



## **Community Biocultural Protocols**

**Building Mechanisms for Access and Benefit Sharing among the Communities of the Potato Park based on Quechua Customary Norms**

**Detailed Case Study**

**ANDES (Peru), The Potato Park Communities and IIED**

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## **Executive Summary**

In this case study, Association ANDES, the International Institute for Environment and Development (IIED), and the Potato Park present the results of the project “Protecting Community Rights over Traditional Knowledge: Implications of Customary Laws and Practices.” This project included the development and negotiation of the Inter-community Agreement for Equitable Access and Benefit Sharing, which proposed an innovative approach to benefit sharing based on the use of indigenous customary laws, norms and practices. The concept of Biocultural Systems (BCS)<sup>1</sup>, which understands processes, resources, knowledge and all beings as reciprocal parts of an indivisible environment, was a guiding theory in this initiative. Accordingly, the inter-community agreement took the form of a Biocultural Protocol. This detailed case study complements the summary for policy-makers (see: <http://pubs.iied.org/G03168.html>).

The Nagoya Protocol on Access to genetic resources and Benefit-Sharing (ABS) requires countries to take measures to ensure equitable benefit-sharing with indigenous and local communities (ILCs) for the use of traditional knowledge and genetic resources held by them, and to ensure access is subject to their Prior Informed Consent. Countries shall take into account indigenous and local communities’ customary laws, community protocols and procedures in implementing their obligations relating to traditional knowledge (TK), and endeavour to support the development by ILCs of community protocols for access to TK and equitable sharing of benefits from its use. The Potato Park’s inter-community agreement provides a model for developing effective community protocols, which build the foundations for equitable and sustainable local economies based on biocultural goods and services, while building community capacity to negotiate *equitable* agreements with third parties. It is one of the few examples of a community protocol which is actually functioning in practice to guide the distribution of a range of monetary and non-monetary benefits amongst communities.

Biocultural Protocols are not only ‘external’ ABS and PIC tools, but also internal governance tools that use customary laws and inputs from national and international law, adapted to local conditions, to regulate interactions among biocultural resource users, and define and guide the behaviour of local networks. The Potato Park protocols emerged from the Potato Park Biocultural System and, therefore, are embedded in the traditional values, ethical norms, customary uses, and cultural and spiritual practices associated with the biocultural resources of the Park. This interlacing of intercultural practice allowed participants in the research process to link Indigenous Andean legal principles, experiences and norms to Western legislative models, thereby providing clear guidance as to how Indigenous biological and cultural resources may be appropriately accessed and benefits equitably shared.

The Inter-community Agreement provides a broad outline for equitable sharing of all the benefits received by the Potato Park, directly or indirectly derived from its biocultural resources. Benefits from different economic collectives are shared and reinvested in strengthening the biocultural system, through an inter-community fund. The Agreement was developed through an in-depth participatory process facilitated by Quechua community researchers over 2-3 years. Three core customary law principles that maintain biocultural systems were identified – reciprocity, duality and equilibrium, and from these principles, derivatives were identified and used to flesh out the benefit-sharing framework, based on existing local norms and practices.

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<sup>1</sup> A complex, adaptive, linked social and ecological system and all of its subsystems and the relationships between them. These relationships are co-evolving and self-organizing, producing rich biocultural diversity.

It is the conviction of the researchers and community members involved in this study that, in order to design appropriate mechanisms to implement *sui generis* systems that are practical and efficient, and at the same time consistent with the aspirations, values and beliefs of Indigenous and local communities, it is important to abandon preconceived notions about access and benefit sharing agreements and the processes of obtaining prior informed consent. A key starting point for developing *sui generis* systems is to analyze issues of access agreements and consent processes from the perspective of the communities themselves; using as the principal lens the customary norms that have thus far guided the preservation and maintenance of local traditional knowledge (TK).

## **1. Introduction**

The communities of the Potato Park are deeply committed to the conservation of biocultural resources, associated knowledge, and Indigenous rights, and undertook the present project to further investigate the role of customary norms and institutions in the protection of traditional knowledge (TK) and resources. The development of a Biocultural Protocol, in the form of the Inter-community Agreement for Equitable Access and Benefit Sharing, is the result of their efforts. In addition to providing a valuable example of effective community-based protection of TK and genetic or biological resources in praxis, this initiative is also one of only a handful of examples worldwide of working models that stem directly from customary laws and norms. Given the present international paucity of models that adequately value and protect Indigenous and local community rights, biodiversity and customary norms and practices in relation to benefit sharing and access to resources and knowledge – the present initiative may further serve as an example of best practice in relation to the implementation of the Nagoya Protocol.

“Protecting Community Rights over Traditional Knowledge: Implications of Customary Norms and Practices” is a research project conducted by the International Institute for Environment and Development (IIED) in five countries: Peru, India, China, Kenya and Panama, with financial support provided by Canada’s International Development Research Centre (IDRC), between 2005 and 2009. The project in Peru was jointly developed with Association ANDES and the communities that make up the Potato Park in the Cusco region. Its main objectives were to:

- 1) Protect the rights of the communities regarding their biological resource-related traditional knowledge, in accordance with their customary laws and practices; and
- 2) Contribute to the debate within the CBD, Food and Agriculture Organization (FAO), and World Intellectual Property Organization (WIPO), with findings on the role of customary law in defining mechanisms for equitable benefit sharing.

The present case study focuses on the project results for Peru, paying special attention to the experience gained in developing the Inter-community Agreement for Equitable Access and Benefit Sharing among the six communities of the Potato Park. The impetus for this agreement came with the signing of a repatriation agreement with the International Potato Centre in 2004. A mechanism was needed to ensure equitable sharing of seeds and monetary benefits derived from this agreement, and of revenues derived from other economic activities in the park, to avoid potential conflicts amongst the communities.

The study results demonstrate the need to adopt an innovative approach to the distribution of benefits – one that takes into account Indigenous perspectives as a starting point (and beyond); and one which emphasises the holistic nature of traditional knowledge systems by working with the corresponding customary laws of Indigenous Peoples. This study also attempts to contribute to the construction of epistemological bridges between Indigenous and Western societies, through sharing experiences,

including experiences of overcoming obstacles, and ideas about best practice in the design and implementation of a participatory, creative methodology and framework for benefit sharing. The aforementioned methodology and framework were both developed inter-communally, built from and by the respective communities.

This detailed case study complements the shorter summary for policy makers, see:

<http://pubs.iied.org/G03168.html>. It provides more details on: the work of Asociacion Andes (Sections 2 and 3); the problems with existing ABS models (Section 4); the need for biocultural approaches (Sections 4 and 5); the methodology for developing the park's biocultural protocol (Section 6); the mechanisms for equitable benefit-sharing in the Potato Park (Section 7); how the biocultural protocol implements the Nagoya Protocol (Section 8); and its role in promoting real equity and benefits, recognition of customary law, conservation and poverty reduction (9 and 10).

## **2. Asociación ANDES**

Association ANDES is an Indigenous NGO located in Cusco, Peru. The activities of ANDES are focused on ameliorating existing poverty and fighting the causes of future impoverishment; the development and dissemination of models for the culturally-based management of biodiversity and landscapes; the recognition and strengthening of traditional resource rights; and the promotion of institutional and policy changes relevant to environmental protection and self-determined development or *buen vivir*. ANDES collaborates with community-level organizations in the development of strategies for the adaptive management of Indigenous Biocultural Heritage – strategies which affirm the rights and responsibilities of communities and prioritize food sovereignty, health, and local livelihoods. In support of these goals, ANDES seeks to build local capacity and adaptive responses to the effects of globalization, and to strengthen the basic socio-economic, cultural, political, and ecological well-being of the communities.

To this end, Association ANDES has been working with Andean indigenous peoples in the Southern Andes region of Peru region supporting indigenous and environmental rights as well as creating actions to build an endogenous development model that can achieve resilience for indigenous peoples and their territorialities at a regional scale. ANDES approach is based on the “Ayllu”<sup>2</sup> system, a traditional indigenous holistic territorial approach still thriving in the Andes and one which allows dialogue and cooperative knowledge construction among members of indigenous communities who share the same history and vision of development: “Sumaq Causay”<sup>3</sup>. The result is a relevant territorial development strategy (which improves upon small and dispersed initiatives) that underlines the multidimensionality of indigenous identity and gives a holistic value (not just a commodification value) to the indigenous territoriality, re-establishing and enhancing old and new biocultural

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<sup>2</sup> Quechua view the community as the totality of existence, including the people, ruins, fields, sacred mountains, lakes, waterfalls, and the spirit of the forest, among others. Three interconnected and interdependent communities form the Ayllu: the Runa Ayllu (the community of humans and domesticated species), the Sallka Ayllu (the community of the ‘wild’ and semi-domesticated species), and the Auki Ayllu (the community of the sacred and the ancestors). The goal of the Ayllu is to achieve Sumaq Causay (holistic living) which requires collective exploration and creation of the material and spiritual conditions to build and maintain harmony among these three Ayllus.

<sup>3</sup> “Sumaq Causay” (Holistic Living), is a local concept of self-determined development; it refers to the indigenous culture of nurturing life. Sumaq Causay is achieved when the relationship of reciprocity among three Ayllus is on balance. The basic exchange value of Sumaq Causay is Ayni, or sacred reciprocity. Ayni defines the relations of production, reproduction and cooperation within and between all the members of the communities. Ayni therefore provides the ethical and spiritual norms that regulate all exchanges between people and their environment, promoting the preservation of the integrity of ecological processes, which in turn ensure energy flows and the availability of biodiversity and ecosystem goods and services.

networks. Guided by a rights-first approach, ANDES has been able to give economic value to the linkages between biological and cultural diversity; creating baskets of landscape goods and services and novel TK-based local products (particularly derived from the local agricultural diversity).

In the last fifteen years the land tenure and territorial rights of indigenous peoples have been eroded by policies that clearly favor the corporate sector, with negative consequences for agricultural landscapes, agrobiodiversity and food security and sovereignty. An example that epitomizes the collusive and dictatorial nature of the system is a recent Presidential Decree allowing GMO crops in Peru, a recognized center of origin and mega-diversity country. On Friday April 13 2011, the current President, in spite of widespread opposition and usurping complete dictatorial control through various unconstitutional laws, passed a Decree that gives de facto control of our food and agriculture to the transnational Monsanto.

In response to the challenging political context that indigenous peoples face in the Andes and elsewhere, ANDES works to build meaningful links between local territorial models and national and international policy. This is accomplished through developing bottom-up legal and policy proposals that create enabling policy and legal conditions that support traditional process of food production, build resilience in agricultural landscapes and strengthen indigenous rights. ANDES has chosen to focus on the development of local rather than national policies because the national institutions which are capable of implementing effective policy are either openly against indigenous peoples' interests or do not yet exist. However, such institutions exist at the local level and are highly sensitive to local realities with institutions that guarantee compliance and effectiveness.

ANDES' cooperation with the Regional Government of Cusco has taken place on specific issues which concerned indigenous peoples' interests regarding food, agriculture and territoriality. During the last five years ANDES has led the development of two important Regional Ordinances: 010-2007, which declares Cusco as a GMO-free region, and 040-2009, which bans biopiracy and regulates access to genetic resources. ANDES has also made breakthrough agreements with international institutions such as the Repatriation Agreement with the International Potato Center (CIP) by which more than 400 native potato varieties were repatriated to the Potato Park from CIP's gene bank; and with the Global Crop Diversity Trust to send botanical seeds to the Seed Vault in Svalbard, Norway, to protect them against disasters brought by climate change. These policies have made gains in advancing and protecting the rights of Mother Earth, the integrity of indigenous biocultural systems, collective cultural and intellectual property rights, a TK-based creative and solidarity rural economy, and the reliable provision of food, water and energy. Currently ANDES is working on developing a proposal for an important Ordinance on Food Sovereignty. This ordinance will have as its objective to ensure that those who produce food have equitable access to, and control over, land, water, seeds, and agricultural biodiversity, and most importantly, will recognize the sacred nature of seeds.

