

# “VALORISATION OF AGROBIODIVERSITY PRODUCTS AND STRENGTHENING OF LOCAL IDENTITIES IN THE PERUVIAN ANDES: EXPERIENCES FROM THE BIOANDES PROGRAMME”

MATHEZ-STIEFEL Sarah-Lan<sup>1</sup>, GIANELLA MALCA Cecilia<sup>2</sup>, and RIST Stephan<sup>1</sup>

## 1. Introduction

In the Peruvian Andes, the incredible levels of agrobiodiversity that have resulted from a long history of co-evolution of local populations and their natural environment represent great potential for local sustainable development. At the same time, agrobiodiversity is undergoing serious degradation processes. Over several millennia, Andean people have moulded their natural ecosystems according to their specific worldview and knowledge. Through the vertical use of various ecological belts as a basic pattern of traditional land use, they have managed to diversify their access to natural resources and domesticate some of the crops that are most important for humankind (Murra 1975). However, in sharp contrast to this biological wealth, Andean indigenous people live under most precarious socio-economic and political conditions, which are among the root causes of increasingly visible degradation of key natural resources such as soils, water, and biodiversity. Furthermore, several socio-economic factors such as the influence of non-native values, changes in individual and collective identities in a context of better access to formal education, and significant processes of migration to urban centres and Amazon lowlands, are fuelling an overall tendency towards erosion of the indigenous environmental knowledge upon which the management of agrobiodiversity is based. Seen from this perspective, the existence and the state of agrobiodiversity are directly related to socio-cultural processes.

Being aware of these links, the BioAndes regional development programme chose to base its initiatives on a “biocultural approach”, the basic hypothesis being that if socio-cultural change is the main cause of the degradation of agrobiodiversity, it might also be a fundamental source of its conservation. In this sense, BioAndes counts itself among the researchers and practitioners in the fields of conservation and development who, since the 1990s, have increasingly recognised the interdependencies of cultural and biological diversity and the need to enhance cultural processes in order to foster biodiversity. This more comprehensive approach avoids the traps of one-sided initiatives that, while aiming to solve one specific problem - by generating monetary income, for instance - create numerous new problems and contradictions within the complex livelihood strategies of Andean farmers, e.g. related to a loss of cultural autonomy due to increased degrees of dependence on external factors and actors (market mechanisms, traders, etc). In the short run, these kinds of initiatives often conflict with the rationality of Andean farmers who, through their own understanding of “development,” try to meet their economic needs in the context of a complex and multifunctional network of activities that considers the intertwining of economic, social and cultural domains of life (Morlon 1992; Golte 1980). Moreover, in mid and long terms, loss of cultural autonomy translates into debilitation of individual and collective identities and

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<sup>1</sup> Centre for Development and Environment, University of Berne, Switzerland

<sup>2</sup> Asociación ETC Andes, Lima, Peru

their related forms of social and economic organisation, thereby contributing to the erosion of indigenous environmental knowledge.

By linking scientific and indigenous expertise, the main instruments employed by BioAndes for developing such biocultural initiatives are: intercultural dialogue, joint learning and capacity development, and transdisciplinary action research. On this basis, indigenous communities, local municipalities, development practitioners, and researchers are striving to create innovative ways to contribute to more sustainable economic, socio-cultural, and political valorisation of Andean biodiversity.

## 2. Project activities

The BioAndes programme is implemented in Peru in two “biocultural areas”<sup>3</sup>: the District of San Marcos in the Northern Andes, in Cajamarca Department, and the District of Pitumarca in Cusco Department, in the Southern Andean highlands.

Situated at an altitude of 2,250 to 4,000 m., San Marcos covers the “yunga”, “quechua”, and “jalca” altitudinal belts according to the natural regions of Peru as classified by Pulgar Vidal (1973). This allows for the cultivation of a large variety of crops - from fruit trees and maize in the lower areas to cereals and Andean tubers on the higher lands. It is inhabited by Spanish-speaking mestizo populations that nevertheless have a strong sense of local identity. During the last decade, biodiversity conservation initiatives have been carried out in the area by promoting local environmental knowledge and uses, and nowadays several associations of farmers and municipalities aim to promote consumption and commercialisation of local agrobiodiversity products.

