

Seeking sustainability

Professor Maria del Mar Delgado is coordinating an exciting network which could transform the way governments, scientists and local communities interact with one another to tackle climate change



To begin, what are the main objectives of the project on COMMUNITY-based Management of Environmental challenges in Latin America (COMET-LA)?

Over the last few decades, Earth has faced dramatic environmental changes. The effects of these changes can be local or global but are most keenly felt on a local level, in particular by communities that base their livelihood on the exploitation of natural resources. However, the solutions can also originate locally. Better knowledge and context-specific decisions on managing these environmental challenges is urgently needed. The objective of COMET-LA is to identify sustainable community-based governance models for the management of natural resources that could be used in different social-ecological systems in the context of climate change and increasing competition for resources.

Why are community-based, participatory models an important method of managing natural resources?

In many areas of the world, local communities have traditionally developed community-based management of natural resources, which has created sustainable models. However, these models are facing increasing pressure from the

current model of economic development. A better understanding of local knowledge and traditions, and the amalgamation of local and scientific knowledge, could answer the needs of local communities facing problems with resource management and help to identify sustainable local solutions that contribute to global sustainability.

The project works with three case studies in Mexico, Argentina and Colombia. What procedures are in place to ensure effective collaboration between the partners involved?

COMET-LA will create a participatory 'learning arena' involving not only Civil Society Organisations (CSOs) and research organisations, but also policy makers and other stakeholders in the analysis and discussion of community-based management of natural resources, and identification of practices and lessons of interest. The overall objective is not to generate new knowledge, but to use the existing knowledge (scientific information, practical experiences, and organisational patterns) to adapt community-based management of natural resources to the challenges of climate change.

Bottom-up and participatory approaches are crucial, because they permit the use of local knowledge and foster ownership of the strategies by their beneficiaries.

How do you hope to adapt the outcomes of your research to local, national and global scales?

The results of the analysis and research developed in the case studies will be synthesised to provide information on issues related to sustainable management and governance of natural resources. The synthesis and integration of these results will allow the sustainable management and governance models to be applied beyond their specific social-ecological systems. Once these models are available, two other case studies will be established where we can test the suitability of the proposed methods and models.

How are local communities, and the natural resources that they rely on, threatened by commercial interests and an increasing global demand for resources?

The problems of each case study are different, but all share pressures such as overexploitation of natural resources or conflicts over access. More specifically, in the Colombian case, there are conflicts over illegal timber extraction, mining and hunting, illicit crops, overexploitation of forest and fisheries, infrastructure development and its impact on ecosystems and local communities, and access to and use of water. In the Mexican case, after many years of government ownership and use of Oaxaca's forests, local communities managed to regain control and tenure of their land and forests. The current tasks are to enhance community welfare without losing equity and to increase value-added economic activities without creating a division between the industrial sector and the primary sector. In the Argentinian case, less artisanal fishing has affected the livelihoods of the families in the area. Alternative activities such as aquaculture or tourism should be explored.

Who are your key collaborators on the project? How are you maintaining close contact with the communities in the areas that you are researching in?

In each case study a Civil Society Organisation is a full partner in the project. Their role is to organise interaction with the local people, to identify the relevant stakeholders and to organise the different participatory workshops. In short, they will link local and scientific knowledge and guarantee close contact between researchers and local communities. The Spanish Committee of the International Union for Conservation of Nature will integrate and upscale the results. The main benefit of these partnerships is the creation of a space for interaction between researchers, local communities and policy makers. All too often, governance problems derive from a lack of such arenas.

Lessons from Latin America

Climate change is affecting the day-to-day lives of many people around the world. **COMET-LA** is an innovative knowledge-sharing platform which aims to consolidate global and local issues and facilitate sustainable responses to this environmental crisis, with collaboration and communication at its core

THE IMPACT OF climate change is increasingly difficult to ignore and communities worldwide are struggling to conceive and implement sustainable resource management strategies. The challenge is greatest for those who depend on natural resources for their livelihoods so, although climate change is a global phenomenon, the most innovative responses to it are often local initiatives. The COMET-LA project will examine the responses of three Latin American communities to climate change and, in collaboration with local and international organisations, use their findings to develop models of sustainable practise for other communities worldwide.

A KNOWLEDGE NETWORK

Unlike most research, the main objective of COMET-LA is not to acquire brand new knowledge. The principal goal is to facilitate the circulation and use of existing knowledge, whether it refers to local traditions or scientific information. The main challenge facing the collaborators is to bring together the knowledge of a variety of interested parties; from national and international governing bodies, to NGOs and CSOs, to citizens from a diverse range of societies and cultures. Project Coordinator Professor Maria del Mar Delgado stresses the fact that there is an emphasis on a two-way flow of information: "Scientists can support management by targeting their research and providing local communities with understandable and useful information. Moreover sustainable community-

based models and local perceptions can be integrated in the management of environmental and climate changes".