### **3. The Potato Park: Approach and Activities**

#### **3.1 A Traditional Andean Ayllu as an Indigenous Biocultural Territory**

The Potato Park, dedicated to the protection of the native potato via Indigenous territoriality traditions, is emblematic of ANDES approach to territorial development. The Potato Park was established in 1998, by Association ANDES-IIED and six Quechua communities in Písaq, Cusco, Peru, as an Agrobiodiversity Conservation Area. The initiative was undertaken to celebrate and protect a unique traditional mountain agroecosystem, its Indigenous culture, and one of the richest native potato diversity areas in the world. The potato, an Andean biocultural expression, was chosen

as a 'flagship species,' placed at the forefront of efforts to restore local habitats and ecosystems, ensure cultural survival, and promote local rights and livelihoods.

The Potato Park is located in the Písaq, in the Sacred Valley of the Incas, at between 3,400 and 4,500 meters above sea level, spanning some 10,000 hectares of land. The Park contains a vast diversity of domesticated and wild potato varieties, and is home to the largest number of wild potatoes in the world. The Potato Park is a centre of origin of the potato (CIP, 2008). The region is home to eight known native and cultivated species and 2300 varieties, of the 235 species and over 4000 varieties found in the world. Also found in the region are 23 of over 200 wild species found in the world. The genetic diversity found within just one plot in the area can reach up to 150 varieties (Chawaytire community, Potato Park) (ANDES-Potato Park, 2007). Apart from potatoes, other native Andean crops such as olluco, beans, maize, quinoa, wheat, tarwi, mashua and oca are produced. Beyond crop production for consumption, agriculture is also responsible for producing wool, medicine and wood. Other important functions of the agricultural system include food security, conservation, development and livelihoods and water conservation. Complementary economic activities include animal husbandry; sheep, cows and camelids.

The Potato Park is modeled on the Ayllu system and is an example of how local participation and control of development processes can achieve sustainable rural livelihoods, resilience and indigenous self-determination. This association of six communities have acquired an economic value based on the particularities of its biocultural diversity, successfully integrating product development (vertical) and territorial development (horizontal) with different sectors of rural production (e.g. handicrafts, gastronomy, agriculture, natural products). Innovations based on indigenous knowledge and science, recognition of the role of women and traditional knowledge experts, as well as horizontal networking among indigenous communities in the region - and from other region of the globe - are creating the local capacity needed for the sustainability of the model. Their work on climate change adaptation which bridges traditional knowledge and science has brought recognition as a community model of ecosystem-based adaptation. Strong leadership has arisen in the communities, and the Potato Park is enhancing its collaborative and competitive advantage by influencing policies, economies and metrics locally, nationally and internationally in order to support living cultures and living systems.

The six communities of the Potato Park have worked tirelessly to strengthen their technical skills and traditional knowledge systems and have applied it to a host of sectors: Six natural medicine pharmacies have been established; a cottage industry of natural products based on potatoes and medicinal plants implemented (focused on the production of natural medicines, cosmetics and nutraceuticals); a biocultural tourism program established (based on landscape enjoyment and educational visits); a Culinary Sanctuary dedicated to the potato is in place (which features hands-on activities associated traditional crop production, experience of cultural and spiritual values of food, gastronomic enjoyment in a restaurant specialized on native potatoes); and a handicraft center which uses agrobiodiversity-derived inputs is active. A local museum for the native potato is being planned. The creative links developed between product development, territorial development and production sectors of the Park is advancing the construction of a dynamic solidarity economy model based on creativity, diversity, equity, self-management, ecological balance and principles of economic efficiency. This model is not only helping in meeting basic needs, but producing concrete benefits to share among all communities (Argumedo and Pimbert, 2010).

The active construction of epistemological bridges between traditional and other knowledge systems (for example scientific knowledge) has nurtured a dynamic process of action research, cooperative discovery and horizontal learning and knowledge networking which is led by the communities. Research partners include local, national and foreign indigenous organization, universities and foundations; the Regional Government of Cusco; the International Potato Centre; the International

Treaty on Plant Genetic Resources for Food and Agriculture; and the Global Crop Diversity Trust, among others. Participatory research topics include agro-ecological and eco-geographic studies, as well as socio-economic, indigenous knowledge and ethno-botanical surveys; crop adaptation to climate change; agroecosystem and climate change monitoring; food sovereignty; localized food systems; gender; traditional knowledge and intellectual property; creative solidarity economy; biocultural product development; participatory plant breeding, among others. Collaboration with CIP under the dynamic conservation approach focuses on the repatriation of native potatoes from CIP's gene bank to the Potato Park, botanical seed reproduction, and characterization and evaluation of native potatoes, particularly on morphological descriptors and agronomical traits.

A Contact Learning Zone model for South-South exchanges has been implemented. Under this model, international-training courses to share information and knowledge on methods and processes in establishing and managing Biocultural territories for indigenous and expert groups from Peru and the world are carried out on a demand basis. Infrastructure for seed management, research and development such as cool room storage, has been built and is actively used. A center for research on traditional knowledge and the potato and for hosting international training meetings is under construction with the support of the ITPGRFA and the Development Market Place. A Register of Quechua Biocultural Heritage has been founded; this includes a register for the more than 1400 varieties of native potatoes in the Park's collection, which is the cornerstone of the defensive protection of the Park's collective intellectual property.

The Park administers and manages a Collective Trademark for the Park's products and services. The purpose is not only to distinguish the geographical origin of these goods and services, but also their very special quality and nature and their distinctiveness in regards to existing similar products and services in the market; thus, promoting the branding of the Park's unique biocultural products<sup>4</sup>. The promotion of innovations based on indigenous knowledge and science, inter-cultural collaboration, recognition of the leading role of traditional knowledge experts, as well as horizontal networking among indigenous communities in the region - and from other regions of the globe - are creating the local capacity needed for the sustainability of the model

The Potato Park's communities retain local potato landraces because of their own interpretations of the biocultural value of these varieties. The potato embodies the very roots of Andean existence. Its significance is kept alive in legends and myths, echoed in the voices of men, women, children and elders who depend on them to complement the cold objective data provided by their environment and help them to interpret the world. Through the potato farmers speak to their gods and the ancestors, and this has been critical for keeping a strong indigenous identity. These biocultural perceptions form the basis of the in-situ approach of the Potato Park. While the virtues of this paradigm are remarkable, it is also clear that it does not constitute a full solution to the rapid increase in genetic erosion. As it is the case for ex-situ conservation, the in-situ model alone can't do all things for all the plant groups in the ecosystem.

Aware that there is not a single solution for conservation, the Potato Park has embarked in the search of an effective integrated in-situ – ex-situ model. This approach has been termed Dynamic Conservation. Thus, since 2004, the Potato Park has teamed up with CIP in the development of the dynamic conservation concept, combining approaches of CIP's gene bank (ex-situ) with the Potato Park gene reserve (in-situ). The cornerstone of this combined approach is the Repatriation Agreement. The CIP-Potato Park agreement has allowed an increase in the potato diversity of the Park, from 778 varieties in 2004 to around 1345 in 2011. The process has brought together traditional knowledge and science, fostering multidisciplinary research and biocultural processes which have enhanced the

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<sup>4</sup> Argumedo, A. Forthcoming. Assessing the Impact of a Collective Mark: the Case of the Potato Park in Cusco Peru

differentiated progress of local crop diversity in situ, guaranteeing the evolutionary development of Andean crops and conservation of wild relatives, as well as nurturing a local economy based on agrobiodiversity. The increase in diversity has fostered further diversification of potatoes brought by the revival of landscape-based participatory plant breeding traditions amongst the communities, a method responsible for the incredible diversity of potatoes in the Andes. This process of in situ conservation and community based management has also enabled effective policy support for the traditional resource rights of the communities.

The increase of potato diversity and the maintenance and reproduction of a multiplicity of Andean cultivated plants and wild relatives have turned the Potato Park into a living genetic reservoir. As a biocultural Gene Reserve, the Park maintains the habitats where the potato can thrive and further evolve without being actively influenced in its development (because of its indigenous farming model), and guarantees its evolutionary development under agricultural production and different levels of utilization intensity. The Gene Reserve approach is helping to set the criteria for conservation and sustainable use, to shape biocultural utilization concepts, interdisciplinary and complex system studies, and to create standards for data collection, storage and exchange, and local participation and control of the process.

Currently the Potato Park has a collection of 1345 native potato varieties; 778 variety specimens have been collected locally; 410 repatriated from the International Potato Centre, and 157 were gained through seed exchanges with the Network of Native Potato Growers. The Potato Park as a gene reserve is also advancing the viability and integrity of indigenous seed systems and can be considered one of the most extensive efforts to preserve potato crop diversity in the world and an insurance policy by holding source material needed to meet challenges of evolving pests and climate changes. Maintaining this great genetic diversity of potatoes, the fourth most important food crop in the world, is itself a colossal task, undertaken daily by the women and men of the Potato Park. Despite the fact that the communities have demonstrated concrete social, cultural, economic and ecological impacts on the conservation of potatoes and the generation of dynamic conservation approaches, and that their efforts have received recognition at national and international levels, the investment and costs of this phenomenal work has yet to be accounted for in national and international conservation policies.

### **3.2 Social Organization and Governance**

There are six Quechua communities in the Potato Park. In 1993, the total population of the Potato Park was 3880 inhabitants, with a population density of 443.87 inhabitants per km<sup>2</sup>. There is a small majority of women (50.2%). 51.6% of the population is between 15 and 64 years old. 28% is between the ages of 4 to 14, and 16% of infants younger than 4 years old. The communities rank in fourth place for extreme poverty and sixth regarding absolute poverty in Peru's poverty map (FONCODES, 2007).

The majority of the population is indigenous to the region, with only 1% of the population being immigrants. There are two identifiable types of economic migration out of the Park; seasonal migration, and permanent migration. Seasonal migration is mainly undertaken by the heads of families who migrate to Quillambamba and the Cusco areas from January to April, during the period of least agricultural activity in the high altitude zones. These migrants work in coffee plantations and as laborers. There is however a small portion of mainly adult males from some communities that permanently work as porters for tourists hiking the Inca Trail to Machu Picchu.

The Potato Park communities have developed subsistence mechanisms and social relations through adapting with their natural environment. The family unit is the productive unit and the vehicle for processing and planning future activities. The extent to which the communities are open to markets,

incorporation of external technologies and specialization depends on the territorial positioning of the communities. Paruparu and Pampallacta are more isolated, while others, such as Cuyo Grande and Sacaca are more open.

The Potato Park governance system developed and evolved from the concept of Pachamama. This concept has guided the holistic understanding of the world and has ensured accountability for generations, resulting in teachings that have cultivated principles, duties, responsibilities, philosophies, jurisdictions, and authorities. Such a system has evolved into unwritten customary laws, which reflect and codify peoples' relations to Pachamama, and to one another. They reflect the co-evolution of Quechua culture and governance system with the biological diversity that sustains their communities. Therefore, governance institutions reflect a complex network of relationships with the species, populations and ecosystems they live with, which have nurtured Quechua people over generations. This underlines the fact that human and the natural world are not separate, that they are interdependent and constitute the reality of our world. In this context, biocultural diversity is the basis of indigenous self-determination

The governance the Potato Park uses both customary and new institutions for decision-making. Customary laws have been incorporated in all aspects of the management of the Park, though the application of norms in the six communities varies according to the needs and traditions of each. Formal local organizations with elected authorities are recognized as legal representatives by the state, and traditional authorities continue to fulfill roles within communities but are not recognized by the state. The Potato Park governance system is comprised of a mixing of the two:

Formal Governance Structures: Formally within the Peruvian legal system, the organization and decision making of the 'Comunidades campesinas'(rural communities), are considered in Law No.24656, General Law of Rural Communities, in which the rights and duties of community members, their internal organization, their communal territory, heritage and business activities are defined. Their governance is based on 3 bodies:

- The 'Asamblea General' (General Assembly) which is the highest authority
- The 'Directiva Comunal' (Community Board), responsible for community governance and administration
- Specialized activity committees, responsible for coordinating specific activities with the Community Board.

