

6.1 ENDOGENOUS DEVELOPMENT AND UNIVERSITY EDUCATION

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AGRUCO is a university centre dedicated to higher education, scientific research and social interaction with farmer communities, in the field of agro-ecology and sustainable development. It is part of the State University San Simon (UMSS) in Cochabamba, Bolivia. This university-based Centre for Agro-Ecology has two roles: it carries out field-based activities and it teaches university courses in crops, animal husbandry and forestry, based on agro-ecological principles and the culture of the Andean farmers. Participatory research and the involvement in small development projects in the Bolivian highlands permit constant feedback of experiences in endogenous development into the contents of teaching.

The province of Cochabamba includes a large number of natural eco-systems, which vary from highlands and valleys to tropical lowlands. The communities that AGRUCO is working with in the context of the Compas programme are in the highlands, some 25 km from the city of Cochabamba. Together they have a total of 2,500 inhabitants of Quechua indigenous background. The communities are located in the Jatun Mayu watershed, at elevations varying from 2,800 to 4,300 meters above sea level. The ecological variety in the area permits a diverse and complementary production system, in accordance with Andean cosmovision and the risk-avoiding strategies related to the climatic uncertainties. The main crops are tubers and grains, especially potatoes and oats in the highlands, and corn, wheat, barley, legumes and vegetables in the valleys. The produce is mainly for people's own consumption, and to a lesser degree for exchange and sale. Animal husbandry is diversified, with llamas in the highlands, and sheep, cows and goats in the lowlands.

University education in Bolivia, as in other Latin American countries, has numerous effects on young people. The fact that the students originate from the Andean culture, often direct descendants of the Quechua or Aymara indigenous peoples, does not imply that they identify with the local culture after they have graduated. On the contrary, the acceptance of the materialistic vision of life, learning about modern agricultural production within the curriculum, and the lack of linkages between higher education and the concepts of the rural people, often leads students away from their cultural background instead of bringing them closer to the potentials of endogenous development. That is why the State University San Simon has created AGRUCO: to enable students to receive an education that is supportive of endogenous development. The link between the university department and the rural communities of the Jatun Mayu watershed is essential in this process.

Cosmovision and farmers' organisation

Because the inhabitants of the Andean communities have been and still are predominantly farmers, their religion has evolved from agricultural experiences. This emphasises the relationship of society and nature in a certain *Pacha* (space-time) and results in a ritual cal-

endar that is in fact an agricultural calendar. This calendar permits them to synchronise the productive practices with the rhythms and cycles of the cosmos. The European and Christian colonisation could not change this: the communities chose to accept the Catholic feasts that coincided or were very close in time to their own festivities. Thus, below the layer of Catholicism, most ritualistic activities maintain their original meaning to a large extent.

In the Andean worldview, the human, natural and spiritual worlds are inseparable: they are in constant dynamic interaction with each other. The notion that people have to relate both to the natural and to the spiritual world implies, therefore, that they not only develop knowledge and skills to survive materially, but that they also have to carry out their own spiritual activities in order to be in tune with the spiritual world. In this worldview, a good crop, quantitatively and qualitatively, does not only depend on the appropriate technologies, but also on the accompanying rituals. The moment that farmers begin to create adequate physical conditions for plant growing, like ploughing for example, they ask *Pachamama*, or Mother Earth, through a ritual, to contribute to this by creating optimal spiritual conditions.

Organisation of farmer communities. The organisation of the Bolivian rural communities is twofold: it combines a syndicate and a traditional organisation. Both forms of communal organisation respond to the same cosmovision. The agrarian syndicates were founded in 1952 in the context of the Agrarian Reform, and are organised in one confederation, which is divided into departmental and provincial confederations and local farmers' subcentres, such as the 'Subcentral 8 of August' in the Jatun Mayu river basin, where AGRUCO works. The role of this organisational structure is to represent the communities to the outside world, such as during their negotiations with the state, NGOs and other entities.

