

## 2. ASSESSING CLIMATE RISK AND VULNERABILITY

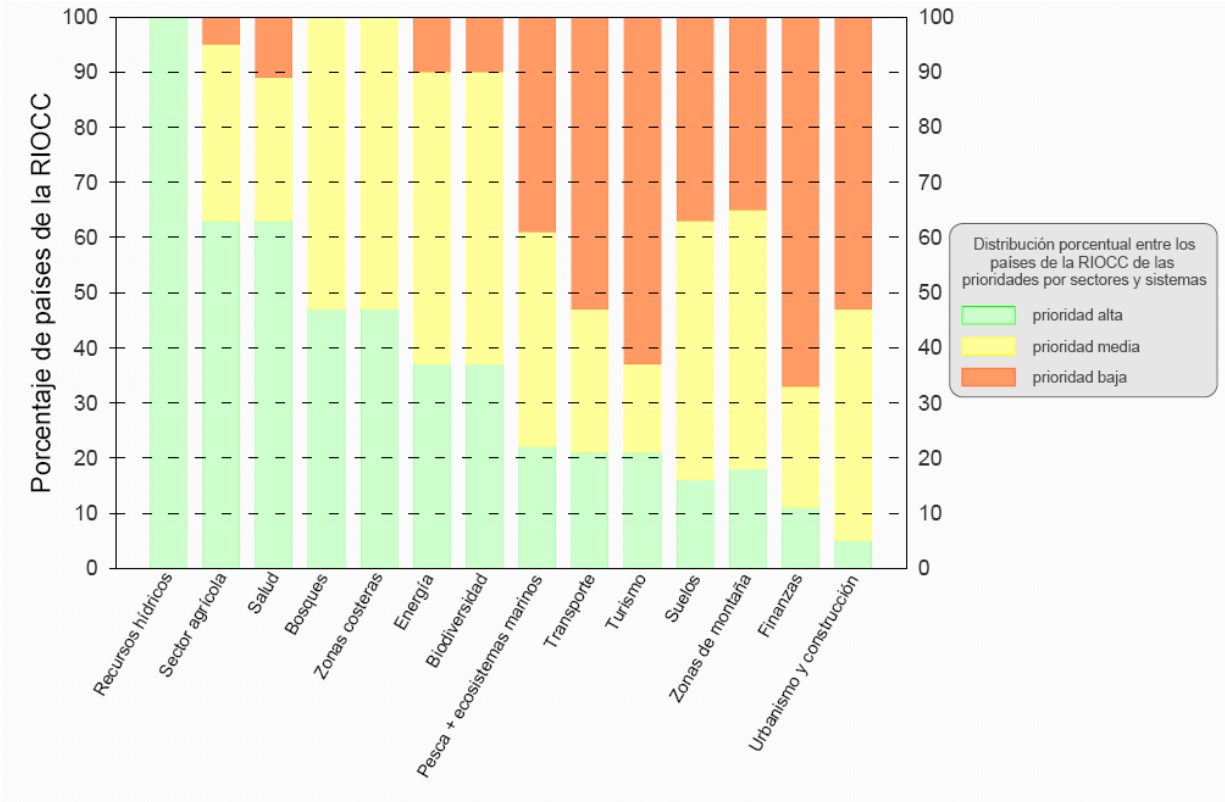
Regarding the activities identified under the focus area **“Methods and tools”** from the Nairobi Work Programme, which objective is to develop and disseminate methodologies and tools for impact and vulnerability assessment and adaptation planning, and **“Adaptation planning and practices”** which objective is to collect, analyse and disseminate information on past and current practical adaptation actions and measures, including projects, short- and long-term strategies, and local and indigenous knowledge, the RIOCC has carried out some projects to achieve these objectives, which are include in some of the specific objectives of the PIACC.