Traditional Governance Structures: There are three levels of administration that correspond to three scales:

a) Landscape scale: The supernatural realm is an important aspect of community life, and almost all phenomena are described through this understanding. At the landscape scale, supernatural phenomena are related to the mountain spirits. Ausangati is the most powerful mountain god in the area, with subordinate smaller mountains that form spirit guardians of the communities. Within the Park, the mountain Sunpichu and his wife (another mountain) are the owners of the land, the animals and even the community members.

b) Community scale:

- *Varayoc* (mayor): they are elected based on their community skills, are usually elderly in age, called taytallactas and are respected by the community. They are responsible for keeping order, cordiality and respect between community members. They also must lead and organize community labour.
- *Pututeros* (helpers): generally are children who support the Varayoc and are elected to

pass on knowledge of territorial administration

c) Family scale: Most of the decision-making occurs within families. The main spokesperson for families are usually men, while women play an important role in decisions over quality of life and planning of activities related to finances, food and health. When the father is not around, women take on male roles. Children also participate by supporting in tasks.

The Association of the Communities of the Potato Park is an organization of the 6 Quechua communities that conform the Park. Each community has formal legal recognition through communal land titles under the national territorial system. The legal base on which the Association is formed under Peruvian law allows for the organization of communities that seek collective goals. The common goal in this case is not only conservation of cultivated agrobiodiversity, but also the development of indigenous territoriality based on solidarity economy and the creativity and innovations associated to traditional knowledge and genetic resources, and the promotion of traditional resource rights.

### **3.3 An alternative development model and creative economy**

One of the goals of the Potato Park has been to establish an alternative development model, which is inclusive, and supports cultural identity and conservation of biocultural heritage. Included in the definition of development goals from the perspective of Sumaq Causay as well being is a focus on health, education, democracy, equitable distribution of income and environmental conservation.

A collective creative economy is a strategy for collectively providing solutions to development needs for attainment of Sumaq Causay. The economic system is designed as a model for creativity and solidarity, through production of goods and services that are derived from the biocultural expressions and application of knowledge, practice and traditional systems of innovation. Andean principles of solidarity and reciprocity are used to guide economic activity. The system has three inter-related components:

- a) Creative institutions (micro businesses and economic collectives)
- b) Creative communities (landscape, ecology and culture as well as traditional institutions and customary laws that support them as a holistic system)
- c) Creative people (runa) (traditional knowledge)

### **3.4 Economic Collectives**

ANDES and the Potato Park worked together in establishing several economic collectives with the objective of conserving and sustainably using biological resources, and a creative and solidarity economy based on those resources. The collectives include the Potato Arariwas (a seed repatriation and conservation collective), the gastronomy Qachun Waqachi collective, Tika Tijillay women's video collective, Naupa Awana craft collective, the Willaqkuna guides collective, and the Sipaswarmi Medicinal Plants Collective.

Indigenous women in the rural areas of Peru are often marginalized in health, education and legal services, as well as in opportunities for employment. The rich biological resources and associated traditional knowledge are in danger of disappearing due to the lack of recognition of the rights of indigenous women. In other instances, knowledge is used to benefit outsiders, and the contribution of indigenous people's knowledge and resources is not recognized.

The Sipaswarmi collective grew out of the project "Indigenous Peoples and Primary Health, Medicinal Plants, Education and Training of Young Women". The project hoped to deal with some of

the important issues facing indigenous women and their communities. The collective has been working on improving levels of literacy, introducing and applying modern technologies like computers and business administration skills, while promoting the use, transmission and protection of indigenous knowledge associated with the conservation and sustainable use of local medicinal plants. Today, the production of herbal medicines provides safe low cost medicines for families in the Potato Park, and the production and processing of herbal products for sale to tourists also provides additional income generating opportunities for local women. Their traditional knowledge is promoted and protected through the use of a multimedia database register.

All of the products made by the women are based on their traditional knowledge using local medicinal plants, while elements of western medicine are also introduced, such as first aid, preventative medicine and treatment options which harmonize with traditional medicine.

### **3.5 Biocultural Databases**

The Park has developed Local Biocultural Databases through use of the traditional Andean system of Khipus. Khipus were used during prehispanic times, to collect and store information related to biological resources, among others. Steps from the binary Khipu process, the symbolic components of the codifying system, the type and quantity of information the Khipu contained, processes for reading information, and the relational and ordering features are the inspiration behind the design of the databases and especially the free software. A visual register was developed for information that uses shapes, sizes, colours and numbers through knots on strings of khipu and an oral system for administering the information registered.

The creation of the databases was informed by sharing experiences between women of the Potato Park and the Deccan Development Society Sagan womens' collective (Andhra Pradesh, India) in 2002. The DDS experience provided opportunity to learn about biodiversity registers and use of multimedia and participatory information collection methodologies. Local taxonomies and relational ordering and storing of information have come together in developing the matrix for the biocultural database.

The result of applying the Khipus system to biocultural databases is an adaptive system that allows capture, registration, storage and administration of indigenous knowledge based on Andean traditional science and technology. It is a tool that can be used to conserve, promote and protect local knowledge, thus becoming useful in facing political, social and technological challenges that are all too common in this era of globalisation. The methods and tools used are suited to oral and visual knowledge models. They include audiovisual information, matrices of biodiversity, GIS, free open source software. Local protocols based on customary laws are used to regulate access to the information.

An important focus of this work has been identifying problems associated with the implementation of the Local Registers, finding the most appropriate response to local needs for protecting traditional knowledge and linking into national and international policies. Andean principles of duality, reciprocity and equilibrium have guided the integration of the traditional and modern knowledge, supporting equity and justice, the basis of the Andean biocultural system.

### **3.6 Passing on traditional wisdom and generating new knowledge**

#### **Thematic Study Groups**

An important strategy used in the Potato Park for analysis, discussion and debate for generation of new knowledge and wisdom is the use of Thematic Study Groups. The aim of the Study Groups is to propose alternative solutions to local conservation and development problems for general well being. More specifically, their objective is to systematically gather and analyse existing local knowledge and

to generate new knowledge through dialogue. The groups participate in the community organisational structures and all projects.

The groups are also able to create inter generational bridges for transfer of knowledge and wisdom. They are informed by Andean epistemology by beginning from traditional categories of knowledge and practice. They use a locally developed methodology, consistent with social organisation of the communities and collectives. The groups are defined territorially, so that meetings may take place in convenient locations. Traditional family and group meeting spaces in the evenings, agricultural or religious events are used for discussions.

The study groups within the Potato Park form a continuous community process for reflection on problems, knowledge and solutions, meeting at least once a week. They are used to support specific projects or initiatives, such as the generation of knowledge for this case study. They employ a variety of appropriate tools and techniques such as participant observation, video documentation, interviews, narratives, informal conversations, focus groups, surveys and questionnaires.

### **TK platforms and local technicians**

Local TK platforms are organisational structures and mechanisms that facilitate horizontal transmission of knowledge, experiences and wisdom from farmer to farmer, and community to community. They also support local governance systems based on Andean principles of reciprocity, duality, solidarity and respect. They are facilitated by local technicians and by their participation with collective groups such as the park's study groups and business groups that participate in other aspects of conservation and development.

Local technicians who are experts in traditional knowledge and alternative science, are responsible for facilitating conservation and management activities for agrobiodiversity that supports sustainable development in communities. As members of the communities, they are in key positions to coordinate horizontal exchange of knowledge across all groups within communities and the Park. Expert technicians are selected based on community needs to facilitate and support strengthening of the Park. They are elected democratically by the community assemblies, based on their knowledge and proven leadership skills. It is important that these leaders are able to embody their role through use of Andean principles.

### **Participatory Mapping**

Visualizing indigenous people's spatial knowledge through cognitive maps, and therefore providing communities added knowledge to tailor the Biocultural Territory management has been an important part of the Potato Park action research efforts. Participatory mapping in the Potato Park has focused on capturing the spatial knowledge of local people about what? such as location, size, distance, direction, shape, pattern, movement and inter-object relations as they know and conceive it to develop Cognitive Maps. These are internal representations of their world and its spatial properties stored in their historic memory. These mental maps are allowing people to know 'what is out there, what its attributes are, where it is and how to get there'.

The resulting maps are not inclusive like cartographic maps, which have a constant scale, but consist of discrete, hierarchically organized pieces determined by physical, perceptual and conceptual boundaries. These maps are being used to:

- a) Carry out the Biocultural Zoning of the 'Life Plan' - a plan for wellbeing, resilience and creative economy based on biocultural resources and values of the Potato Park; and

b) Support the management of the Landscape component of the Agroecotourism program by providing information for monitoring: Landscape landmarks, old routes and trails; and surveying biocultural hot spots. The maps are providing information of memorized places in relation to local cultural events and biodiversity; ordered sequences of landmarks; and, identification of simultaneous locations of biological and cultural value. These interrelations are allowing for a participative and creative route planning, identifying better detouring, shortcutting, etc. for agroecotourists.

### **3.7 Engagement in bottom-up Policy Development and the Right to Food**

The Potato Park has also established breakthrough agreements with international institutions such as the Repatriation agreement with the International Potato Center in 2004 by which more than 400 native potato varieties were repatriated to the Potato Park from CIP's gene bank. It has included its potato collection into the Multilateral System of the International Treaty on Plant Genetic Resources, and has worked with the Global Crop Diversity Trust to send botanical seeds to the Seed Vault in Svalbard, Norway, to protect them against disasters as a consequence of climate change.

Engagement of the Association of the Communities of the Potato Park in policy development and participatory research and education has fostered successful policy engagement. Examples of success have come through the Potato Park and ANDES' cooperation with the Regional Government of Cusco on specific dimensions where indigenous peoples' interests with regards to food, agriculture and territoriality are concerned. During the last five years, the Potato Park has led the development of two important Regional Ordinances: 010-2007, which declares Cusco as a GMO-free region, and 040-2009, which bans biopiracy and regulates access to genetic resources.

Currently the Potato Park and ANDES are working on developing proposals for an Ordinance on Food Sovereignty. This ordinance will have as an objective to ensure that those who produce food have equitable access to, and control over, land, water, seeds, and agricultural biodiversity, and most importantly will recognize the sacred nature of seeds. The Right to Food recognized in the International Covenant on Economic, Social and Cultural Rights requires three elements for its realization of the right to food:

- *Adequate standard* – Food must be in a quantity and quality sufficient to satisfy the dietary needs of individuals, free from adverse substances, and acceptable within a given culture.<sup>5</sup>
- *Available food* – Refers to the possibilities either for feeding oneself directly from a productive land or other natural resources or for well functioning distribution, processing and market system that can move food from the site of production to where it is needed in accordance with demand<sup>6</sup>.
- *Accessible food* – Refers to food's economic accessibility, i.e., cost associated with the acquisition of food for an adequate diet should be at a level such that the attainment and satisfaction of other basic needs are not threaten and also to physical accessibility. It provides special attention to vulnerable groups, including indigenous population groups whose access to the ancestral lands may be threaten or compromised.”<sup>7</sup> Furthermore, the food should be be accessible for both present and future generations (sustainability)<sup>8</sup>.

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<sup>5</sup> Committee on Economic, Social and Cultural Rights, General Comment 12 on substantive issues arising in relation to the implementation of the international covenant on economic, social and cultural rights on art 11 (The right to food), Para. 7 -11 of General Comment 12.

<sup>6</sup> Para. 8 and 12 of General Comment 12

<sup>7</sup> Para. 13 of General Comment 12

<sup>8</sup> Para. 8 of General Comment 12

Currently, the Park is trying to gain the recognition of the Peruvian authorities, as an Indigenous Biocultural Territory and Agrobiodiversity Gene Reserve created by, and belonging to, the communities and managed according to their customary laws.

### **3.8 Holistic Objective: Sumaq Causay**

The objective of the Potato Park is Sumaq Causay, a central philosophy of Andean indigenous cosmovision, which means “harmonious existence” or “a way of living together in community”. This way of living in community includes considerations of customs, celebrations, agricultural practices, use of local products, sharing and putting into practice the memories and knowledge that come from the ancestors, use of traditional dress, music, food and rituals, and living in *ayni* (ie. reciprocity) with *pachamama*, the *apus* and other community members. Sumaq Causay presents a holistic vision that considers diverse elements of the human condition, where material goods are not the only determining factors, but rather other values, knowledge, and practices also influence the quality of life, and where the right to life applies to humans and nature alike. Sumaq Causay represents a viable local alternative to development, integrating important elements of well-being, conservation, spirituality, traditional knowledge and governance systems. It also supports the right of people to control their own resources, economies and livelihoods, and to choose what cultural values they will embrace.

