

## Initiatives

The first area selected for the launch of the database is the region of Epirus. This is a border region of Greece with geopolitical importance, since it communicates, has relations and interacts with the neighbouring regions of the Balkans and the country's centre. At the same time Epirus is the most mountainous region in Greece. It is made up of 67 mountainous municipalities with 444 mountainous municipal or communal departments. It is also one of the most sparsely populated and poorest regions in the European Union (EU-15), although very rich in terms of nature and culture.

This database is a research initiative, drawing on bibliographic and internet sources, which tries to identify the natural and socioeconomic reality, cultural elements, traditions, craftsmanship, local environment and biodiversity in every mountain community of Greece. At the same time, this database is a way to investigate the interactions and interdependencies and their changes through time, between natural and human resources, as well as focusing on the problems and needs that occur within these multi-dimensional relationships.

The database includes 25 regularly updated data-fields for each mountainous community/municipality, such as: altitude, permanent population, historic monuments and museums, traditions and festivals, local products, traditional architecture, mountains, water resources, flora and fauna, biodiversity and protected areas, interactions between environment and local cultures, problems and needs etc.

It is known that Greece is regarded as a biodiversity hotspot in Europe, as well as a hotspot for endemism in Europe and the Mediterranean region, due to its topography with great mountain chains along the central part of the country and other mountain ranges. However, according to the Greek Ministry of Environment, the present rate of Greek biodiversity loss is relatively low compared to other European countries.

Epirus and Pindos Mountain, in particular, are well known for their high species and ecosystem diversity, for genetic variability and endemism as well as for medicinal plants and herbs that are noted for their antimicrobial and pharmaceutical properties. There is an obvious need for the protection of Epirus' biodiversity as a whole, with respect to human beings and their natural and cultural environment. With this in mind, an action plan has been implemented which includes the set up of three national parks that make up the most extended environmental protection area in Greece, covering the largest part of the mainland, from the borders with Albania, to Pindos Mountain, Tzoumerka-North Pindos and Grammos Mountain and the regions of Kastoria and Ioannina; a distance of approximately 150 kilometres.

Certain barriers have to be overcome in order to implement this plan properly and effectively. These include contending with bureaucratic and administrative issues that cause great delays, proper coordination of the competent authorities and avoidance of political expedience.

Essential prerequisites for the Worth-Living Integrated Development of the regions and the protection of their biodiversity are:

- Thorough investigation on the geographic distribution of species and the possible changes and losses in biodiversity due to climate change, land use and other man-made activities;

- Systematic collection, mapping, monitoring, analysis and interpretation of the necessary reliable, diachronic and up-to-date data on the area's natural and socioeconomic reality. In addition to statistical data, these Integrated Surveys of mountain areas require the use of photointerpretation, remote sensing methods and techniques in Geographic Information Systems (G.I.S.) for the systematic mapping and monitoring of biodiversity;
- Supply of the necessary financing and overall planning with scaling of needs and priorities;
- Provision of experienced and interdisciplinary trained scientific staff and volunteers;
- State-of-the-art specialised technology, infrastructure and know-how;
- Collaboration with local authorities and relevant national and international bodies;
- Distribution of knowledge and environmental awareness to local populations, students and educators;
- Adoption of a holistic and integrated view regarding the "development" of each area, taking into account its natural, socioeconomic and cultural advantages, potentials and limitations.

The database will be uploaded at the N.T.U.A. M.I.R.C. website [www.ntua.gr/MIRC/](http://www.ntua.gr/MIRC/) in Greek.

For further information, contact N.T.U.A. M.I.R.C. ([naturesl@central.ntua.gr](mailto:naturesl@central.ntua.gr) or [rslab@survey.ntua.gr](mailto:rslab@survey.ntua.gr)) or visit the website at [www.ntua.gr/MIRC/](http://www.ntua.gr/MIRC/)

## Technological Innovation Servicing Biodiversity

Lourdes Chuquipiondo (RAMP PERU)

Samuel, Antolin, Corina, Maria.... are only some of the names of ordinary people, of people like us. However, all of them have a common characteristic that unites them: they are creators of technology.