The traditional organisation is reflected in two institutions: the *Alcalde de indios*, or mayor, and the *Juez de Aguas*, or water manager. The *alcalde* is the traditional religious authority responsible for ensuring cohesion within the community. He has to be involved in all community discussions, including the planning of agricultural activities, and all actions need to be legitimised by him. Moreover, he has to resolve conflicts, is part of the juridical administration and also presides over the ceremonies and rituals of the community. His symbol is the *vara*, a kind of stick. In Jatun Mayu a new *alcalde* is elected each year on the 3rd of August, during a ceremony in which all villagers participate. The water manager also has a significant responsibility. This person has the difficult role of ensuring the equitable distribution of irrigation water in the community.

Principle of reciprocity. The rural indigenous communities are linked by the principle of reciprocity that permits the reproduction and continuity of the families. There are various forms of reciprocity, and several of them are related to agricultural production. The most frequent form is called *a partir*: one farming family owns a plot of land and another family does the work; the profits are shared between both families. *Ayni* is a work-exchange arrangement practiced at family level. These systems of reciprocity are well adjusted to the heterogeneity of the climate, topography and biodiversity of the Andean

ecosystems, as the variety of climatic conditions poses significant risk to agriculture. The Andean logic also includes the concept of *El Don*, which refers to moral reciprocity, not only between people, but also with nature and the spiritual world.

Today, the continued functioning of the syndicate structure, the traditional communal organisations, and the system of reciprocity shows that, in spite of the effects of globalisation and westernisation, the Quechua and Aymara communities are still organised in accordance with their own worldview. It is quite remarkable that in the course of history, in spite of many fierce efforts to dissolve their structure, these indigenous groups have been able to withstand total cultural erosion and destruction. It is, however, necessary to avoid romanticising these cultures and to open up the Andean cosmovision through intercultural dialogue, to improve the quality of human life and the sustainability of nature.



Bolivian woman performs a thanksgiving ritual to emphasise the reciprocity between humans, Pachamama and animals.

AGRUCO

Changing approach over time. AGRUCO's main goal is to support sustainable rural development through a revaluation of local knowledge, culture and agro-ecology. Over the past years we have gained experiences in supporting the process of endogenous development without interfering too much with social structures, values and the specific contexts that make each community unique, and are finding ways of including this experience into the university curriculum. Chronologically, this process can be divided into three phases. Between 1985-1989, during the 'agro-biology phase', our programme worked with rural communities, taking organic agriculture as practised in Switzerland as its starting point. We concentrated on interrelated systems, like those between soils, plants and mixed cropping, for example. Over time, however, we came to understand that the agro-ecosystem is the result of the co-evolution of nature and human society, rather than only a nat-



Farmers and fieldworkers review the results of experiments with traditional Andean crops, Agruco, Bolivia.

ural process.

Therefore, between 1989 and 1995, we implemented an 'agro-ecology' approach, working in an interdisciplinary way in research and extension. Education and technical assistance was provided to the communities in an attempt to overcome the gap between research and its application in the field. Our methodology involved participatory research, revaluing local knowledge and local decision making models. This implied the search for a reciprocal relation between researchers and community members. The task resulted to be easier than we had thought, because the agro-ecological principles are congruent with the essence of traditional Andean agriculture. Over time we found, however, that in the process of handing over more research responsibilities to the farmers' communities, we had unintentionally continued with the conventional 'transfer of technology' model.

While entering the third phase of supporting 'sustainable rural development' in 1996, we concluded on the need to get a deeper understanding of the concepts of life of the communities we were working with, in order to develop a context for our actions. We developed a methodology based on the material, social and spiritual life of the rural people. Participatory research and intercultural communication between farmers and scientists became central in our actions. For the first time we became aware that experience and sensitivity are required when entering indigenous communities, and that we had made some critical mistakes in this respect. For example, we would try to meet with the leader of a community at a time of community fasting or during spiritual withdrawal, without taking this into consideration. We learned the necessity of understanding the indigenous concepts of life, and found that respecting, sharing and becoming part of the ritual in a

deeply spiritual way are important principles in the process of educating professionals, who intend to work in sustainable rural development. In this approach, from 1996 onwards, AGRUCO has been involved in Compas.