## **4. The Policy Context for Developing the Inter-Community Agreement**

In order to understand the significance of these research findings, it is necessary to provide a background on the place of Indigenous customary law in international legislation and related debates. Since the adoption of the Convention on Biological Diversity (CBD) in 1992, governments, NGOs, international organizations, and Indigenous Peoples have been exploring mechanisms to regulate access to genetic resources – such as via access and benefit sharing (ABS) agreements and other legal provisions and protocols. Such attempts at regulating access must both respect the sovereign rights of states over genetic resources; and respect the rights of Indigenous and local communities to their TK and associated genetic resources, practices, and innovations. The United Nations Declaration of the Rights of Indigenous Peoples recognises Indigenous peoples, have ‘the right to autonomy or self-government in matters relating to their internal and local affairs’ (Art 4). Nevertheless, after almost two decades the proposed approaches have proved both ineffective and inadequate to ensure compliance with the sovereign rights of Indigenous and local communities.

### **4.1 The Peruvian Policy Context**

The natural and social richness of Peru, as well as its legal framework on biodiversity, genetic resources, traditional knowledge, and Indigenous rights, places the nation in a unique position to contribute to the current debate. The cultural and genetic diversity of Peru gives rise to a significant number of plants with medicinal value and a variety of often globally significant crops, such as the more than 4,000 varieties of potato. This diversity is the result of millennia of innovation by the Quechua people of the Andes.

Peru is one of the few countries that has adopted national *sui generis* legislation for the protection of TK, and has ratified International Labour Organization (ILO) Convention 169, recognizing the inherent rights of Indigenous Peoples. Peru’s constitution upholds the right of Indigenous communities to use their customary laws on their lands. Specifically, the biodiversity law<sup>9</sup> recognizes

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<sup>9</sup> Republic of Peru ‘Law No. 27811 of 24 July 2002 introducing a Protection Regime for the Collective Knowledge of Indigenous Peoples Derived from Biological Resources’.

[http://www.wipo.int/clea/en/text\\_pdf.jsp?lang=EN&id=3420](http://www.wipo.int/clea/en/text_pdf.jsp?lang=EN&id=3420) . See also: Republic of Peru ‘Law No. 28216 of

traditional knowledge as the cultural heritage of Indigenous communities (Art 12). It states that Indigenous Peoples rights in this regard are 'inalienable and inalienable' (Art. 11) and that access to this knowledge requires the prior informed consent of Indigenous Peoples (Art 6). It is regrettable however, that this protection does not extend to knowledge classed as 'in the public domain', which leaves many past cases of 'biopiracy' unchallenged (Art 13).

Locally, the agreement signed by the six Andean communities of the Potato Park and the International Potato Center (CIP), bringing about the repatriation of the native potato, opened the door to more innovative and culturally sensitive approaches to the use of traditional knowledge, land and resources that prioritize local maintenance and use over extraction, commodification, and third party profit. In addition to these developments, the regional government of Cusco recently passed two ordinances: the Ordinance on Biopiracy (Ordenanza Regional 048 - 2008 CR/GRC.CUSCO contra la biopiratería) and the ordinance that declares Cusco as a transgenic-free zone (la Ordenanza Regional 010-2007- CR/GRC.CUSCO). These ordinances provide a supplementary legal framework, through which the creative combination of customary and Western laws can be realised in an innovative approach to Access and Benefit Sharing (ABS).

#### 4.2 The Nagoya Protocol

The Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization was adopted by the Conference of the Parties to the Convention on Biological Diversity at its tenth meeting in October 2010 in Nagoya, Japan. The Protocol is currently open for signature and waiting for the fifty ratifications necessary to enter into force<sup>10</sup>.

The Nagoya Protocol implements the third **objective** of the Convention on Biological Diversity. The Protocol's objective is the sharing of benefits arising from the utilization of genetic resources in a fair and equitable way, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding, thereby contributing to the conservation of biological diversity and the sustainable use of its components.<sup>11</sup>

Indigenous peoples and local communities continue to face biopiracy; therefore, the importance of the Protocol for ensuring appropriate access to their knowledge associated with genetic resources and benefit sharing is beyond question. However, there is concern that the Protocol does not provide adequate safeguards to ensure indigenous peoples' human rights and their full and effective participation, as required by other instruments (Joint Submission by the Grand Council of the Crees et al, 2011).<sup>12</sup> While the **scope** of the Protocol states explicitly that it applies to traditional knowledge associated with genetic resources and to benefits arising from the utilization of such knowledge,<sup>13</sup> TK does not have the same level of protection as the access and use of genetic resources. The fact that traditional knowledge has been dealt with marginally as stand-alone provisions reinforces the view that indigenous concerns were not fully respected or fulfilled in the Protocol.

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April 30, 2004 on the Protection of Access to Peruvian Biological Diversity and the Collective Knowledge of Indigenous Peoples'. [http://www.wipo.int/clea/en/text\\_pdf.jsp?lang=ES&id=5752](http://www.wipo.int/clea/en/text_pdf.jsp?lang=ES&id=5752)

<sup>10</sup> Nagoya Protocol, Art. 33

<sup>11</sup> Nagoya Protocol, Art. 1

<sup>12</sup> Grand Council of the Crees et al, 2011. Nagoya Protocol on Access and benefit-sharing: Substantive and Procedural injustices relating to indigenous peoples' human rights. Joint Submission to the First Inter-Governmental Committee, 2011

<sup>13</sup> Nagoya Protocol, Art. 3

The main **features** of the Protocol in relation with TK are:

- Prior Informed Consent (PIC): Provider Countries shall take measures with the aim of ensuring that the PIC or approval and involvement of ILCs is obtained in two situations:
  - First, PIC obtained for access to genetic resources where ILCs have the established right to grant access for such resources<sup>14</sup>.
  - Second, PIC obtained for access to traditional knowledge associated with genetic resources held by ILCs
- Mutually Agreed Terms (MAT): Each Party requiring PIC shall establish clear rules for requiring and establishing agreed terms that may, for example, include dispute settlement clauses, terms on benefit-sharing, technology transfer, intellectual property rights<sup>15</sup>.
- Equitable Benefit Sharing (BS): Parties shall take measures towards sharing benefits arising from the utilization of GR held by ILCs and the utilization of TK associated with GR upon MAT.<sup>16</sup>
- Use of Customary Law and active participation of ILCs: Parties shall take into account ILCs customary laws, protocols and procedures when implementing the Nagoya Protocol<sup>17</sup>, not restrict the customary use and exchange of genetic resources and associated TK within and amongst ILCs<sup>18</sup> and support the development *by* ILCs of<sup>19</sup>:
  - Community protocols in relation to access to TK associated to GR and the fair and equitable sharing of benefit arising out of the utilization of such knowledge,
  - Minimum requirements for MAT to secure the fair and equitable sharing of benefits arising out of the utilization of TK associated with GR
  - Model contractual clauses for benefit sharing from the utilization of TK associated with GR

In addition, clauses relating to the requirement to establish mechanisms to inform users of TK about their obligations<sup>20</sup>, to raise awareness of the customary norms and laws of Indigenous Peoples<sup>21</sup> and to take measures to build the capacities of Indigenous Peoples to participate equitably in negotiations over the use of traditional knowledge and genetic resources<sup>22</sup> are welcome moves towards the reconciliation of international law with the customary laws of Indigenous Peoples.

The setting up of legal, institutional and operational mechanisms to implement the Nagoya Protocol represents an enormous challenge for Parties and indigenous peoples. The international Protocol alone cannot ensure the implementation of the provisions on TK. Therefore, it is vital that indigenous peoples themselves lead and complement national implementation processes by developing local ABS tools arising from their customary laws, as established in the Protocol,

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<sup>14</sup> Nagoya Protocol, Art. 5.1. 6.2 and 6.3 (f)

<sup>15</sup> Nagoya Protocol, Art. 6.3 (g) and Art. 18

<sup>16</sup> Nagoya Protocol, Art. 5.2 and Art. 5.5

<sup>17</sup> Nagoya Protocol, Art. 12.1 and

<sup>18</sup> Nagoya Protocol, Art. 12.4

<sup>19</sup> Nagoya Protocol, Art. 12.3

<sup>20</sup> Nagoya Protocol, Art. 12.2

<sup>21</sup> Nagoya Protocol, Art. 21

<sup>22</sup> Nagoya Protocol, Art. 22

The Protocol establishes a mechanism to monitor the utilization of GR<sup>23</sup>. Therefore this could include ILCs in those cases where the GR resources were accessed from ILCs that have the established right to grant access for such resources<sup>24</sup> and it could be argued that the international recognized certificated of compliance in Art. 17.4 refers to all providers, i.e., countries and ILCs. However, the Protocol does not contain explicit measures to monitor the utilization of TK associated with GR. Biocultural Protocols built upon customary laws and human rights safeguards can assist the inclusion of measures for the disclosure of origin of TK associated with genetic resources and provide evidence of fair and equitable sharing.

Indigenous peoples need to imprint Human Rights law such as UNDRIP in customary law-derived mechanisms to ensure that access to TK associated with biological/genetic resources and sharing of benefits fulfill Art. 5 of the Nagoya Protocol. This article requires Parties to take 'legislative, administrative or policy measures, as appropriate, with the aim of ensuring that benefits arising from the utilization of genetic resources that are held by indigenous and local communities, in accordance with domestic legislation regarding the established rights of these indigenous and local communities over these genetic resources, are shared in a fair and equitable way with the communities concerned, based on mutually agreed terms'. Unless proper legal frameworks and capacity are developed, indigenous peoples will not be able to assist in the implementation the Nagoya Protocol.

### **4.3 The International Treaty on Plant Genetic Resources for Food and Agriculture**

After 7 year of negotiation the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) was adopted in 2001 and entered into force in 2004. There were 127 contracting parties to the Treaty (126 countries and the European Union) as of 16 March 2011.<sup>25</sup> The overall goal of the Treaty is the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security. In order to support sustainable agriculture and global food security, it establishes an international commons pool under a multilateral system (MLS). The MLS guarantees access to these resources and the sharing of benefits generated from their use.

The ITPGRFA requires protection of farmers' rights to traditional knowledge and to equitable benefits from the use of genetic resources, and recognizes the enormous contribution that indigenous and local communities and farmers have made to the conservation and development of crop genetic resources. Yet the ability of farmers in the Andean region to continue this role is seriously threatened — not only by a lack of benefit-sharing, but by a lack of secure rights to land and genetic resources and policies that promote industrial agriculture and monocultures. Indigenous peoples have argued that benefit-sharing, which now is limited to voluntary donations by a very few number of Contracting Parties and International Organizations, should take a broad approach and include the creation of measures for the protection of farmers' customary rights over genetic resources and associated landscapes, cultural values and customary laws, on which the continued conservation and improvement of crops by farmers depends. Such protection is usually covered by small funds coming from international donors, and some have questioned if the IT benefit sharing fund money is additional money or just redirected funds that have been removed from other projects relating to agriculture and development.

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<sup>23</sup> Nagoya Protocol Art. 17

<sup>24</sup> Nagoya Protocol, Art. 5.1. 6.2 and 6.3 (f)

<sup>25</sup> <http://www.itpgrfa.net/International/content/127-nations-signatories-global-treaty-save-and-share-crop-diversity>

It is argued that mandatory payments of the users of ITPGRFA can be a sustainable way to ensure predictable and continuing benefit-sharing through the Treaty. However, for such increase of the Benefit Sharing Fund through mandatory payments, the Governing Body would have to extend the obligation for mandatory payments to include all commercialized seeds. As there is no efficient compliance mechanism for the Multilateral System and the Standard Material Transfer Agreement, the benefit-sharing requirements and the restrictions for patents now stand on shaky ground (Chiarolla & Jungcurt 2011)<sup>26</sup>.

#### 4.4 Critique of Existing ABS models

Despite the partial progress noted above, uncertainty remains over the implementation of the Nagoya Protocol once it enters into force – not least because of the consistent presence of weakening text such as ‘subject to domestic legislation’ or “with the aim of ensuring”. The present case study seeks to redress this imbalance, overcoming the tendency of predominant models of access and benefit sharing to not only fail to build and maintain Indigenous knowledge systems, but also to facilitate biopiracy.

