COMMUNITY-BASED MANAGEMENT OF ENVIROMENTAL CHALLENGES IN LATIN AMERICA

Factsheet nº 2. Cases studies

SELECTION OF ENVIRONMENTAL PROBLEMS AND SITES

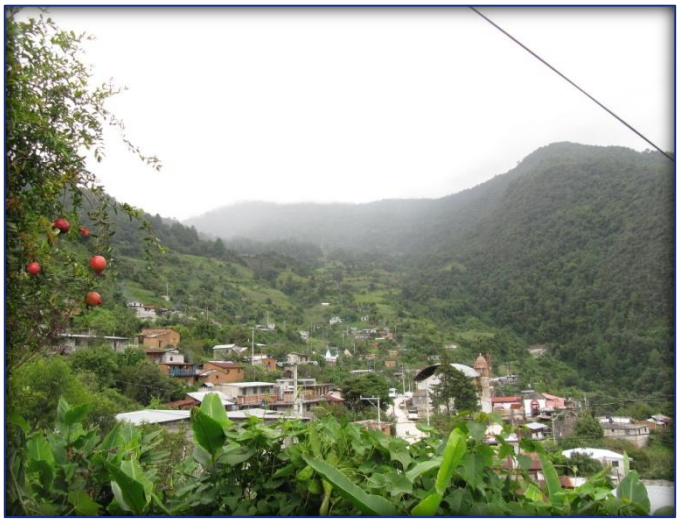
The successful management of natural resources in the context of climate change requires recognition that they are part of complex and highly dynamic social-ecological systems that evolve, often in unexpected or non-linear ways, according to the human and natural interventions they receive. The mentioned complexity is on the origin for the lack of understanding and knowledge of these systems and on how to up-scale them in order to face global environmental challenges. Adjustments need to be made in current management practices in terms of timing, placement, scaling and coordination to support ecosystem resilience in the context of a rapidly changing climate. COMET-LA will analyze the community-based management of three social-ecological systems covering a broad range of environmental challenges in 3 Latin American countries (Colombia, Mexico and Argentina). In all the cases, urgent environmental challenges need to be addressed. Each case will focus more specifically on one environmental challenge: biodiversity and water, forest and land use and coastal and marine areas management. In all the case studies sound governance models, but also environmental conflicts can be found.

WHY BIODIVERSITY AND WATER IN COLOMBIA?

Colombia with just 0.8% of the world area is classified as one of the seventeen countries with more biodiversity in the world. The basins of rivers such as Magdalena, Cauca, Paraná, and Amazonas create important water social-ecological systems. Although it has been recognized in many international forums as an example of an effective use, management and conservation of different natural resources, Colombia has many species in risk of extinction. The institutional framework (Colombian Political Constitution and the Environmental National System) gives priority to the protection of the environment, to the water and biodiversity management and to the need of doing research and improve the knowledge about the Colombian natural resources. The *Consejos Comunitarios's* territory is also part of an area of great hydrographical wealth as part of the Pacific Ocean watershed. The hydrographical system is a key element of the local biodiversity, and provides water for the local communities' domestic consumption, agriculture and mining activities. Communities in this territory have an economy based on the exploitation of natural resources such as forests, soils and minerals, fisheries and sceneries. Historically, local communities have developed a close connection with the natural environment.

COMET-LA contributes to the empowerment of local communities and will give them tools and capabilities to deal with several situations such as: overexploitation of natural resources, conflicts in the access to water and different ways of using it, a proper development of infrastructure regarding ecosystem.

WHY FOREST AND LAND USE IN MEXICO?



Mexico has a higher percentage of forested land than either Canada or the United States. Forestry represents an important means of living to many Mexican families. It is responsible for about 82,000 direct jobs and for more than 208,000 in the