Combining higher education with support to rural communities. Some fundamental conditions and actions enabled AGRUCO to evolve from an university organisation with a conventional development programme, into an organisation that initiates and practices an intercultural dialogue between the scientific and local knowledge systems. Three questions were important in this process of change. Firstly, how can we establish an institutional framework that permits harmonious and permanent interaction between the university and the rural communities? Secondly, what are the main attitudes necessary to enhance the exchange between the community and the university? And finally, how can we encourage technical staff to overcome the limitations of conventional and specialised education, that prioritises the use of quantitative methods?

In order to establish the institutional basis for the intercultural dialogue we had to take two basic realities into account. On the one hand, it was the university of which we are part of, and its academic programme based on scientific knowledge and values. And on the other, it was the native communities, with an entirely different system of knowledge, objectives and concepts of life. This meant that AGRUCO had to find an institutional configuration that allowed a horizontal and reciprocal interaction with the communities. Since we wanted to ensure that our work interacted with all parts of the communal



University students exchange their views and findings with the community.

process of learning and action, we could not organise ourselves as in a conventional university: into departments for education, investigation and extension. Instead, we had to structure AGRUCO into three other units. First we created a unit called 'support to communities'. This provided the basis for the activities of the other two units, namely 'participatory research' and 'education', which imply activities both at communal and university level.

This combination of education, research and support to the communities now permits the integration of local experiences into the educational process at the university. When we describe a farmer's technology, or when a student produces a thesis in and with the community, we simultaneously contribute to participatory research, support of the communities and reciprocal education. During courses located within the communities for students, university teachers and professionals, the local people are able to transmit their knowledge and capabilities, their needs, pre-occupations and aspirations to them.

The support given to the local communities is focused on strengthening their organisation, and the elaboration and management of projects as prioritised by the community members, which are called Integrated Community Programmes for Self management and Sustainable Development, or PICADS.

Self-education of university professionals. Having overcome the artificial separation of research, extension and education, we realised that the methodological instruments we used still needed to be revised. One aspect of utmost importance was the process of re-education of the professionals involved. For example, we had to learn to behave as an interdisciplinary team rather than as a multidisciplinary one. In AGRUCO we maintain a permanent and obligatory process of self-education for the whole staff, which starts with a phase of de-schooling and an analysis of the experiences of conventional agricultural extension.

Our experience shows that it is possible to overcome the problems of extension by openly analysing the contradictions and the failures, and by making serious efforts to achieve dialogue on an equal basis. In this process the issues raised by the professionals included: how can we understand the reactions and decisions of the community? How can we learn with them about their reality and their strategies? What is extension? Who decides what? What is it we all want and what can we offer? We concluded that we should move from extension to 'guiding the dynamics of community knowledge'.

Another important factor has been the re-encounter as university professionals with our own cultural identity, as we all have our origins in Andean rural communities. This experience of re-encounter with our own roots is actually the methodological basis of the work with our pre- and post graduate students.

University training programme. In the graduate programme, the training starts with the life of the farming communities, and goes on to co-operating with the families in their search for alternatives to strengthen endogenous development. This co-operation is carried out both in the field and in workshops, with themes identified by the communities, which may vary from agro-ecology to policy and organisational issues. The basis of this work is the process of permanent reflection and dialogue between local knowledge and

scientific knowledge. In this way, the research projects of the students start, when possible, with the problems expressed by the farming communities; they then engage in looking for solutions and alternative ways of solving them.