Consensus models for ABS and the protection of traditional knowledge remove TK from the relationships that have nurtured it, divorcing it from the customary laws and Biocultural Systems that led to its formation. Current intellectual property rights regimes understand TK within the context of restricted, conventional notions of property rights, which facilitate the commodification of Indigenous knowledge and resources by separating them from the network of relations within which they operate. Existing mainstream access and benefit-sharing regimes follow this line of thinking. Here, traditional knowledge is also viewed as an object separate from the cultural and spiritual relationships and the lands within which it is embedded. Attempts to incorporate TK within existing (limited) notions of property – e.g. public, private or common property<sup>27</sup> - have succeeded in creating ‘legal’ as well as the recognised illegal acts of biopiracy. This is facilitated through the removal of TK as a commodity from the cultural, spiritual and territorial contexts in which it has originated. As a result, Indigenous Peoples’ cultural integrity remains unprotected *and* adequate mechanisms for the equitable sharing of benefits derived from the use of TK have yet to be developed. For Indigenous Peoples, experiences with ‘bioprospecting’ (as biopiracy is often called by corporations and in free trade agreements) have proven that ABS is more a curse than a blessing. Thus far it has only provided them with limited ‘opportunities’ as rewards for their knowledge, practices, innovation systems, and biodiversity stewardship, while these ‘goods’ are subsequently used to generate colossal profits for third party actors. Furthermore, on this unlevel playing field the ABS model has been unable to deal justly with the issue of prior informed consent, highlighting the asymmetrical power relations that characterise the negotiation of benefit-sharing agreements, and which lead to inter- and intra-community conflicts, as well as creating uncertainty of governance and in representation amongst Indigenous Peoples.

For decades now, Indigenous Peoples have expressed their concern, in various forums, that national and international law and policy meant to protect TK address knowledge from a fragmented perspective, rather than in an integrated manner. A holistic approach would focus on the adoption of mechanisms that serve to strengthen and maintain traditional knowledge systems as a whole, including all elements (such as the languages, customary norms and practices, and traditional territories and resources involved in intergenerational transmission of these systems).

To some extent, the CBD has taken up this concern through various decisions of the COP and, particularly, through the Ad Hoc Open-ended Working Group on Article 8(j) and Related Provisions

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<sup>26</sup> [www.evb.ch/en/p25019093.html](http://www.evb.ch/en/p25019093.html)

<sup>27</sup> For example in commons models or in intellectual property rights.

(WG-8j). Articles 8(j), 10(c) and the preamble of the CBD highlight the interdependence between biodiversity, culture, traditional knowledge, and customary practices. The CBD COP10 Decision “Elements for *sui generis* systems for the protection of traditional knowledge”<sup>28</sup> states that the rights conferred to protect knowledge can include “*rights to all components of the biocultural heritage associated with the traditional knowledge— including rights over the biodiversity, customary laws, cultural and spiritual values and lands and waters traditionally occupied or used by indigenous and local communities.*”

Earlier documents prepared by the CBD Secretariat acknowledge the interdependence between TK and traditional and cultural territories, and its importance to the effectiveness of said *sui generis* systems<sup>29</sup> and stress the importance of a basis in customary law<sup>30</sup>. Previously, COP-7 had adopted a decision urging the Parties to develop, adopt, and/or recognize local and national models for the protection of traditional knowledge, with the participation of Indigenous and local communities.<sup>31</sup> This includes models developed by communities to protect, preserve, and maintain their knowledge systems, as noted in a document of the Secretariat of the CBD (which adds that such standards should be formally recognized by the State to ensure effectiveness and continuity).<sup>32</sup>

Article 10(c) of the CBD is of particular relevance because it establishes an obligation for the Parties to the Convention to protect and encourage customary use of biological resources. Said protection must be compatible with the conservation and sustainable use of these resources, which are threatened by the practices of multinationals and under free trade agreements. The Indigenous Peoples of Peru govern these customary applications using their norms and practices, which are inextricably linked to the knowledge systems that constitute their cultural heritage.

Meanwhile, the World Intellectual Property Organization (WIPO) also recognizes that TK is inseparable from the traditional norms and practices of Indigenous Peoples,<sup>33</sup> having proposed in the draft provisions for the protection of cultural expressions and traditional knowledge that any scheme should be developed with due recognition and respect of customary laws.<sup>34</sup> In fact, as a result of the strength and conviction of Indigenous voices, WIPO has been working on the development of a *sui generis* system for TK protection – that begins to recognize the customary norms of Indigenous Peoples as a fundamental tool that actually maintains and preserves the ecosystem elements that sustain knowledge systems and ensure their intergenerational transmission. And the United Nations Declaration on the Rights of Indigenous Peoples also contains important principles related to customary laws, pointing out that Indigenous Peoples have the right to self-determination and, therefore, to self-governance or autonomy. The realization of these rights is closely linked to the customary laws of Indigenous Peoples and their ability to maintain and strengthen traditional institutions and mechanisms for decision-making.<sup>35</sup>

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<sup>28</sup> CBD, Decision X/41, Elements of *sui generis* systems for the protection of traditional knowledge

<sup>29</sup> CBD Secretariat (2007) Development of elements of *sui generis* systems for the protection of traditional knowledge, innovations, and practices to identify priority elements. UNEP/CBD/WG8J/5/6. <http://www.cbd.int/doc/meetings/tk/wg8j-05/official/wg8j-05-06-en.pdf>.

<sup>30</sup> CBD Secretariat (2009). Elements for development of *sui generis* systems for protection of traditional knowledge. UNEP/CBD/WG8J/4/7

<sup>31</sup> See CBD Decision VIII/5.e.1.

<sup>32</sup> Secretariat of the CBD (2007) Development of elements of *sui generis* systems for the protection of traditional knowledge, innovations, and practices to identify priority elements. UNEP/CBD/WG8J/5/6. <http://www.cbd.int/doc/meetings/tk/wg8j-05/official/wg8j-05-06-en.pdf>.

<sup>33</sup> Information Booklet on Intellectual Property and Traditional Knowledge. WIPO Publication No.920.

<sup>34</sup> Tobin B. et al, The Role of Customary Law in ABS and TK Governance in Andean and Pacific Island Countries, UNU-IAS/WIPO (forthcoming).

<sup>35</sup> Tobin B. et al, The Role of Customary Law in ABS and TK Governance in Andean and Pacific Island Countries, UNU-IAS/WIPO (forthcoming).

At the same time, there have been various attempts to define arrangements for fair and equitable ABS with communities, largely emanating from bioprospectors, from which lessons can be drawn. Most, if not all current ABS schemes use contractual agreements that do not take into consideration the integrated and holistic nature of biocultural systems. Neither do they consider community norms that regulate the practices of exchange and benefit sharing derived from the customary use of traditional knowledge. Although some mainstream initiatives have contained interesting elements, unfortunately they have failed to yield a fair and effective benefit-sharing scheme. One example of this is the International Cooperative Biodiversity Group (ICBG)<sup>36</sup> in Peru,<sup>37</sup> which signed a ‘know-how agreement’ with three federations representing Aguaruna communities. Although the know-how agreement is an innovative tool that incorporates interesting clauses related to benefit-sharing, the project has not escaped criticism for its community-level approval process; or on the basis of the conflict that emerged among the peoples of Aguaruna and Huambisa, which resulted in the agreement only being signed by the Aguarunas. Additionally, the effectiveness of a contractual agreement between unequal parties and the absence, at the time, of a legal framework through which to regulate access to genetic resources and TK, came in to question. Likewise, problems with the distribution of benefits within Indigenous communities were identified. Another ICBG project in Chiapas, Mexico, faced strong criticism regarding its process for prior informed consent, the criteria for deciding who would participate in the project, and the quality and quantity of benefits. The project was cancelled when national institutions withdrew their support and Indigenous communities decided not to participate.<sup>38</sup>

Some of the arguments used to explain the failure of the above models are that they focused on the possible *types* and *amount* of benefits while paying insufficient attention to the process and mechanisms for the *identification* of and for the *distribution* of benefits among the involved communities. Furthermore, these ABS models are discordant with Indigenous epistemologies, which do not separate resources and traditional knowledge from cultural norms, or from the stewards of said resources and knowledge. Experiences with these models highlight the risks that can arise when trying to impose benefit-sharing schemes that are alien– and typically antithetical – to Indigenous cultures, values, and norms. A precondition for the minimally satisfactory operation of these schemes is that they be supported by measures ameliorating the imbalance between the negotiating parties, and that the prior informed consent of the communities be obtained from the beginning of the project (including in the planning phase). As such, it is essential to identify, in advance, whether the involved communities already have mechanisms for benefit-sharing that are tailored to the objective of the project or agreement. Additionally, the experiences of the ICBG in Peru and Mexico showed that communities must agree among themselves, and according to their customary norms, as to how they will distribute possible benefits, what kind of institutional capacity they will need, what their expectations are, and what are the advantages and disadvantages of the potential project. In this way,

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<sup>36</sup> The International Cooperative Biodiversity Group is a program sponsored by the National Institute of Health (NIH), Biological Sciences Directorate of the National Science Foundation and the Foreign Agriculture Service and Forest Service of the USDA created to commit joint efforts to address issues of biodiversity conservation, pharmaceutical drug discovery, and sustainable economic development. For more information about ICBG, see: [http://www.fic.nih.gov/programs/research\\_grants/icbg/index.htm](http://www.fic.nih.gov/programs/research_grants/icbg/index.htm).

<sup>37</sup> The Peru ICBG involved Searle, Washington University of St. Louis, Universidad Peruana Cayetano Heredia, The Natural History Museum of Peru, Universidad de San Marcos de Peru and three local federations of Aguaruna People: FAD, FECONARIN and OCCAM.

<sup>38</sup> For more discussion on ICBG in Chiapas, see “Bioprospecting. Can pharmaceutical research give back?” *Cori Hayden. Harvard Review on Latin American Studies*. Flora and Fauna. *Nature in Latin America*. Winter 2005. In: [http://drclas.fas.harvard.edu/revista/?issue\\_id=27&article\\_id=813](http://drclas.fas.harvard.edu/revista/?issue_id=27&article_id=813)

the communities will be in a better position to negotiate and to avoid possible intra-group conflict and the dissolution of solidarity that has typically resulted from such projects.

In addition, the rights of Indigenous Peoples to prior informed consent for the use of their TK and the just distribution of benefits has recently come under a new kind of threat. The bilateral free trade agreement between the United States and Peru contains higher standards of intellectual property than the TRIPS agreement itself, in the sense of stronger rights for intellectual property rights holders rather than (and even at the expense of) those providing the information that forms the basis of intellectual property claims. Moreover, this agreement has meant a change to the regional legal framework established by the Andean Community of Nations (CAN), which required the presentation of the access contract and, when appropriate, the license or authorization for the use of the TK in patent applications, under threat of invalidation of patents for failure to comply with such request (Decision 486).

Currently, the relevant Peruvian legislation (Law 29316) represents a clear setback, since it only provides for a penalty but does not threaten to invalidate patents which inequitably and illegally utilise the traditional knowledge, genetic or biological resources of Indigenous Peoples. However, an order enacted in the Cusco region (Regional Ordinance 048-2008 CR/GRC.CUSCO against biopiracy) retrieves the requirement for a disclosure of origin for activities related to access and use of TK from the communities of the region of Cusco. As such, it provides some assurance of the prior informed consent of communities for access to resources and associated knowledge. Furthermore, Regional Ordinance 010-2007 CR/GRC.CUSCO protects crops and traditional practices of the rural Indigenous farming communities of the region by declaring Cusco a transgenic-free zone and a center of origin of the potato, forbidding the introduction of genetically modified organisms (GMOs).

## **5. Biocultural Systems: A Holistic Perspective on Traditional Knowledge and Biodiversity**

One of the first results from the research carried out by ANDES, IIED, and the Potato Park was the definition of the concept of Biocultural Systems (BCS), the development of which has created a starting point for a new approach on access to biodiversity, genetic and phyto-genetic/plant resources, and associated TK systems, as well as for just ABS. 'Biocultural System' is a term that describes a system containing the knowledge, innovations, and practices of Indigenous and local communities, collectively maintained; and which also incorporates the traditional resources and territory itself, including the diversity of genes, variety of crops, species, and ecosystems, and the cultural and spiritual values and laws developed within the socio-ecological context of the communities. These elements are customary parts of knowledge systems and are, in general, linked to cosmological beliefs as part of the Indigenous 'cosmovision,' or holistic view of the world. The strong links between human society and the environment, which form part of the lived experience of the communities of the Potato Park (and other Indigenous Peoples) suggest that biological and cultural resources are interdependent manifestations of the diversity of life on Earth. The natural environment is considered an essential part of human society just as many biological resources – such as diverse crops and healthy ecosystems – depend on time-honoured practices of breeding and stewardship. It is within this context that the case study was carried out.