An innovator demonstrates an ecological stove. Photo: Fogon Multiusos Sr. Cuchillo Cusco.

At RAMP PERU we place our bets on them and it is for this reason that we have developed a model that contributes to the development and progress of the capabilities of the many inventors and innovators that we find in the country. Our intervention even goes beyond granting technical assistance for the development or financing of technological products. At RAMP PERU we work alongside the innovators so that they develop their own companies based on the technological products proposed.

Given the fact that our intervention, as a project, is carried out in areas located in the mountain regions of Peru (Cusco, Puno, and Cajamarca), we cannot stray from the importance of contributing to the conservation of biodiversity in these regions. It is because of this, that RAMP PERU has come to the conclusion that the technologies that support this project must be characterised by the following five themes: water, agriculture, energy, health and biodiversity, thus reinforcing the objectives of the millennium which consider these subject areas to be priorities for humanity.

Through RAMP PERU we are supporting those innovators that are conscious of the importance of biodiversity on the impact of people's lives, especially of the poorest. Until now, we have contributed to the development of eighteen technological prototypes, five of which consist of improved ecological stoves, one consists of a water heater run by a solar heating system and another consists of an ecological biodegradable flowerpot. Our creators, through proposals such as those already mentioned, present innovative solutions of a technological nature which also promote the appropriate and rational use of the components of the planet's biodiversity. If we observe the case of the ecological plant pot as an example, which is made based on the use of biodegradable materials instead of polyethylene bags (solid, non-degradable residues), or if we take into consideration the creation of the water heater or thermal heater which makes optimal use of the strong Andean sun to generate hot water for domestic use, we can clearly see the contribution RAMP PERU makes to the planet in terms of conservation of the environment.

The model that we propose with this project attempts to develop two programmes, open to the public, which provide professional and economic support to the innovators so that they are able to develop their inventions. These programmes are developed in four phases: incubation, launching, growth period and exit phase.

During the first phase of the programme, we submit the presented proposals to a process of defining their breadth and their capabilities in order to create a technological prototype and a business plan. In the launching phase, we provide consultancy, general support and financial support to take the technological product to the market by means of a business strategy. In the third phase we continue to provide advice and support for the growth and diversification of the business strategies of the proposals that are still continuing to develop in the market. Finally, in the exit phase, we work alongside the innovator to be able to ensure the future sustainability of the business strategy.

Among the main results that we hope to achieve with RAMP PERU in the protection of biodiversity, we highlight the promoting of the development of technologies that facilitate responsible and sustainable use of elements that comprise biodiversity. We seek to generate alliances with institutions that support our innovators' business initiatives through



An ecological stove in use. Photo: Martin Cuchillo.

adequate financial mechanisms. These efforts are already bearing fruits: RAMP PERU has signed an agreement with the company MICROSOL S.A.C. to develop a complementary business to exchange carbon offsets associated with the innovations that involve improved stoves that contribute to the reduction of these emissions.

In addition, to date we have supported twenty innovators during the incubation phase of the First Strengthening Programme, having invested close to USD108,000 toward the development of their business plans and prototypes. We have also accomplished the establishment of important alliances with several of the country's universities, regional and local governments, organisations from the private sector and the State, interested in promoting the innovation of technologies that have social and environmental impact.

The job continues and by the middle of this year we will launch an innovation announcement for the Second Strengthening Programme, through which we hope to keep identifying, recognising and supporting our country's creators and inventors.

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RAMP PERU, established in the year 2007, is managed by an association of three institutions: NESsT (Nonprofit Enterprise and Self-sustainability Team), CONDESAN (Consortium for the Sustainable Development of the Andean Ecoregion) and the PUCP - GROUP (The Pontifical Catholic University of Peru's Group for the Support of the Rural Sector).

If you wish to obtain further information on this project, please contact Ricardo Ordoñez (National Coordinator) [rordonez@nesst.org](mailto:rordonez@nesst.org), María Paz Montoya (Regional Coordinator) [m.montoya@cgiar.org](mailto:m.montoya@cgiar.org), or visit [www.ramp-peru.org.pe](http://www.ramp-peru.org.pe)