In AGRUCO, the investigations and projects related to the re-valuation of local knowledge and agro-ecology fall into 3 major domains: plant diversity (including wild plants, forestry, and soil conservation), animal diversity (including wild fauna) and cultural and socio-economic diversity (including community strategies, social organisation and alternative community economy). Each domain has diverse projects and sub-projects, and takes general concepts such as sustainability, gender and empowerment into account. The post-graduate programme is based on the same concepts, and offers actualisation courses, as well as a masters in 'Agro-ecology, Culture and Sustainable Development in Latin America'.

Case studies, theories and experiences from other parts of the world also contribute to this educational process. The works of Rist [1992] and Apfel Marglin together with PRATEC, as well as the exchange of experiences through magazines, such as *Compas Magazine*, have stimulated this process.

Examples of field activities

Supporting endogenous development in Jatun Mayu. In 1998 we started working with the four villages of the Jatun Mayu watershed near Cochabamba. Together they form the subcentre '8th of August' founded in July 1991 in the Jatun Mayu river basin of the Municipality of Sipe Sipe, province Quillacollo. The general aim with the communities is to support farmers' organisations, so they in turn can identify and define their own strategies for endogenous development. More specific objectives include: strengthening the farmer organisations within the new social, economic, political and legal context; supporting and innovating farming practices and technologies related to health, food and biodiversity; supporting local initiatives that strengthen cultural identity; supporting communities in the elaboration, management, execution, administration and evaluation of sustainable development projects.

In the initial process of revitalising the community, we consider three major steps: orientation, consolidation and transfer. During 'orientation', the main emphasis is on understanding the natural, social and spiritual world and their interrelations by means of a 'participatory community diagnosis'. The outcomes and plans for action are then fine-tuned in the context of the whole watershed. During 'consolidation', we support and participate in indigenous research activities, especially in the field of irrigation or production. During 'transfer', AGRUCO provides follow-up support and training in project management to ensure sustainable rural development.

Apart from the monthly meetings of the communities, seminars on political and socio-economic themes of interest to the communities are organised once or twice per year. Through resolutions the farmers express their positions on various issues, like the need to improve education and health in their communities, or their discontent with certain laws. In some cases this has resulted in concrete action directed to national authorities. For example, when the farmer leaders signed an agreement against the development of genet-



The field work of AGRUCO strengthens community organisation and activities such as soil erosion control.

ically modified food and crops in Bolivia, they wrote a letter to the Secretary for Sustainable Development soliciting him not to permit experiments with genetically manipulated potatoes in Bolivia. As a result of these and other actions, the tests were temporarily suspended. The people of the communities have recognised the importance of these seminars and congresses, as enabling them to analyse fundamental aspects of community life. Moreover, this has revitalised the community organisation, the role of traditional leaders, and their relations with local authorities.

The farmers in Jatun Mayu have expressed keen interest in learning how to develop projects for their communities and how to improve their relationships with the municipalities, who, due to the Popular Participation Act, now control government funds for local activities. Permanent reflection between the communities and the AGRUCO project team has resulted in a strategic vision for the development of the river basin, which is now gaining importance in the annual plans of operation of the Sipe Sipe municipality. Community members submit their problems and requests to the appropriate authorities, such as the municipality, and express their points of view about solutions in The Integrated Community Programmes for Selfmanagement and Sustainable Development (PICADS).

These PICADS are also the basis of the interaction between the communities and the municipalities, which - according to the 'Law for Popular Participation' established in 1992 - handle government funds for local development activities. This law enables communities to receive financial support from the state through the local municipalities, which

means that successful experiences can be replicated by building them into the operational plans of the PICADs.