In fact, the notion of a holistic knowledge system, based on the concept of BCS, considers access to genetic resources and TK from a distinct perspective, since it does not deal with resources, territories, culture, and traditional knowledge as separate entities, but as a biocultural whole. Academically, there are parallels between this latter point and with the concept of *transdisciplinarity*. This is in the sense that both transdisciplinarity as a concept and (many) indigenous cosmovisions are incommensurable with the (artificial) separation of knowledge-about-the-world into bounded, and doctrinal disciplines

such as ‘economics’, ‘law’ or ‘biology’. As such, BCS represents a significant departure from current policies and legislation, which focus on the conservation of biodiversity and ABS through separating resources, knowledge, norms, and Indigenous Peoples from one another. It also raises the point that, in order to preserve the dynamics involved in the intergenerational transmission of knowledge, innovations, and practices, legal and policy frameworks must recognize that:

- 1) Biological resources cannot be separated from traditional knowledge, as the landscape provides physical space for the customary use of biodiversity and the free exchange of knowledge and resources, which is essential to maintain both biodiversity and knowledge systems.
- 2) Traditional knowledge and customary laws are usually acquired and transmitted in specific sites within a given territory, all of which have a spiritual meaning. For example, the lakes, rivers, forests, or sacred mountains are a part of traditional governance and belief systems, both of which operate at the landscape level to manage common property.
- 3) Cultural and spiritual values shape the processes through which Indigenous Peoples acquire, use, and transmit knowledge, thereby ensuring continuity.
- 4) Resources and knowledge cannot be separated from the communities in which they reside, as local people have been the stewards of the environment and the natural and social processes that have given rise to these assets.

The fact that biocultural approaches, such as the one proposed in this case study, are now emerging as useful concepts is testament to the inadequacy of reductionist, disciplinary methods that continue to be the *modus operandi* of conservation and development research, policy formulation, and action. Mainstream perspectives do not value the role Indigenous Peoples have played historically – and continue to play today – as stewards and guardians, innovators and developers, of their ecosystems and knowledge systems. The shift toward a BCS approach comes with the recognition that Indigenous Peoples are the rightful owners of their biocultural heritage and associated knowledge, and that their customary norms and traditional governance systems can provide holistic, fair, and appropriate alternatives for their protection and promotion.

### **5.1 Indigenous Territorialities, Biocultural Territories and Collective Rights**

Indigenous territoriality refers to a conceptual grid which encompasses traditional indigenous land tenure, land use, ritual, production and exchange systems, political organization, holistic goals such as Sumaq Causay and cultural identity. Indigenous territorialities such as the Ayllu, Marka, Comarca, Resguardos, Ejidos, etc. continue to thrive in many regions of the world nurturing the biocultural heritage of indigenous peoples and thus continue evolving as systems of holistic territorial management which emerged from native memories and lived experiences. What is termed conservation and development are inherent to the system where spiritual beliefs ensure the indivisibility and interconnectedness of the cultural and biological realms with the territory.

This holistic concept has been central in the indigenous ABS claims and agenda where identity is an important part of their strategies to negotiate with states. Existing constitutional and legal frameworks recognize the rights of indigenous peoples to ancestral territoriality, despite the context of persecution, and forced displacement. Indigenous peoples underline that the recognition of prior informed consent and equity is not enough; they also demand their right to difference, that is, recognition of special rights for Mother Earth, including biological and genetic resources.

The biocultural approach represents a challenge not only to mainstream models of benefit sharing, but also to the ITPGRFA and the Nagoya Protocol. For example, even though the Nagoya Protocol

supports the use of customary laws, protocols and procedures<sup>39</sup>, it draws a clear distinction between genetic resources and TK associated to GR, which are treated as separate entities.

Biocultural Territory (BCT) is an indigenous-led system for the maintenance of indigenous territoriality developed by Asociacion ANDES. As a framework it uses modern and traditional territorial development approaches with the goal of maintaining the integrity and viability of the indigenous territorial systems and promoting the endogenous holistic development paradigm of Sumaq Causay. Increasingly indigenous peoples are being displaced, deterritorialized, and becoming transient populations; therefore, BCT are a response to current global change and promotes the construction of locality for indigenous peoples as coherent social formations, as structures of feeling in the face of the biocultural erosion, dispersal, and implosion. The Indigenous Biocultural Territory approach is about advancing the idea of a communal system today -- one not mapped out in advance by any ideology or “conservation” paradigm, or by any simple return to the past.

As awareness of traditional knowledge’s intrinsic, cultural, social, spiritual, environmental and economic value has grown, so too have concerns to develop necessary law and policy to protect rights over it. Indigenous peoples have consistently argued that that access and benefit-sharing measures should over that their traditional knowledge and associated genetic resources must be built upon the inter-generational and human rights foundations of indigenous collective rights. This special foundation distinguishes them from the collective rights of businesses or other associations<sup>40</sup>. Therefore, measures should be developed in accordance with their vision of collective rights and benefits as established in their own legal regimes, or customary laws and practices. Biocultural protocols build on customary laws and institutions can clarify the definition and representation of the beneficiaries of collective rights that other forms of bioprospecting contracts usually have encountered. This is important, in relation to the granting of prior, informed consent and ensuring a culturally acceptable fair and equitable benefit sharing. Efforts are now ongoing in various fora and regions to develop biocultural protocols at the local, regional and international level.

## 5.2 Threats to Biocultural Systems and Customary Laws

Threats to Biocultural Systems can be global (e.g. the erosion of rights and concentration of power) or local (e.g. religious or educational incursions, some NGOs, and market forces). ‘Globalisation’ (see for example, Featherstone, *et al*, 1995; Yearly 1996; and Franklin *et al*, 2000) describes the trajectories taken by dominant, European, or latterly North American ideologies and ideas, and their apparent diffusion in the world. Biocultural Systems are threatened by globalisation - by a hegemonic worldvision - which posits economic considerations as separate from and superior to other concerns such as rich social relationships, spirituality, environmental sustainability, biodiversity and wellbeing. The uncontested privileging of economic goals such as increased growth, is parasitic upon attempts to effectively manage the finite biological and non-biological resources of the planet. Ecological Economics has been instrumental in providing alternative strategies for redressing this imbalance. The realization that the threats posed by globalisation require innovative, dynamic, effective *and* culturally appropriate responses to the problems faced by particular Biocultural Systems led to the identification of the following responses in the Potato Park:

- Mechanisms and tools to protect Biocultural Systems, including the recognition and implementation of rights relating to systems of knowledge; and recognition, strengthening, and use of customary laws and approval of agreements for the restitution of BCS (e.g. the agreement between CIP and the communities of the Potato Park for the repatriation of potato varieties and restoration of rights);

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<sup>39</sup> Nagoya Protocol, Art. 12.1 and

<sup>40</sup> <http://www.tkcommunity.blogspot.com/>

- Local management and control of biocultural heritage; and the strengthening of customary norms and traditional institutions for common property resource management (e.g. the inter-community agreement for access and benefit sharing); and
- Incorporation of measures and mechanisms for the joint protection of TK and BCS in national and regional policy and legislation (e.g. ordinances passed by the regional government of Cusco about biopiracy and transgenics).

These responses led to the development of Biocultural Protocols that control the interactions occurring within the Biocultural System of the Park. Crucially, Biocultural Protocols also mitigate and inform interactions with external bodies and agencies.

## **6. Constructing a Community Vision and Approach to ABS**

### **6.1 The Potato Park's ABS Policy Approaches**

As a depository of a large living gene bank of native potatoes, the Potato Park has engaged in the international policy process under the CBD and the FAO International Treaty to which Peru is a Party. The objective is to be well prepared to be able to share agricultural innovations while managing the challenges of conserving and using the rich genetic pool on hand and benefit from the important environmental, economic and social benefits that genetic resources offer to indigenous peoples and their communities.

In the process of establishing an open, rights-based approach to manage access to their TK and associated genetic resources and ensure equitable benefit-sharing, the Potato Park has developed a strong and compelling vision for holders of traditional knowledge, and established a strong basis for cooperation and networking between international organizations and indigenous peoples. This vision defines self-determination through concrete actions, which have far reaching impacts, and provides guidance and a sound basis for rights-based ABS approaches. Steps in building this vision include:

1. The concepts of access and benefit sharing have been blended into one concept that links customary law and international environmental and human rights law.
2. The 2004 Repatriation Agreement with the International Potato Center has been renewed and this includes further increase of the genetic diversity of the Park and more opportunities for economic development
3. In 2010 the Potato Park became the first community organization to make agricultural genetic resources available under the multi-lateral benefit-sharing mechanism of the Plant Treaty
4. In 2011, the Potato Park submitted its potato varieties to the Svalbard Global Seed Vault in response to concerns about the long term in situ conservation of the varieties in the context of climate change in the Peruvian Andes.
5. Currently the Park and partners are exploring the possibility of applying and adapting “open source” or “commons” models to the sharing of genetic resources and traditional knowledge to promote “open” and “networked” innovations

A key element in these approaches has been establishing the right of communities to their genetic resources and traditional knowledge and therefore that they have the right to grant access to GR. This is a prerequisite for ensuring minimum requirements for MATs, securing fair and equitable sharing of benefits, and ensuring that the genetic resources and/ or the TK of the Potato Park are accessed with their PIC.

The Potato Park approach has gained international recognition. In May 2011 the United Nations Secretary General referred to the work of the Potato Park by observing that: “In Peru, indigenous communities are responding to climate change by re-introducing native varieties of potatoes. They have support from a United Nations-backed fund benefiting poor farmers<sup>41</sup> Now they are helping conserve the earth's biodiversity.” However, he went on to observe that while “Ancient indigenous traditions can help overcome modern problems. The goal is not to appropriate your knowledge, to extract it or exploit it, but to respect indigenous peoples and help preserve their traditions.”<sup>42</sup>

## **6.2 Developing the Inter-community Agreement: A Bottom-up Methodology**

Mechanisms for ABS should respond to, and be consistent with, the concept of Biocultural Systems. As a result, it is essential that they are clearly outlined and agreed upon at the community level, and are concordant with customary norms and traditional governance, before entering into any negotiations with third parties. This applies not only to bioprospecting (or biopiracy) activities that fragment elements of BCS, or research related to genetic resources, but also to every case in which the collective biocultural heritage of communities is implicated or affected.

The research carried out by ANDES, IIED, and the Potato Park has concluded that, in order to ensure the effectiveness of resource-use and TK agreements, it is necessary to create ‘bottom-up’ benefit sharing mechanisms. Such mechanisms are also conducive to efforts aimed at the alleviation of poverty, and are effective in providing protection against future impoverishment. ‘Bottom-up’ approaches, by facilitating the generation and distribution of benefits in a fair and equitable way, resonate with local expectations, community needs, traditional values, and customary practices. To this end, the research project identified a number of guiding principles that constitute the basis of the customary legal and institutional system of the communities. In the case of the Quechua communities of the Potato Park, these mechanisms are based on customary norms that guide traditional practices of reciprocity and allow for income equality and redistribution of wealth among the communities. These principles have been essential in maintaining the Quechua economy, but are also central to defining rules of justice and to regulating new benefit sharing situations. In order to develop the Inter-community Agreement for Benefit Sharing, it was necessary to not only identify these norms but to also, working with the communities, see which norms were relevant to regulating the benefits associated with BCS, and identify new mechanisms that needed to be incorporated.

The first step was determining the methodology. Defining and implementing a methodological framework constituted a major challenge due to the lack of previous experiences from which lessons could be drawn, and the great variability of the contexts and situations related to access to collective biocultural heritage and specific issues related to ABS and TK. One of the biggest hurdles was designing a participatory process that was culturally sensitive and, at the same time, could combine Western and Indigenous tools and involvement. Another obstacle was articulating the results of the research in a concrete way that could respond to the specific needs of the communities, while also contributing to achieving cultural and environmentally sound development beneficial to the communities, their environment, and their livelihoods. Finally, linking written national laws with the oral systems of Andean society proved to be a difficulty in and of itself.