**Outputs and impacts of action**

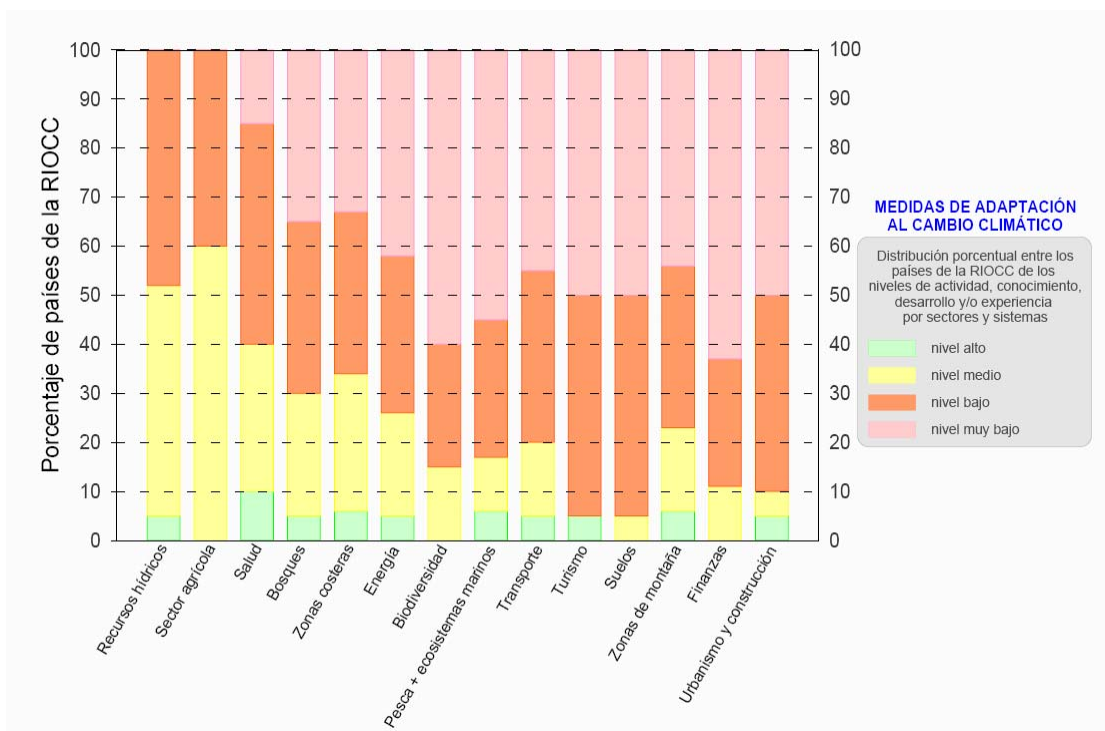
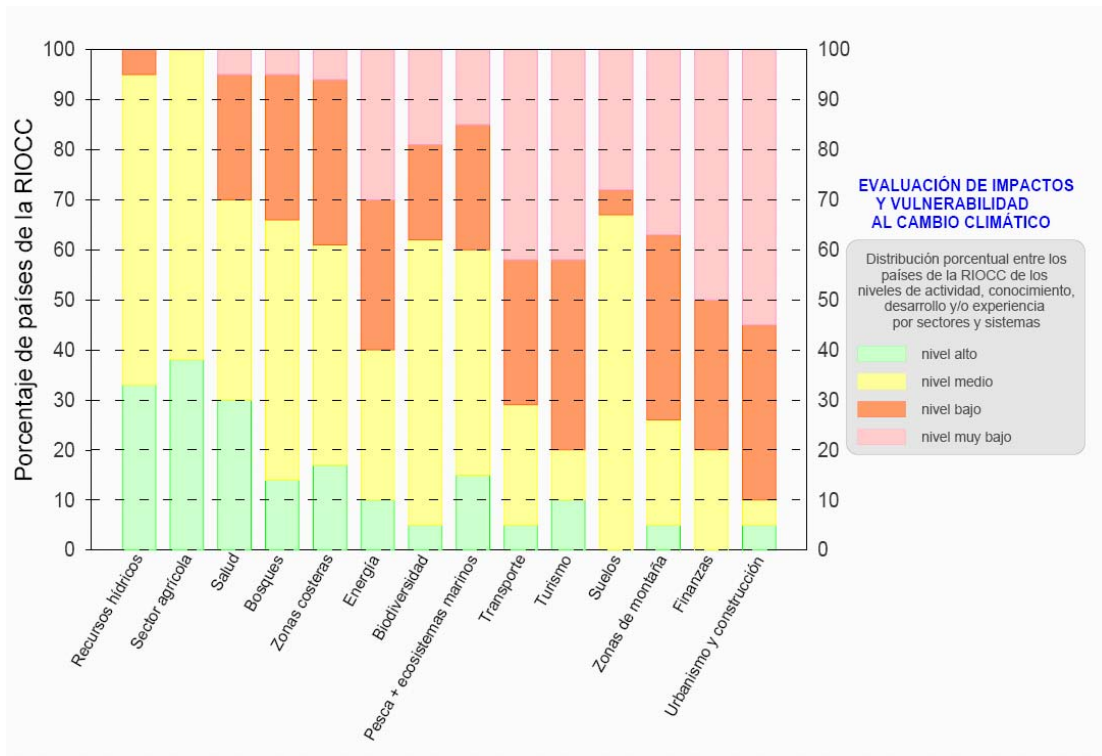
RIOCC has carried out an analysis in the Ibero-America region, as a starting point to develop the PIACC, in order to identify the main priorities, elements, process, systems and sectors related with climate change adaptation. The source of information was a stock taking process witch provided the data for the elaboration of the *Analysis report of the Regional Workshop on Adaptation to Climate Change in Ibero America (OECC 2006)*, available in [http://www.lariocc.net/riocc\\_principal/es/documentos/archivos/docs\\_riocc/02\\_piacc/analisis\\_piacc.pdf](http://www.lariocc.net/riocc_principal/es/documentos/archivos/docs_riocc/02_piacc/analisis_piacc.pdf)

