez-Navarro, 2006). The socio-political situation has limited the development, research and protection of natural areas, as seen in a small number of recent reliable studies and projects.

ProCAT's project in the SNSM evaluates the conservation status of terrestrial and marine ecosystems in the region. It will try to improve the conservation planning and actions through ecological research and the establishment and promotion of environmental friendly practices, including the key actors and main interests from institutional, ecological and cultural points of view. Current conservation activities in the area include national universities' monitoring programs in both terrestrial and aquatic ecosystems; and landscape conservation planning by

government entities and international and national NGOs. ProCAT's project looks to add to these efforts in order to fill the gap on the terrestrial-freshwater-marine ecosystems interface and human-dominated landscapes conservation across ecosystems. Here we describe some of the strategies to meet these goals, to produce tangible results that can be translated into reliable data, patterns, and potential modelling for conflicts and ecological tendencies. This will use a model that was in part explored in Talamanca, Costa Rica (Gonzalez-Maya *et al.* in press; Gonzalez-Maya *et al.* in press).

- Evaluate the conservation status of the area based on the ecology of endangered key species. Currently, one of our projects is focused on the study of three species of felids that are classified as Near Threatened on the IUCN red list (*Panthera onca*, *Puma concolor* and *Leopardus pardalis*), joining our efforts and knowledge for the conservation of local populations and endangered habitats in the SNSM and Talamanca. All the data derived from the study of these species is one of our key components for conservation planning.
- Making rapid biological assessments to identify current threats, priorities and conservation needs by using complete social surveys in the local communities and identifying the human-wildlife conflicts in the region. From these results biodiversity functional groups will be selected as development choices (for example tourism, wildlife species farming, alternative agriculture methodologies).
- Identify key actors and joining with them in the conservation process of the region, including them in projects in the region; and working with them in local workshops for conservation planning of the entire region. The inclusion of decision-makers and local people in research projects helps to reduce the wide distance between science and conservation, and helps to direct efforts towards the causes and main problems previously identified.
- The entire project will be a joint effort of project staff and strategic alliances with national universities, NGOs, local communities and governmental authorities to respond to the growing threats to regional biodiversity, trying to produce the most reliable information on species distribution ecology and status, and the main threats associated with these ecosystems.
- Implement and promote a strategic conservation plan including socio-cultural and ecologic aspects of mountain conservation. This will be moving towards a 10 year goal, where strategic alliances and clear objectives will be designed in order to reach a full plan implementation and monitoring where all the actors, including NGOs, decision-makers and stakeholders, will be included as central and main actors responsible for the total fulfilments of the plan.

References

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Proyecto Conservación del Área Talamanca (ProCAT) <http://www.procat-talamanca.org> has the goal of improving the state of biodiversity knowledge for the Caribbean Talamanca Region of Costa Rica so that management and conservation decision-making can be based on a solid scientific foundation.