The team hopes to achieve this goal of efficient and intelligent use of existing knowledge by creating a pioneering learning arena. The network will allow all parties to access a wide range of knowledge and enable better decision making for sustainable resource management.

COMMUNICATION AND COLLABORATION

At this early stage, Delgado and her collaborators are working to ensure that all components of their network will be able to communicate effectively with one another. Three sites have been chosen in Latin America for careful study of their resource management practices. Building close relations with the communities involved is crucial to success of the project, so the studies will focus on three regions which are already working with CSOs keen to benefit from scientific research into how they might better tackle problems caused by climate change. Coordinating and managing all parties in the learning arena will be no mean feat, but Delgado believes the results make this worthwhile: "The coordination and management of such partnerships can be a challenge, but on the other hand it can represent a unique richness and opportunity to share problems, views, approaches, and understanding".

Indeed, when the challenges these communities must confront are considered, it seems clear

that COMET-LA could become a vital scheme in the quest for truly global sustainability. In order to gain knowledge that will serve as many other communities as possible, the team will study a range of environmental concerns. The collaborators established that water and biodiversity management, forest and land use, and marine and coastal management are currently the most pressing environmental issues, and chose their case studies accordingly.

LEARNING FROM THE LOCALS

The first case study addresses biodiversity and water management in Colombia. Water is, of course, crucial to all life but rising sea levels and unusual rainfall means that it is also one of the most troublesome aspects of climate change. Biodiversity creates a fine balance between all living species, but this becomes strained by the destructive use of the Earth's resources. Colombia is one of the world's most biodiverse countries and many socio-ecological systems have developed along its territory. With an increasing number of species threatened with extinction in Colombia, the need to improve water and biodiversity management is evident.

The Alto y Medio Dagua and the Cuenca Baja del Río Calima communities, with populations of 1,254 and 4,000 respectively, have been selected as the focus of COMET-LA in Colombia. These communities share a long tradition of close interaction with nature, and depend on resources such as biodiversity, fisheries, timber and soil for

survival. This dependence has become the social axis of these communities and create a strong sense of belonging to the land. The pressures of a changing environment coupled with land ownership conflicts and the presence of illegal armed groups make tackling climate change a sensitive issue in this region. COMET-LA aims to empower these communities by providing the necessary tools to deal with these problems.

The second case study is situated in Mexico and focuses on forest and land use. The role of forests in carbon absorption and balancing the climate, as well as a habitat for innumerable species of flora and fauna, is common knowledge. However, deforestation and poor management remain the most significant threats to forests worldwide. Mexico is home to vast areas of forest but the annual rate of deforestation is estimated at 4-6 million ha. Although the Government has attempted to mitigate this, forestry is still one of the biggest employers in the country.

COMET-LA is focusing its attention on the community of Santiago Comaltepec, situated in the state of Oaxaca with a population of around 2,000 people. This forest community manages the forest sustainably but its exploitation is not enough to provide livelihood to all its inhabitants and they are forced to migrate. The community's notion of environmental sustainability could provide valuable lessons in responsible resource management. In exchange, COMET-LA can help with research into other economic and social welfare problems which the community is currently facing.

The third and final case study is based in Argentina. Coastal and marine areas are among some of the most affected by anthropogenic climate change; many of the world's largest cities are found on or near coastal areas, and fishing provides a vital source of food and employment

worldwide. With so much depending on marine ecosystems, any disruptions to them are widely and swiftly felt by many different populations. With one of the biggest expanses of coast in Latin America, and a coastal capital, many communities in Argentina are trying to combat the effects of climate change.

The international team from COMET-LA will study the Bahía Blanca Estuary and the many fisheries it sustains. Poor management and decision making has led to overfishing and other problems in the area. Although some local organisations from both the public and private sector are trying to develop better coastal management strategies, more must be done to protect the short- and long-term interests of local people. Here the project intends to work with families from the area to examine different options for increasing the sustainability of the fisheries. Of particular interest is the question of how they can adapt to the effects of climate change.

THINK GLOBAL, ACT LOCAL

All three of these studies will incorporate matters concerning gender and resource management. Another goal of the project is to empower and engage with women from all aspects of the learning arena and to ensure that all programmes developed for sustainability and conservation are sensitive to gender issues.

With promising lessons to be learnt from the local communities and valuable scientific support available, the COMET-LA learning arena will no doubt be a vital component in the fight to mitigate and adapt to climate change. Truly the epitome of the motto 'Think global, act local', this project will join the dots between responsible resource management at a local level and sustainability on a global scale.

RESEARCHERS FROM ALL THE PARTNERS AND LOCAL COMMUNITIES IN COLOMBIA



INTELLIGENCE

COMET-LA

COMMUNITY-BASED MANAGEMENT OF ENVIRONMENTAL CHALLENGES IN LATIN AMERICA

OBJECTIVES

To identify sustainable community-based governance for the management of natural resources that could be used in different social-ecological systems in a context of climate change and increasing competition in the use of these ones.

PARTNERS

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