Documenting indigenous practices. Over the years AGRUCO has established a large number of documents based on Quechua and Aymara local knowledge and practices in the form of IK-information sheets. These documents are authored by farmers with an innovative practice or knowledge, and are used in community meetings for diffusion. The IK information sheets have proven useful tools in energising the discussions and reflections on the importance of local knowledge, and the way it is adjusted to fit the needs of each local context. Moreover, it has stimulated self-esteem and motivation of the farmers to continue experimenting with these practices. Based on these and other experiences a series of calendars have been designed and distributed, which show the inter-relation between agrarian production and the celebration of rituals and fairs.

Within the university context, a large number of publications have been brought out throughout the years, organised as different series. Several small booklets resulting from small research projects of students about specific alternative technologies in the fields of agriculture and livestock comprise the 'technical series'. The 'reflection series' includes reflections about a specific theme based on concrete experiences in the communities, while the 'memorising series' systematically documents the methodologies used in the work with the communities, research and educational activities. Finally, books are published within the 'series Kumakapi': these result from thesis research of the students following different courses. These documents form the basis of the educational activities, both in the university and in the field work, and have also resulted in a series of publications in national and international magazines.

Strengthening and revitalising indigenous practices. Within the Jatun Mayu area we are presently conducting three investigations: 'Farming strategies to gain access to potato (*Solanum spp.*) seeds for conservation of biodiversity under conditions of climatic risk'; 'Influence of social relations of reciprocity and kinship on farming production systems for a sustainable agriculture' and 'Conservation of biodiversity of cultivar seeds by a cultural value system centered around the role of the Andean woman, in the case of potato (*Solanum spp.*)'. These documentation activities, and the dialogue necessary for them, have strengthened, on the one side, the eroding local knowledge, and, on the other side, the education of graduate and postgraduate students.

Dialogues and reflection with the communities have led to ideas about specific ways towards endogenous development. For example, it was decided to establish a common seed bank in the community of Chorojo, which is now being managed autonomously. This seed bank is supplying and safeguarding the main varieties of local tubers and grains. This positive experience has been spread to other communities for reflection and analysis with a view to replicating it. In another community, Capellani, a water tank was constructed and soil improvement activities were carried out to enhance horticulture. Members of these communities also visited other parts of the country for exchanging experiences related to community organisation, organic agriculture, horticulture and local management of natural resources.

Strengthening local fairs. A fundamental element in the educational process has been the support of the fairs and festivities of the farming communities. These festivities are of strategic importance, especially in times of crisis when cash flows are restricted. Documenting and supporting these events, therefore, is of didactic significance for all involved farmers, technicians, students, as well as development scientists. It provides the chance to learn more about the depth of the ethical principle of reciprocity in the Andean cultures.

Seventh Friday Fair. AGRUCO has devoted much attention to the Seventh Friday Fair, carried out on the 7th Friday after Easter, in the town of Sipe Sipe. The exchanges that take place during this fair are guided by the traditional concepts of *cambiacuy*, *trueque*, and *purchase sale*: each system complements the other in terms of objective, time and importance. The *cambiacuy* is the most important form of exchange, based on affinity rather than on interest in gain; the produce is handed over as a gift to satisfy and please the receiving family. It has a strong spiritual and emotional dimension, strengthens the ties between families and signals new friendships. *Trueque*, or barter, is the other form of exchange at the fair, through which farmers can exchange ceramics, woven baskets, or agricultural products, without the involvement of cash. Purchase sales enable the farmers to buy household items, like sugar, rice cooking oil, radio batteries, and enables transport and buying *chicha*, or local corn beer.

During these exchanges, community and family news is shared, which strengthens feelings of solidarity. This fair shows how two sets of economic logic complement each other: the indigenous logic of 'reciprocity' and the modern logic of the market economy. The fair is very important for farmers in the region because it contributes to food security through non-monetary and monetary exchange, and strengthens social relationships between relatives, friends and *compadres*, or godfathers, from different communities in the valleys and highlands. Moreover, it is an occasion when religious feelings are expressed. According to elderly farmers in villages near Sipe Sipe, it may date back to the times before the Incas. The Seventh Friday Fair, like other indigenous fairs and festivities in Bolivia, has been losing ground over the last decades due to the influence of religious sects and increased consumption of agroindustrial foods, such as sugar, rice and noodles. These factors have also led to reduced production of Andean crops.