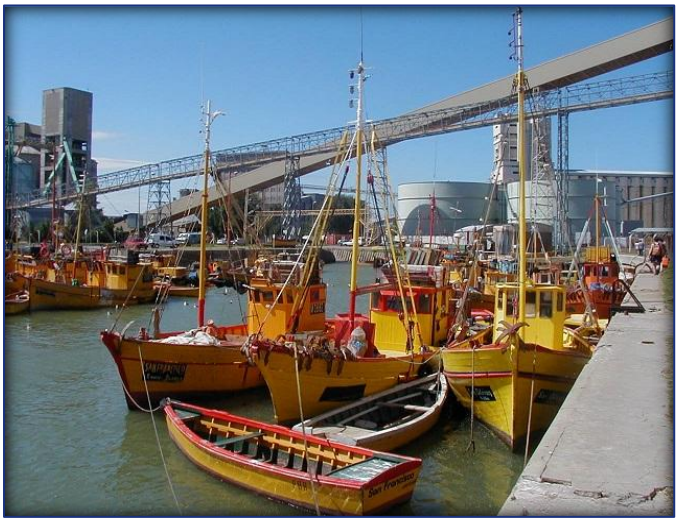
industrial sector. At the same time, it suffers from one the highest rates of deforestation that reaches 600,000 hectares per year. The property of forest resources in Mexico is basically social. About 95 million hectares of the 128 total are owned by "*ejidos*" and communities.

Santiago Comaltepec is a small forest community located in the State of Oaxaca in South Pacific of the Mexican Republic.

Comaltepec can be characterized as a community which has combined economic viability with social equity. Its paradigm consists of making possible that all actors participate in the running of the main economic activities but also that nobody profits unequally from them. A strong institutional arrangement is in place to make sure everybody complies with the rules, and at the same time, independence is kept, as much as possible, from external actors It is a community where social capital plays a key role in their achievements and challenges.

COMET-LA promotes initiative that enhance community welfare without losing equity, increasing value added economic activities without creating a division between the industrial section and the primary one, increasing economic development, new institutional arrangements. Despite the so-called good example of sustainable development Comaltepec represents, several challenges are still in place and require attention. COMET-LA will help to extend these above mentioned areas of collaboration.

WHY COASTAL AND MARINE AREAS IN ARGENTINA?



Argentina has one of the most extensive coastlines in Latin America and artisanal fisheries are an important resource for coastal communities. Coastal retreat by sea level rise and erosion due to climate change is likely to become much worse and have recommended a need for an integrated coastal management program to provide well advanced strategic measures from decision-makers and stakeholders to take to avoid any potential prejudicial conditions along the coast. The artisanal fisheries of the Bahia Blanca Estuary and the adjacent coast of Pehuen Co and Monte Hermoso involve over 1500 families from the localities of Ingeniero White, Punta Alta, Pehuen Co and Monte Hermoso. Even though the fishers complain that catch reduction is related to pollution, there are long-term monitoring data showing that contamination is unlikely. It is probably related to overfishing, both inside and outside the estuary, as well as changes in water and air temperature, and prolonged drought situations that are affecting the freshwater input into the estuary. Although these problems have all been predicted, decision makers only started to take action when the fisher community reacted by closing the deep harbors for commercial shipping. There is a need to develop rational coastal management strategies for short, medium and large scales for the estuary and, in particular, for the coastal localities within a range of 100 km outside such as Pehuén Co and Monte Hermoso. COMET-LA explores strategies in collaboration with the families supported by the artisanal fishery to adapt this fishery to a more sustainable activity. In addition to this, it will explore other activities that will utilize the skills of this community such as providing new production systems through aquaculture, or even considering touristic activities in the estuary and surrounding region of Bahia Blanca that utilize the boating skills and local knowledge of the community.

WORKING METHOD

For each case study a working group formed by researchers from EU and LA institutions, but also for the members of the CSOs has been established. In the water and biodiversity case NILU experts on biodiversity and JHI experts on water are working with PUJ ones and with the Colombian CSO (CCC). In the forest case, UCO experts are working with UNAM ones and with the Mexican CSO (ERA). Finally, in the coastal and marine case SGM experts are working with IADO ones and with the Argentina CSO (AQM). JHI is responsible of the scenario building. The global CSO (CEIUCN) supports all the case studies. However, members of all the institutions participate in meetings and workshops with local communities in the other countries. The objective is to have a broader vision of the problems and solutions, to contribute with the different expertise and also to share strategies, knowledge, common understanding, etc. The scientific partners will provide scientific knowledge and methods about social-ecological systems. CSOs are responsible for interacting with the local population, for identifying the relevant stakeholders, for the organization of the different participatory workshops, in short they are facilitators to link local and scientific knowledge. The global partnership allows the matching of local-scientific knowledge, the adaptation of outcomes to local, national and global scales and the broader dissemination of COMET-LA results.