The District of Pitumarca covers the “higher quechua”, “jalca”, and “puna” altitudinal belts (Pulgar Vidal 1973), with altitudes ranging from 3,600 to 6,400 m. The inhabitants of the district are indigenous Quechua-speakers who dedicate themselves to subsistence agriculture and alpaca breeding, and have an important tradition of fine textile weaving. All daily activities such as alimentation, family and collective rituals, or traditional medicine are closely linked with indigenous environmental knowledge and the use of local biodiversity.

Project activities are diverse and range from the cultivation, transformation, and commercialisation of organic Andean fruits in San Marcos to the recuperation of natural dying techniques for alpaca wool and traditional weaving in Pitumarca and the promotion of responsible ecotourism in both regions. The novelty of these rather traditional initiatives is that they are all accompanied by activities that revalorise indigenous environmental knowledge (e.g. elaboration of agro-ritual alpaca breeding calendars and potato growing activities, together with local families and school pupils; recuperation of traditional techniques of agrobiodiversity management). Other supporting activities include attaining political incidence and promoting bottom-up policy-making by linking local actors (communities, producer associations) with higher-level authorities (e.g. municipalities, provincial government), and conducting action-

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<sup>3</sup> For a definition of « biocultural areas » in the context of the BioAndes programme, see Mathez and Rist (2008).

research in intercultural and interdisciplinary teams (e.g. inventories of local agrobiodiversity, studies on the local management of natural resources and indigenous environmental knowledge).

### **3. Main insights gained**

After two years of implementing BioAndes projects, we have gained several insights into the potential of valorising agrobiodiversity products in the Andes for local development in a biocultural perspective.

#### *Culturally contextualised economic valorisation of agrobiodiversity*

A first insight concerns a culturally contextualised economic valorisation of agrobiodiversity. Although we are aware of the risks associated with the incorporation of indigenous people into the market economy, it was interesting to observe that in the case of Pitumarca the commercialisation of textiles in the city of Cusco represents an efficient tool for cultural revitalisation. Supported by high demand related to international and national tourism, farmers began to revalorise numerous traditional weaving techniques, such as the spinning of alpaca and sheep wool, dying with natural products (e.g. plants and minerals), and recuperation of indigenous iconography, all of which are particular to the valley of Pitumarca.

Some of these techniques had been abandoned by the local population during the previous century: Since the 1910-20s they had been dying wool almost exclusively with synthetic colours and, since the 1980s, they have used only synthetic wool. However, by maintaining impressive weaving skills and keeping some ancient textiles that can now be used as models, they can revitalise “lost” techniques and designs relatively easily. Nowadays, although the local population still employ synthetic wool for their own use, the economic value assigned by tourists to their traditional weaving activity has led to valorisation of their cultural heritage and to partial restoration of the wearing of traditional clothes (e.g. at women’s weaving association meetings and for special events and fairs).

Moreover, the women involved in the elaboration and commercialisation of local textiles began to generate monetary income and learned to organise themselves in associations, leading to higher levels of independence and power and increased recognition within their families and communities. This eventually enhances their status within the broader society to which they belong.

Another example from BioAndes was the support given to representatives from local communities to participate in the national gastronomy fair “Perú Mucho Gusto” in Lima. Potato growers from Pitumarca presented a collection of 45 of their 140 native potato seed varieties, and farmers from San Marcos displayed a collection of their native fruit, tuber, and cereal varieties and some of their transformed products. The significant interest that both exhibitions generated among the visitors has helped to raise farmers’ consciousness of the cultural value that their agrobiodiversity products are increasingly gaining at the national level (especially in the capital city). They have indeed become more aware of the existence of a market that values agrobiodiversity economically as well as culturally, and that is conscious of the benefits of consuming healthy products produced on the basis of traditional knowledge and management.

### *Linking local products with their wider natural and cultural landscapes*

A closely related insight is that such biocultural initiatives are more likely to be successful when they are embedded within activities that go *beyond a focus on local products* and seek valorisation within the wider natural and cultural landscape, for instance through the promotion of regional agro-tourism and gastronomy, more sustainable management of local resources, including the restoration at ecosystem-levels, and the realisation of inventories that show the regional significance of local agrobiodiversity and knowledge related to it.