The project to strengthen the Seventh Friday Fair is a result of joining the farming families in several rural communities in the highlands of Sipe Sipe. Over a period of 10 years AGRUCO has supported the production of Andean crops, and small agro-ecological projects have been carried out to increase biodiversity and improve food security. Organising of farmer workshops to reflect on the objectives of the fair, and its importance in times of crisis, has been another activity, as well as publishing on this subject in local papers and radio. The results of these activities have been positive. We have had a good response not just from the communities where this experience was born, but also from other communities and from people in the city of Cochabamba.

This year, the process of strengthening the fairs has been broadened with the active participation of the municipality of Sipe-Sipe. This project not only stimulates fairs and festivities, but also aims at increasing access to Andean foods, strengthening indigenous

cultural identity, and educating the urban and rural population about Andean cultural practices. But, most importantly, the support given to these socio-cultural indigenous activities point out new ways of reactivating the production of Andean crops and supporting indigenous forms of solidarity. These may well be viable alternatives to the crisis that the Bolivian rural population is facing today.

Supporting local health traditions. After more than a decade of working with local agroecological knowledge, AGRUCO concluded that it would not be possible to support sustainable agricultural production without taking the communities' concepts of health and disease into account. In the Andes agriculture, food, health, and cosmovision are parts of a diversified whole: there can be no health without culture, food and biodiversity. AGRUCO's experiences with local knowledge have allowed us to get a better understanding of the way these concepts of health and disease fit into the daily lives of the people. Health is based on the principle of 'being united with everyone to live well and better'. This implies being in harmony with the family, the community, the *Pachamama*, or Mother Earth, and all supernatural beings. Consequently, a disease cannot be cured by simply applying a medicinal plant. The medical treatment needs to be combined with a ritual that re-creates adequate spiritual conditions for a healthy life.

The indigenous inhabitants of the Andes identify three types of supernatural diseases. First there are 'diseases due to supernatural punishment'. These diseases are caused by the accumulation of 'sins' for not obeying the norms of the community. The second category of supernatural disease includes those caused by 'unbalanced' people. This especially refers to negative practices in love life, such as envy or desire for revenge. These diseases are 'sicknesses put upon someone', 'sicknesses due to hurt' or 'diseases sent by humans'. The third type of supernatural disease is known as 'spirit loss'. Its usual symptoms are headaches, stomach aches, and rashes and itching all over the body. The villagers attribute this illness to emotions of fear, for example due to stepping on an anthill or the sudden appearance of a snake. The one who treats the 'loss of spirit' is the traditional healer, or *coca khawador*, 'he who foretells the future and cures with coca leaves'.

AGRUCO has worked on participatory research to collect the medicinal plants and the knowledge related to them in the communities of the Jatun Mayu basin. More than half the wild plants in the Chorojo community have a local medical use. A total of 112 species with medicinal properties have been found. This has been analysed in community meetings, and documented in small booklets that are distributed to other communities and regions.

International networking

Latin-American Compas Network. AGRUCO hosted the First International Compas Workshop in Capellani in 1996, and since 1999 assumed responsibility to co-ordinate the Compas network in Latin America. Within this context, a Latin-American Workshop on Indigenous Cosmovision and Biodiversity in Latin America was organised in the community Chorojo in February 2001. Besides AGRUCO, Compas and the Department for Rural Development of the Faculty of Agronomy of UMSS, experts in the subject matter from

various indigenous organisations in Peru, Chile, Ecuador, Guatemala, Nicaragua, Colombia and Bolivia were present at this event. The central themes of the workshop were 'indigenous cosmovision' and 'local knowledge and biodiversity', which are essential components of development programmes for the revitalisation of culture, natural resources and indigenous knowledge.

