2005). Moreover, the impacts of global market forces on small scale growers and on consumer expectations at all levels of society render the stability of present-day small farm economies and other aspects of the food system precarious.

From watersheds to foodsheds

The term watershed is commonly used to describe an area of land in which water drains to the lowest point. In a watershed, water moves through a network of drainage pathways converging into streams and rivers, eventually reaching an estuary and the ocean. Watersheds can be large or small, with boundaries following major ridgelines around channels and meeting at the bottom, where water flows out of the watershed.

The term foodshed is used to describe the constellation of food systems, from local to global, that provide a specific population with food products, each of which moves through diverse production and consumption networks in order to feed people. Kloppenberg et al (2006) have used the concept of the foodshed to describe the flow of food products from the area where they have been grown to the place where they are consumed. A foodshed specifically refers to a particular population's complex network of providers and distributors. For example, the LPEAF refers to the diverse food systems that supply La Paz and El Alto populations with food products.

Mapping the La Paz-El Alto Foodshed (LPEAF) will examine the nature of the farming systems that feed La Paz-El Alto and their sustainability in ecological, social and economic terms. The research will identify key indicators for monitoring the LPEAF and will also consider the current and potential economic, social and environmental sustainability of small farms as a dominant force in feeding urban populations. The project will focus on important traditional Andean crops such as quinoa, potato, corn and peanut as well as introduced crops and important vegetable, fruit, meat, and dairy staples.

The LPEAF project is an innovative step towards establishing baseline information on a complex food production and consumption system. The research will develop an integrated understanding of a complex foodshed in such a way that it can be used to assess other foodsheds and their relative sustainability. As Bolivia enters a new phase of development spurred by the exploitation of its abundant natural gas and minerals, it is likely that the traditional small-scale agroecosystems will undergo changes. Many of these changes may be positive, such as the alleviation of the extreme poverty in which most Bolivian farmers live. However, it is important that the relatively low energy-use and high agro-diversity systems that comprise the LPEAF are monitored so that such strengths can be retained. In addition, as climate changes around the world intensify it is crucial that the effects of such changes on agroecosystems in the Central Andes be monitored and farmers supported so that they can respond in such a way that their livelihoods and cultural heritage are preserved.

Describing and monitoring the LPEAF will also provide important information that can be used in educational programs for farmers to consumers to policy-makers, on the complexity, ingenuity and needs of foodsheds and foodshed actors. The feeding of large populations in any part of the world is complex and dynamic. LPEAF research will result in the development of a broad network of actors involved in the foodshed and will permit the establishment of relationships to respond to changes in food systems and foodsheds in Bolivia and the world.

To learn more about the LPEAF project please contact Stephen Taranto at *erep@lapazofoot.com*

Andean Páramo Project: Conserving Biological Diversity

Bert De Bievre

Ecological reserve of El Angel, Northern Ecuador. Photo: Proyecto Paramo Andino

Páramo is the Spanish name given to natural, high-altitude grassland in the tropical Andes. Frequently wrapped in a mantle of fog, the páramos are distributed like an archipielago of islands in the highest parts of the Northern and Central Andes. Páramo is a strategic ecoystem on a global and regional scale:

- They have the greatest biological diversity of life forms adapted to living in the unique conditions of tropical cold, such as the frailejon plant (*Espeletia sp.*);
- They contain and protect water sources for an important part of the continent's rural and urban population;
- Their vegetation and soils contain a critical reserve of carbon and organic matter, keys to water and fertility regulation for the production of subsistence crops, and an important carbon sink at the global scale;
- They make up an area where numerous peasant and indigenous communities live, and thus represent an area with rich cultural inheritance.

However, the páramos are increasingly threatened: agriculture, livestock and forestation have expanded into these higher and more fragile ecological zones. Several areas are threatened by gold mining.

The project "Conservation of the Biodiversity of the Páramo in the Northern and Central Andes", better known as "Proyecto Páramo Andino" has now initiated its activities in its full size phase.

The project is funded by the Global Environment Facility (GEF), and the implementing agency is the United Nations Environment Programme (UNEP).

The lead executing agency is the Consortium for Sustainable Development of the Andean Ecoregion CONDESAN, a division of the International Potato Center. In each of the participating countries: Venezuela, Colombia, Ecuador and Peru (the Andean countries that have páramos), a National Executing Agency takes the lead. Those are respectively the Instituto de Ciencias Ambientales y Ecológicas of the Universidad de los Andes (Venezuela), the Instituto Alexander von Humboldt (Colombia), the Fundación EcoCiencia (Ecuador), the Instituto de Montaña (Perú). Two international universities, University of Wisconsin and University of Amsterdam, support the project with technical assistance.

Work has started in each of the 10 project intervention sites, on the basis of agreements with local partners and stakeholders, aiming at the design and implementation of sustainable management plans for each of the sites. Immediately work will start on the other project components: policy and advocacy (the search for formal and non-formal policy options at all scales: local, national and Andean), training of stakeholders related to the páramos ecosystem, communication and creation of awareness of the importance of páramos within the urban and rural population in general, and replication.

The Andean Páramo Project functions under the auspices of the Regional Biodiversity Strategy for the Tropical Andean Countries, approved by the Council of Andean Ministries of External Affairs on 7 July 2002 (Decision 523), an initiative taken by the Secretary General of the Andean Community in coordination with the Andean Committee of Environmental authorities (CAAAM).

Please visit the renewed website at *http://www.condesan.org/ppa*

For more information contact Bert De Bievre, Regional Project Coordinator, *b.debievre@cgiar.org*

Some native crops of the BioAndes program: corn (Zea mays). Photo: *Claire Nicklin*

COUNTDOWN 2010
SAVE BIODIVERSITY

Governments worldwide have promised to save biodiversity by 2010. Countdown 2010 helps them move from words to action.

Countdown 2010 is a powerful network of active partners working together towards the 2010 biodiversity target. Each partner commits additional efforts to tackle the causes of biodiversity loss. The secretariat – hosted by the World Conservation Union's Regional Office for Europe – facilitates and encourages action, promotes the importance of the biodiversity target and assesses progress towards 2010. An assembly of all partners meets annually to review the overall direction of Countdown 2010. In its implementation, Countdown 2010 is guided by a core Advisory Board.

Countdown 2010 was launched at the stakeholder conference "Sustaining Livelihoods and Biodiversity: Attaining the 2010 Target in the European Biodiversity Strategy" in Malahide, Ireland in 2004. This conference resulted in the Message of Malahide, which today forms the foundation of the European Commission's Biodiversity Communication.

Currently, the powerful European network is made up of 170 members. Countdown 2010 is gaining worldwide momentum: new hubs in Africa, Asia and Latin America engage stakeholders to save biodiversity by 2010.

Partnership of Countdown 2010 is open to governments, local authorities, civil society, and private sector organisations which demonstrate a clear commitment to contribute toward the achievement of the 2010 biodiversity target.

To learn more please visit: *http://www.countdown2010.net* or send and email to Wiebke Herding at: *wiebke.herding@iucn.org*

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