In San Marcos, all activities related to valorisation of agrobiodiversity products were incorporated into a broader agro-touristic project that values both the natural and the socio-cultural components of the local territory. Thanks to a wide network of partnerships with local farmer associations, tourist operators, the educational sector, and local authorities, national tourists and school pupils are being sensitised to the principles of agro-ecology. They visit places where organic crops are grown (e.g. native fruits, cereal, potato and other tuber varieties, medicinal plants), watch how they are transformed (e.g. into jams, fruit concentrates, chips), observe soil conservation practices, engage in discussion with local farmers and get an idea of their tremendous agricultural knowledge (e.g. local climate prediction practices), participate in festivities related to the agricultural calendar, and enjoy gastronomy based on locally grown products. This experience enables them to appreciate the benefits of agrobiodiversity for local people, and the compatibility of agro-ecological principles with Andean systems and knowledge. The main partners in this project are the “San Marcos Provincial Association of Organic Producers” (APPESAM) and the San Marcos municipality, who recognise that the development of multiple and complementary economic activities is necessary to increase territorial competitiveness in a sustainable way.

### *Globalising local notions of development*

A third insight drawn from the projects’ experiences is that the sustainability of these initiatives, which are often externally induced, is conditioned by the ability of local actors to acquire ownership of projects and obtain the knowledge required to carry them out in line with their own individual and collective notions of development. Therefore, the development of personal and institutional capacities for better handling and controlling the whole chain, from production to commercialisation, is greatly appreciated by local actors, although this does not necessarily lead to great additional income in the short term.

Furthermore, this process of appropriation can only be successful if it is linked to the creation or strengthening of social networks (e.g. social movements, associations, cooperatives, etc.) that help articulate these local initiatives within the global context. This tendency to “globalise” local notions of development rooted in indigenous and local cultures found its expression in San Marcos through support given to the APPESAM, a local organisation of 30 formal members (whose activities involves nearly 100 organic farmers) that seeks to produce and conserve native crops using agro-ecological practices and establish fair commercial relationships through strategic partnerships between the private sector and public institutions. Thanks to its membership in the “Peruvian National Association of Organic Producers” (ANPE-PERU), it has gained political and organisational support and found better opportunities to commercialise its

products at regional and national levels. Furthermore, its links with ANPE-PERU has helped it to become a partner in the international “Slow Food” social movement, within which it coordinates the “Baluarte of Andean Fruits of Peru” project and participates directly through the production, transformation, and commercialisation of three fruit trees native to the area: the “pushgay” (*Vaccinium floribundium*), the “poroporo” or “tumbo” (*Passiflora mollissima*), and the “tomatillo” or “aguaymanto” (*Physalis peruviana*).

In Pitumarca, local weavers’ and alpaca breeders’ associations were strengthened by helping to link them with the municipality – specifically through their involvement in participatory budget exercises and the negotiation platform for the development of Pitumarca District. This involvement allowed them to defend their interests better and to have some of their activities funded by the municipality.

### *Difficulties and contradictions*

A final key insight from the BioAndes programme concerns the difficulties and contradictions of the above positive tendencies in terms of their specific local expressions. Although indigenous people have learnt a lot about how to deal with the different economic rationalities with which they are confronted, they are usually rather vulnerable and disadvantaged in this respect. Because they still do not have enough capacity to manage the dominant economic rationality and have too limited access to the information needed to do so, they face many difficulties in combining these things with their traditional livelihood strategies.

The women weavers from Pitumarca for instance, became totally dependent on a few intermediaries that have the advantage of mastering both economic rationalities – the external one based on the market economy, and the local one based on reciprocity. These intermediaries ensure the fidelity of the weavers by establishing ritual kinship relationships with them and keeping them technically dependent (e.g. by providing the material for the natural dying processes and executing some of the finishing steps in product elaboration themselves) and commercially (e.g. by organising transportation, renting a selling venue, and selling the products in the nearby city of Cusco).

In the case of the organic producers from San Marcos, this aspect is expressed in the numerous difficulties that they face when trying to incorporate themselves in the market and still hold to their family strategy that consists of producing small quantities of many different products and which is needed to ensure their own food security.

In both cases, local people had to transform their traditionally family-based production system to a collective one (e.g. through the creation of associations), in order to be able to be incorporated into the market economy, with all the adjustments that this implies.

## **4. Conclusion**

Experience showed that economic valorisation and commercialisation of local products can be a powerful tool for the revival and innovation of eroded indigenous know-how related to the management of biodiversity and the underlying more holistic worldview of indigenous people.