Presently, the Latin American Compas Network is divided into units along the lines of ethnicity: Quechua and Aymara indigenous groups (with organisations from Bolivia, Peru, and Colombia), Mapuche indigenous groups (with organisations from Chile), and Maya indigenous groups (with organisations from Guatemala). In the future, the network may also include Amazonian indigenous groups.

Other networks. AGRUCO also has a co-ordinating role in other international networks, such as MAELA (Latin American Agro-Ecological Movement), which includes over a 100 organisations involved in organic agriculture in Latin America and the Caribbean, GRAIN (Genetic Resource Action International), and LEISA (Information Centre for Low External Input and Sustainable Agriculture), and participates in the Platform against Genetic Modification.

Towards endogenous development

There is an urgent need for a new relationship between the scientific knowledge system and the hundreds of native knowledge systems all over the world and recognition that, after all, we are all immersed in the same adventure. Or as the native people would say: "*we are all fish in the same sea, we are all birds of the same sky*". Fifteen years of permanent work have made AGRUCO a pioneer in the field of agro-ecology and in revitalisation of indigenous knowledge and Andean culture within the university context. This has permitted AGRUCO to develop into a centre of excellence, recognised by the academic world and by other Latin American institutions.

One of the questions that keeps coming up is: 'In view of the existing difference between conventional rationalism and the native concept of life, what are the options for the Andean population to develop and yet maintain their identity?' It is obvious that one of the ways to express cultural identity is through using the native language. Over the years we have learned that as outsiders we should be very careful with the interpretation of local concepts. We refer not only to the literal, but also to the conceptual and the symbolic dimension of these languages. This is an aspect that we have had to take into account throughout our activities.

Concept of poverty and well-being. It is also essential to study the meaning of concepts, such as 'poverty' and 'development', according to the worldview of the rural people. For the people in communities of Jatun Mayu, 'development' means *Allin Qausay*, or 'living well', which implies not only material well-being, but also living in community, having good relations within the community, and with the natural and spiritual world. It is only when a person can comply with the demands of the social, natural and spiritual surroundings, can he or she reach this stage of 'living well'. In this sense, anyone in the com-

munity who does not have enough food to eat, or cannot totally support his family in a material sense, is not considered poor, but rather as 'lazy'. The concept 'poverty' is related to a person who, while he or she has reached considerable material well-being, is not able to share this with the community, nature and spiritual beings, who have facilitated this success to start with. Poverty is thus related to a person who has lost the spirit of reciprocity. Such a person is not seen as being apt for community leadership nor for working towards 'development'.

These indigenous concepts of poverty and development are not in line with the concepts used in official and conventional development programmes. In fact, many laws relating to the management of natural resources go directly against the internal norms and functions of the indigenous communities in the area that are for preserving the same natural resources. This lack of understanding, and perceived differences in interests between the official organisations and farmers, has led to many confrontations, such as road blockages and other forms of protest. These are often seen as the only way to make the government listen to the farmers. Dialogue is still a far cry.

Intercultural dialogue in universities. Yet there is hope. We have learned that the Andean communities have plenty of potential in moving towards endogenous development. The indigenous concepts and community organisation structure, in spite of numerous conflicts and difficulties, form an important basis for endogenous development, as they imply cultural values geared towards community well-being. Another potential is the continuous experimentation and innovative capacity of the community members, to include and adapt external practices and strategies into their lives without losing their cultural identity. Moreover, the recent laws for decentralisation give local communities the possibility to negotiate their interest in the municipalities, and obtain funds for local projects.

The support of qualified technicians, who have received an education that includes the indigenous cosmovision, is essential in this process. We are convinced that a university education, which is based on enhancing the synthesis between western-based scientific knowledge and traditional Andean knowledge, is required to educate fieldworkers who would gain the capacity to truly support endogenous development.