Some results are showed in the next graphics.

The chart below represents the percentage distribution of the priorities of sectors and systems among the country members of the RIOCC.



The two following charts represents, in the first case, the percentage distribution in the countries of the region of the levels of activity, knowledge, development and/or experience by sectors and systems related to the climate change vulnerability and impact assessments, and in the second case related to the adaptation to climate change measures.



### ***Vulnerability assessment to climate change in marine and coastal areas of Ibero-America***

This project complies with the mandate settled by the **VII Environmental Iberoamerican Ministers Forum**. (El Salvador, June, 2007). One of the main points of this mandate was to establish a work line, in the PIACC framework, about analysis and reduction of vulnerability and impacts on climate change in the marine and coast-marine areas as well as in human coastal settlements in Iberoamerica.

This mandate has been assumed at the IV Annual meeting of the RIOCC (Cartagena de Indias, October 2007), where it has been agreed to develop a project in order to achieve this mandate.

The **main objective** of this study is to facilitate specific information to the “Regional Studies about Climate Change Economy” (ERECC) of South America, in order to be able to develop an economic analysis of the climate change impacts at the South American Coastal Areas, with special emphasis to the physical environment. The project is being developed under the coordination of ECLAC with Spanish technical and financial support.

#### **Tasks**

The main tasks related to the project are to determine recent changes on marine and coastal dynamics over the last decades; estimate, from climate scenarios, the future foreseeable changes at the marine and coastal dynamics; develop numeric models of coastal dynamic changes; evaluate the potential effects of marine dynamic changes in the nature fields and littoral human uses; develop a methodology for the establishment of coastal vulnerability; propose adaptation strategies and alternatives; set up the basis for later studies that will cover other aspects that haven't been considered in this study; develop technological transfer and carry out capacity building activities and learning works related with the project.

The results obtained will be used to carry out the economic evaluation of the impacts.

The methodology used to carry out this project has been developed by the Cantabria University, and has already been successfully applied in Spain; its potential application has been estimated in the whole Iberoamerican region.

The application of this common methodology gives more value to the project, because it will help to develop homogeneous analysis and face up adaptation options on a shared way with the transborder systems.