Moreover, experience indicates that when this responds not only to an externally induced demand but also to a perceived internal need to strengthen own cultural identities, it creates a cultural shaping of the market economy that is – at least partially - able to resist its basic feature of commoditisation of all aspects of life. This opens a perspective for communication between local communities and the market economy, in which markets are supposed to serve indigenous or local cultures, instead of the other way round. In this sense, the generation of income is instrumental to the empowerment of marginalised groups such as indigenous smallholders and women and, by restoring natural resources and their management to a context of renewed indigenous worldview, it works against excessive commoditisation of “nature”.

It was shown that the valorisation of biocultural diversity must be part of an integrated regional approach because this corresponds better to the concept and limitations of development in Andean communities, who feel that their socio-cultural and natural spaces for expressing and thereby strengthening - their local identities have been much more restricted at regional than at local levels. Expanding inter-community and eventually regional strategies are therefore much more in line with the historic and present features of Andean livelihoods, which instead of specialising in one or a few of the extremely diverse socio-environmental resources of the Andes, aim to maintain access to great biocultural diversity through an eco-symbiotic organisation of their economic activities. Eco-symbiotic economies require thorough knowledge and skills for managing regional biocultural diversity. They also result in a significant social distribution of diverse seeds, animals and tools, and make communities less vulnerable to socio-economic and environmental risks such as price shocks, climate change, and pests in plants and animals, thus rendering them more resilient with regards to food security and sovereignty.

Such a regionalised approach to localising products can be significantly strengthened when it is part of a network of national- and internationally shared and coordinated initiatives. The articulation of local initiatives within wider societal movements makes it possible to counter the dominant notion of the supposed superiority of the global (neoliberal) notion of economy in relation with supposedly “imperfect” local forms of economic development. The globalisation of local notions of development becomes an alternative strategy: instead of instrumentalising local cultures for the purpose of conforming to the dominant market economy, the latter becomes part of a strategy that aims to foster local biocultural diversity in the context of regional, national and global cooperation and complementarities.

Against this background it becomes crucial for regional and national authorities to learn to craft new models of economic development that can exploit the potential of local or indigenous economic systems and their associated livelihood strategies. This means creating room for alternative economies that, while based on strengthened Andean indemnities, complement the present governmental model that consigns the Peruvian Andes principally to the role of an “exporter”, which alone is certainly unable to valorise adequately the incredibly great Andean biocultural diversity (Garcia Pando 2008).

The valorisation of local agrobiodiversity through a biocultural strategy shows great potential for enhancing natural and cultural diversity in the Andes (and possibly also in the lowlands of South America). However, as this cannot be other than the result of a collective construction by all actors involved, it is important that the local communities not only participate in the process, but that they also have the possibility of shaping the conditions under which this happens. The way

forward is to jointly understand and meet the difficulties that local communities encounter in their search to regionalise and globalise their livelihood strategies step by step, in interaction and in complement with other locally-based cultural groups at regional, national and eventually global level. This process can be understood as a social learning process in which local people are in charge of revalorising their knowledge and organising themselves, and in which NGOs support them by providing inputs and resources for personal and organisational capacity development and help them to link up with local authorities such as municipalities, while national and international authorities create the appropriate normative frameworks and incentive structures that allow for jointly shared valorisation of natural and cultural resources (e.g. water, soils, landscape, knowledge).

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## 6. References

- Garcia Pando J. 2008. “Sierra exportadora: de espaldas a los productores.” *La Revista Agraria* 102 (December 2008). Lima: CEPES
- Golte J. 1980. *La racionalidad de la organización andina*. Lima: IEP. 124 p.
- Mathez-Stiefel S.-L. and Rist S. 2008: “Diversidad biocultural y de zonas bioculturales.” *Biodiversidad y Cultura en los Andes* 1 (December 2008): 20-24. Cochabamba: AGRUCO.
- Morlon P. 1992. *Comprendre l’agriculture paysanne dans les Andes Centrales : Pérou – Bolivie*. Paris: Institut National de la Recherche Agronomique. 522 p.
- Murra J. V. 1975. *Formaciones económicas y políticas del mundo andino*. Lima: IEP. 339 p.
- Pulgar Vidal J. 1973. *Geografía del Perú: Las ocho regiones naturales del Perú*. Lima: Editorial Universo.