The participatory methodology sought to address these challenges. The ultimate approach, designed by ANDES in collaboration with Indigenous researchers of the Park, was termed an ‘emancipatory methodology,’ because not only did it involve Indigenous researchers in its design, but its implementation was also led by the communities of the Park and included the use of Indigenous

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<sup>41</sup> The Potato Park is the recipient of project support from the UN Plant Treaty Benefit-Sharing mechanism.

<sup>42</sup> [http://www.un.org/apps/news/infocus/sgspeeches/statments\\_full.asp?statID=1185#](http://www.un.org/apps/news/infocus/sgspeeches/statments_full.asp?statID=1185#)

methods and technologies, combined with contemporary/mainstream participatory investigation methods. The Indigenous methods employed included: the use of myths, prophecies, and drawings; as well as several culturally-attuned courses of action, such as research work, horizontal training, Indigenous-based education, and strengthening of local governance. The research questions were addressed in local study groups facilitated by community technicians (see section 3.6)

### **6.3 Participatory, Emancipatory and Indigenous Methodologies**

The Association ANDES works from a methodological orientation that combines the complimentary approaches of participatory methodologies, emancipatory/decolonizing methodologies and indigenous methodologies (see text Box 2.). Due in particular to its emancipatory/decolonizing orientation this means that within this broad methodological framework specific methodologies for specific projects must be designed in collaboration with indigenous community partners.

#### **Box 2. Participatory, Emancipatory/Decolonizing and Indigenous Methodologies**

**Participatory methodologies:** Methodologies of action and learning aimed at involving relevant stakeholders in the decision making processes and actions/activities that affect their lives.

**Emancipatory/ Decolonization methodologies:** Methodologies of action and learning aimed at achieving the leadership of stakeholders in processes aimed at achieving positive change in their lives often with a particular focus on social justice issues and confronting oppression.

**Decolonization methodologies** in particular focus on promoting self-determination indigenous peoples and the privileging and promotion of indigenous cosmovisions, methodologies and cultural beliefs.

**Indigenous methodologies:** Methodologies of action and learning rooted in indigenous cosmovisions, conceptual frameworks and ways of life.

In the case of the Potato Park the collaborative design of the methodology began with the process of Free Prior Informed Consent which lies at the heart of ANDES work and is enshrined in the United Nations Declaration of the Rights of Indigenous Peoples. This was especially important as the scope and framework for the investigation had already been pre-defined in the terms set out in overarching “Protecting Community Rights over Traditional Knowledge” project. As a result, ANDES staff met with indigenous community members to re-interpret this framework from the perspective and needs of the community which lead to the new focus on equitable benefit sharing and the project’s goal of establishing a biocultural protocol for access and benefit sharing in the form of an inter-community agreement between the different communities of the Potato Park. As mentioned, this process also involved the development of an appropriate methodology based on the following requirements:

- The new methodology should be oriented towards meeting the needs of the communities and contributing to their development.
- It should use flexible methods to collect and validate scientific information and traditional knowledge that can link written knowledge (science / positive law) and oral knowledge systems (traditional / customary law).
- Indigenous researchers act as a bridge between the two worlds / information systems of western and indigenous cultures.

This methodology came to be known as an "emancipatory methodology" as its goals were broadly emancipatory and aimed at decolonization, namely at asserting the communities' indigenous rights over their biocultural heritage, the development of mechanisms in defense of those rights and according to their own concepts and terms, and in resistance to those who have and might seek to exploit their BCH. The final approach involved the following methodological phases:

- Phase I: Identifying Community Norms and Customary Law
- Phase 2: Consultation, Discussion, Revision and Negotiation of the Inter-Community Agreement
- Phase 3: Final Consultation and Validation of the Inter-Community Agreement

#### **6.4 The Methodology in Action**

This section will explain how the methodology collaboratively designed by ANDES and the communities of the Potato Park played out in practice. It will examine each methodological phase of the action research process, introducing its objectives and briefly outlining its process before offering a more detailed analysis in terms of the participatory, emancipatory/decolonization and indigenous methodologies employed and their respective methods.

##### **Phase 1: Research on customary laws and norms**

The main objective of the initial phase of the action-research was to identify and document customary laws and their underlying principles that relate to access to bio-cultural resources and the equitable distribution of benefits with the Potato Park. These were to be used to form the conceptual basis of the inter-community biocultural protocol (BCP) and also to design mechanisms that would result from its implementation including benefit sharing and conflict resolution mechanisms. In line with an emancipatory/decolonization orientation, indigenous community researchers were to take the lead role in this process. In order to support this ANDES played an important role in capacity building and training for potential indigenous researchers. In addition ANDES conducted a thorough literature review of customary Quechua laws and norms in order to identify potential principles and practices relevant to the investigation. These customary laws and principles combined with community feedback were then used to produce a draft protocol.

The role of participatory methods in this phase included the participatory training workshops for the indigenous researchers selected to participate in the project and the use of different kinds of study groups. These study groups played a major role throughout the action-research process (see Box 3.) and in this phase included:

- Thematic working groups: These identified the key themes to be addressed in relation to the investigation. As a starting point discussions focused on the principles and practices identified in the literature review and then developed around these subjects.
- Study groups: These held in depth discussions in relation to the themes previously identified in the thematic working groups. Participants identified principles derived from customary law that would be useful in the context of access to biological and genetic resources, associated knowledge and benefit sharing.

##### **Box 3. Study Groups**

Study groups have been a key approach used throughout ANDES work with the communities of the Potato Park including this project. Their objective is to systematically gather and analyse existing local knowledge and to generate new knowledge through dialogue. These groups are defined territorially, so that meetings may take place in convenient locations such as traditional family and group meeting spaces in the evenings. They employ a variety of appropriate tools and techniques such as participant observation, video documentation, interviews, narratives, informal conversations, focus groups, surveys and questionnaires.

In keeping with the emancipatory/decolonization orientation of the methodology, the indigenous researchers took a lead role in facilitating and coordinating these study groups. These same researchers were also originally selected for training and participation in the project by members of the Potato Park communities themselves and according to their criteria, further ensuring community control and leadership of the process. Another important method employed by the indigenous researchers was participant observation. This is because the customary laws of the Quechua people are not written or systematized, but are infused within practices and customs found in action in all events of their daily lives. As a result the indigenous researchers examined a number of traditional practices for administering cultural and biological resources including distribution of seeds, inheritance of land, and transmission of knowledge at the individual, communal, regional and generational levels. An economic analysis of customary principles was also undertaken, in order to identify rules for benefit-sharing. Careful scrutiny of these and other practices with community members combined with the literature review, led to the identification of three Andean principles—Reciprocity, Equilibrium, and Duality—that underpin the practices of administering traditional resources.

The indigenous concepts identified through this action-research process were then put into practice in the creation of an initial draft intercommunity biocultural protocol. The initial drafting process involved the identification of the common interests of the communities, the objectives and the scope of the protocol as well as a participatory definition of the process itself based on customary laws and practices. These same laws and practices were used to establish conflict resolution mechanisms and clear rules of play for the negotiation process and to identify mechanisms for the sharing of information and benefits. The result was the transformation of the draft writing process into an indigenous methodology and the production of an initial draft protocol based on the Quechua customary law and principles of the communities of the Potato Park.

## **Phase 2: Consultation, Discussion, Revision and Negotiation of the Inter-Community Agreement**

In this phase, the main objective was to continue the development of the BCP by expanding community participation and control of the process. In order to achieve this aim a broad-based consultation and negotiation process was initiated throughout the Park involving local authorities and community members in discussions concerning each of the proposed articles in the draft BCP and the options for implementing them. These discussions were also used to collect and incorporate community members' doubts, questions, observations and suggestions regarding the draft and how to improve and strengthen the document.

Participatory methodologies played an important role in this stage of the methodology particularly in the identification of participants to be involved in the consultation and negotiation process. A participatory 'Social Analysis System' method was used to identify social networks of actors involved in some way or another in the Park while a final profile for the inclusion of actors in the consultation process was decided upon by members of the Potato Park association. Once potential participants had agreed to join the process they were organised into groups of five that met regularly to discuss the different aspects of the draft agreement and offer their observations, suggestions and doubts.

As an emancipatory/decolonising approach, indigenous researchers once again played a central role in facilitating these consultation groups and the discussions that took place. To facilitate the discussion, researchers used methods such as video and power-point presentations and the use of conceptual images related to the Quechua culture. As part of this process a video was developed in Quechua to explain the different legal terms and re-interpret the concepts in indigenous terms which required the creation of new Quechua words to incorporate these new concepts.

The use of indigenous methodologies and concepts was also essential in this stage of the methodology. The consultation process itself was based on the Andean principles of reciprocity, duality and equilibrium and traditional practices used for generating and maintaining flows of dialogue and decision-making. An example of this is the participation of members of the Park's gastronomy group who prepared and served traditional dishes using some of the rarest species of potato found in the Park to members of the consultation groups both as a form of reciprocity and to facilitate discussion about bio-cultural heritage. The development of the video was also conceived of as a tool to link the written legal systems with the oral system of communities and to convey the content and new concepts of the BCP based on images and spoken word.

### **Phase 3: Final Consultation and Validation of the Inter-Community Agreement**

In this last stage of the methodology, final consultations and a validation process incorporating the ideas and suggestions of the consultation groups was carried out with the goal of finalising and signing the ICA. During this stage, community participation was expanded further involving consultations and meetings with a wide variety of different actors including study groups, representatives of economic groups, community leaders, shamans, women's groups, elders, youth groups and the Board of Directors of the Association of Communities of the Potato Park. Following these consultations a validation process began in the form of community assemblies where after hearing all arguments the ICA proposal was put to a vote, with each community approving the agreement by a large majority.

With respect to participatory and emancipatory/decolonization methodologies, work continued in the final consultation process in the form of study groups facilitated by indigenous researchers. Following a similar methodology these groups now focused their discussions around questions of objectives, benefits and beneficiaries, rights and responsibilities and forms of benefit sharing within the BCP. In this way knowledge gaps were identified and addressed in order to improve the final versions of the ICA draft which were then reviewed by a group of experts including a lawyer with a specialisation in customary law.

These study groups also continued the decoding process in workshops aimed at simplifying the ICA project for ease of understanding and re-conceptualising the content of the agreement in Quechua terms. After its final revision the final draft version of ICA based firmly on Quechua norms and principles and conceived in Quechua terms was presented to Community Assemblies in which traditional decision-making practices were followed in line with the focus on indigenous methodologies. These traditions and practices were also incorporated in the final inter-community agreement, which was then signed and brought into affect.

## **6.5 Customary laws that govern Benefit Sharing among Quechua Communities**

### **6.5.1 Understanding the *Ayllu***

No discussion of customary law can begin without some understanding of the context in which those laws arise, evolve, and operate: the *ayllu*. While anthropological and historical analyses present the *ayllu* as a political system under which Andean society and economy were organized, the modern *ayllu* is described as “a community of individuals with the same interests and objectives linked through shared norms and principles with respect to humans, animals, rocks, spirits, mountains, lakes, rivers, pastures, food crops, wildlife etc.”<sup>43</sup> The contemporary Andean *ayllu* is itself a complex, adaptive, holistic Biocultural System, an Indigenous territoriality with a creative economy based on biodiversity and culture. Of course, it carries with it an entirely different notion of ‘territoriality’ than

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<sup>43</sup> Argumedo, A. (2010), *The Ayllu System of the Potato Park, Cusco, Peru*, Satoyama Initiative. <http://satoyama-initiative.org/en/case-studies/americas/agriculture/ayllu-system>.

the ones found in discourses of conservation, neoliberal economic globalization, or state-derived rights. These discourses perceive territory as an arena of regulation, within which command/control over resources and people is organized. By contrast, the *ayllu* is best thought of as a conceptual grid which encompasses customary land tenure, production and exchange systems, political organization and goals, and cultural identity. As a biocultural heritage approach, it builds on the relationship between ancestral lands and historical memory, Indigenous discourse, ceremonial and economic practice, horizontal networks, and the customary laws of Indigenous Peoples.