### ***Co-operative project on Mitigation and Adaptation to Climate Change in Sustainable Forest Management in Ibero-América. (MIA project)***

The main objective of this project is to generate information and knowledge as well as to strengthen the capacity building regarding to climate change adaptation and mitigation, of both, the Research Institutes and the Forest Sector, by the Sustainable Forest management

This project, open to all the interested institutions, counts with the following **Participant Institutions**, as:

1. Center for International Forestry Research (CIFOR-CGIAR)
2. Research and Agriculture and Alimentary National Institution of Research. (INIA-Spain)
3. Tropical Agricultural Research and Higher Education Center (CATIE).
4. Polytechnic University of Madrid (UPM)
5. Research centers of the INIAs systems of Iberoamerica ( not determinate yet)

#### **Objectives:**

- ⇒ Strengthen research activities on sustainable forest management and climate change in Iberoamerica taking the System use at the Agricultural Research centres of the Iberoamerican region as the starting point.
- ⇒ Develop and circulate methodologies and case studies about forest management for its adaptation to climate change.
- ⇒ Develop and circulate methodologies and implement case studies about forest management for its mitigation to climate change.
- ⇒ Strengthen human Iberoamerica resources capacities in terms of adaptation and mitigation of climate change through sustainable forest management.
- ⇒ Strengthen forest sector presence in the regional and international dialogue.

Initial activities have identified the main themes of Research, Capacity and Scattering of the climate change adaptation and mitigation information in the forest management:

**1. Research for adaptation**

- ⇒ Modelling climate change effects over ecosystems and species for adaptation
- ⇒ Genetic improvement and ecophysiology (Forest fires, pest resiliency, carbon remove.. ).
- ⇒ Define guidelines for an adaptation forest management (forest fires, increase pest resilience, etc..)

**2. Research for Mitigation**

- ⇒ Development of methodologies and tools ( baselines, monitoring, leaks)
- ⇒ Feasibility of REDD programmes ( deforestation responsible, illegal cuts, sustainable management , conservation)
- ⇒ Consequences for development ( communities, socioeconomic, equity)

**3. Capacity building for adaptation and mitigation**

- ⇒ Balance basic knowledge between MIA partners
- ⇒ Strengthen research capacity in the themes mentioned above
- ⇒ Strengthen formulation adaptation, MDL and REDD projects capacity building
- ⇒ Monitoring and evaluation tools
- ⇒ Package of Forest techniques

**4. Scattering for adaptation and mitigation**

- ⇒ Updated information about who is doing research work and what is being done in forest and climate change research ( inventories)
- ⇒ Updated information about current knowledge and about the results obtained in researches that had already finished, for different actors , in different languages and ways:
  - i. National Communications about Climate change
  - ii. Policies, Strategies, and methodologies ( MDL; REDD; etc)
  - iii. Successful and less successful experiences
- ⇒ Improve learning by developing multiple ways channels

An inventory of the activities that have been carried out in the region, regarding sustainable forest management, mitigation and adaptation to climate change has been created.

More information about this project can be found in the website: <http://www.proyectomia.com/>

Some activities carried out by the PIACC try to facilitate the development and the implementation of **methods and tools** for assessing impacts, vulnerability and adaptation to climate change in different sectors and systems in Ibero-America.

In the PIACC framework two regional projects are being developed to promote development and use of common methodologies and tools to assess climate change impacts and vulnerabilities and to integrate adaptation considerations into sectoral planning and management.:

- Vulnerability assessment to climate change in marine and coastal areas of Ibero-America
- Co-operative project on Mitigation and Adaptation to Climate Change in Sustainable Forest Management in Ibero-América.

The main characteristics of these projects are shown in the textbox below.

***Emerging opportunities, challenges and further needs***

***Opportunities***

- RIOCC offers an optimum framework for the development and implementation of methods and tools for risk and vulnerability assessment at a regional level, approach also taking into consideration in the NWP for adaptation
- The IberoAmerican region is pioneer in regional activities and projects in climate change adaptation, so it could be use to promote experiences in other regions.

### *Challenges and further needs*

- Increase coordination among RIOCC members and sector-regional centres active in CC adaptation
- Increasing vulnerabilities in the region
- Monitoring climate change impacts at regional level
- Reinforce capacity building
- Finance continuity