Systems of holistic territorial management arise from both collective memory and lived experience, and because of their cultural rootedness and adaptive responsiveness continue to thrive not only in the Andes, but in various forms in other regions (for example, the *marka*, *comarca*, *resgurados*, *ejidos*, etc.). The Indigenous territoriality and productive regimes exemplified by these social formations are critical to Indigenous Peoples' survival worldwide. It should be noted that the centrality of memory, here, is not about resurrecting some romanticized past, but instead provides a working model of communal organization that predates – and has survived – the advent of capitalism, and is therefore capable of grounding political action against modern reiterations of this intrusion and disruption (particularly neoliberal economic globalization, or neo-colonialism). The underlying purpose of the *ayllu* is the attainment of well-being from an Indigenous perspective, defined as *Sumaq Kawsay*, or flourishing in social, economic, and political spheres through leading a full, balanced life, including nurturing the positive, reciprocal relationship between humans and all other elements of creation. *Sumaq Kawsay*, in turn, is invigorated by the continual application of the principles that guide Quechua customary law.

The customary laws of the Quechua people can be found in action in all events of their daily lives. These laws are not written or systematized, but are fused with practices and customs, all of which are compulsory for community members. Quechua customary law emanates from and reflects the *ayllu* system. Natural links between the *ayllu*, customary law, and *Sumaq Kawsay* are drawn through the principles (outlined below) that undergird all three; accordingly, these principles can be used to build bridges to external concepts and frameworks in a bottom-up approach to policy development. Customary law organizes, gives balance among the various elements of, and supports the adaptive capacity of the *ayllu*. Just as the *ayllu* is the provider of wealth and benefits of all kinds, it is customary law which dictates the equitable distribution of those benefits among community members.

### **6.3.2 Identifying customary law principles**

ANDES researchers and the communities of the Potato Park examined customary laws by identifying their underlying, guiding principles. In this process, traditional practices of the BCS (including distribution of seeds, land inheritance, and transmission of knowledge at individual, communal, regional and general levels) were studied. An economic analysis of customary principles was also undertaken, in order to identify rules for benefit-sharing. A careful review of these (and other) practices with community members, combined with an examination of the literature on Andean society and worldview, led to the identification of three main Andean principles: reciprocity, equilibrium, and duality. These principles guide all aspects of the Andean cosmovision and underpin the practice of natural resource management. From these principles, derivatives were developed and used to flesh out the benefit-sharing framework in the Inter-community Agreement.

In order to identify rules and norms derived from the three principles for benefit-sharing, the communities and researchers had to observe the events and activities of daily life (such as marriages, births, burials, and agricultural work). For example, the distribution of work among communities is based on the principle of reciprocity represented in the ancient practice of *ayni* (mutual assistance). The three core principles of customary Quechua law that maintain the BCS are defined as:

**Reciprocity (*Ayninakuy*):** what is received must be paid back in equal measure. This includes the principle of equity and provides the basis for negotiation and exchange between people and Pachamama (Mother Earth). All of the elements of nature, including human beings, give and receive, thus contributing to the common good and harmony of the world. *Ayni* is the mechanism by which the principle of reciprocity finds expression; therefore *ayni*, defined as mutual assistance, can be applied both to people and to elements of nature. This principle can be seen in seed exchanges among the communities and in the distribution of agricultural work. Reciprocity and fairness are the cornerstones of the Quechua cosmovision; they are embedded in and found throughout the material, spiritual and natural worlds. They are based on complementarity and redistribution, as opposed to the principles of competition and accumulation that are essential to capitalism. In fact, the idea of accumulation is alien to the Quechua, as this practice would destroy the balance between human beings, nature, and the supernatural world. Therefore, all profits must be distributed and redistributed.

**Duality (*Yanantin*):** means that the cosmos is always divided into two opposite but complementary halves. This can be seen in the division of labour between men and women (which, while differentiated, does not denote superiority or subservience, but mutual interdependence); or between rights and obligations, both of which should be met to achieve harmony and maintain equilibrium. This principle can be found in the transmission of knowledge related to agricultural practices, where the roles of women and men complement each other. It is important to note that in the Indigenous concept of duality, one part is not superior to another, but rather each part serves a necessary and complementary role. Unlike mainstream systems that equate structure and distinctness with hierarchy, the Andean system does not privilege the role of duty over rights, or man over woman. However, it is also necessary to understand the context in which the concept of duality (as well as reciprocity and equilibrium) presently exist and not essentialize Indigenous Peoples and their principles. For example, Indigenous epistemologies, such as the Andean worldview, are marginalized under the paradigm of capitalism and its requisite exploitation and, as a result, have changed since the days before imperialism and colonization.

**Equilibrium (*Rakinakuy*):** refers to proportion and harmony with nature (Pachamama, Mother Earth), the sacred world, and among community members – for example, respect for nature and mountain gods, and the resolution of conflicts to restore social harmony and complementarity (including between ecological niches). Equilibrium needs to be observed in the application of customary laws. This principle is related to a fair and proportionate distribution of profits in relation to needs, capabilities, responsibilities, contributions, and efforts. This criterion also features in conflict resolution and decision-making, ensuring the impartiality of all actors.

### **6.3.3 Using Ecological Economics to guide equitable benefit-sharing**

The three core Quechua customary law principles represent a longevous alternative to mainstream contemporary concern with the generation of economic value which underpins much international and national legislation related to traditional knowledge, resources, and Indigenous rights. They serve as the basis of customary law and new, innovative approaches to benefit-sharing – initiatives that value the roles and rights of Indigenous and local communities, as envisioned in the BCS approach. The initiatives of the communities of the Potato Park, such as the Inter-Community Agreement, seek to revalue and return to these principles.

In this sense, as explained below, one of the tools chosen to resolve the question of how to distribute benefits among the Potato Park communities is derived from Ecological Economics (see Section 7.8). It has been chosen as an appropriate tool because of its commitment to *Reciprocity* - distinct but interrelating and overlapping systems – economic, social, and natural are all viewed as depending upon and shaping each other. As well as providing a solid base for examining relations between

each and every constituent part of an ecosystem (conceptually and literally), Ecological Economics, is consistent with the principle of *Duality*. In this case, this is in reference to the complementarity between the indigenous principles and academic discourses about biodiversity, indigenous knowledge and sustainability. Similarly, the principle of *Equilibrium* is echoed in Ecological Economics through its emphasis on relationality and the myriad interrelations of elements within (cultural and physical) ecosystems. Ecological Economics in principle offers the potential to include- alongside *status quo* considerations such as ‘society’, ‘economics’ and ‘nature’ – *incommensurable* values such as sacrality or the equilibrium of nature itself in assessments of biodiversity, sustainability and benefit-sharing. Lastly, the central tenets of nature, time and particularly of *justice* in Ecological Economics (Faber, 2007)<sup>44</sup> are appropriate vehicles for the transmission of indigenous peoples’ concerns – and their struggles - in a heterogeneous, uncertain world.

Although Ecological Economics is a relatively new field of knowledge, it is also one which offers important insights into ways in which more generic economic assessments of biodiversity and sustainability can be reconciled with indigenous peoples’ own worldviews- not least because of its emphasis on inclusivity and holism. For this reason it has been considered a suitable perspective to incorporate in the following economic analysis of the project results. Lastly, Ecological Economics may also offer a means of building bridges - not only amongst Indigenous norms (Customary Law) and Western legislative models, but also between indigenous worldviews and recent developments in academia. To this end, it is hoped that Ecological Economics may serve as a means to develop novel tools and criteria for biodiversity assessment as well as for ensuring the equitable sharing of benefits arising from the utilisation of traditional knowledge and associated genetic resources.

## **7. The Potato Park Inter-Community Agreement for Benefit Sharing**

The Inter-community Agreement is a broad outline for benefit sharing that includes all benefits received by the Potato Park, directly or indirectly derived from its biocultural resources. The Agreement is expected to become part of a model benefit-sharing framework that can be used by other Indigenous and local communities in the Andean region. It provides valuable insights and lessons learnt that could assist in the early implementation of the Nagoya Protocol. It is also an innovative document, as it is based primarily on customary norms and practices identified by the communities. It reveals the true nature of these norms, which are not static, but constantly adapt to the changing environment (as do the components of a BCS). As such, these norms are always able to respond to new situations, like those related to ABS; and to incorporate and adapt, when necessary, the principles, norms and tools of national and international legislation. This process is derived from the principle of duality, represented here by the meeting of the Andean norm world/system and the Western legal world/system. Along with the agreement with CIP, the Inter-community Agreement helps restore the idea of equilibrium, as it is understood from within the Andean cosmovision and in the concept of BCS. Additionally, the Agreement provides a mechanism to protect and preserve the traditional knowledge associated with biological resources and to strengthen the cultural identity of the communities.

### **7.1 Importance of the CIP – Potato Park Repatriation Agreement**

For centuries, Andean communities have shared and maintained their agro-biodiversity through traditional practices of seed exchange, which have contributed to the development and maintenance

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<sup>21</sup>Faber, M. (2007) “How to be an Ecological Economist,” Working Papers 0454, University of Heidelberg, Department of Economics, (Revised Oct 2007). Available at: <http://www.uni-heidelberg.de/md/awi/forschung/dp454.pdf> (Last accessed 24.04.2011)

of countless medical and nutritive cultivars. However, history has always been told from the perspective of those who forcibly or surreptitiously extracted the knowledge and resources of the communities, without compensation for (or consideration of) the impacts on local culture and livelihoods. Until recently, the norms and practices that regulate the flow of seeds, plants, and knowledge among the communities have been largely ignored by research institutions and national authorities, as well as by the agricultural and pharmaceutical industries that seek to commodify, privatize, and monopolize these resources.

The Quechua people, possessing an invaluable knowledge about plants and seeds, are usually willing to share their knowledge and resources, as this practice is integral to their culture. In fact, sharing is an ancestral practice that has helped develop and maintain agricultural genetic resources since ancient times – but it is not an unregulated practice. Anyone who participates in this kind of exchange (even as a recipient) becomes part of the tradition of adopted mutuality, and therefore becomes bound by the law of reciprocity. The Quechua have sought to enforce this law with outsiders, since these exchanges take place within their traditional territory and biocultural heritage, and the CIP agreement is an example of their success in these endeavours.

The International Potato Center has been collecting genetic material from the area of the Potato Park since 1960, without any compensation to the communities living in these areas. From the perspective of the communities, CIP had not met its obligation under the law of reciprocity and had unjustly taken resources from the ecosystem and the communities that live within (and constitute a part of) it. Due to this, balance was lost and needed to be regained. For this reason, the communities approached CIP to urge the organization to comply with traditional law. After the ensuing dialogue and negotiations, in 2004, an agreement for the “Repatriation, Restoration and Monitoring of Native Potato Agrobiodiversity and Associated Knowledge of Indigenous Communities” was signed.

Considering the personal and communal investments made to maintain the agro-biodiversity of the Potato Park (a genetic reserve for a key food crop worldwide), there is a sizeable ecological debt owed to Indigenous farmers and Andean communities. The costs associated with the perpetuation of germplasm, the related information provided, and their maintenance for commercial use, have thus far gone unrecognized, along with the rights of local farmers. The agreement with CIP provides for the repatriation of seeds and outlines a commitment to share the benefits derived from the use of said seeds, as well as the TK associated with them. Moreover, from the perspective of the communities, it is a case of ‘reverse access’: communities legally accessing the potato cultivars that constitute their biocultural heritage, and which had been alienated from them, an act which stands as a restitution of community rights. Specific benefit sharing mechanisms for this agreement were defined prior to drafting the agreement, when the communities identified the need to agree among themselves on a local benefit sharing arrangement. In this regard, the agreement with CIP can be identified as a driver of the participatory process among the communities of the Potato Park, which has itself led to the definition of a framework for the distribution of all benefits derived from the activities and resources of the Park. That framework is explained below.

In December 2010, the CIP- Potato Park agreement was renewed, this time including provision for CIP support of the Potato Park plan to send seeds from their collection of native potatoes to the Svalbard Seed Vault. In the first year of the three year project with the Global Crop Diversity Trust, CIP scientists will train farmers from the Potato Park in techniques to produce botanical potato seed, and together they will identify all seed producing varieties from the Park collection. In the second and third years of the project, 200 seeds of each variety will be send to the Seed Vault. Two other sets of seeds will also be produced, one to be stored at the CIP gene bank, and one to be used by the Potato Park to develop climate-ready varieties. The work of the Potato Park, CIP and The Seed Vault ensure

the availability of the incredible potato diversity of the Andes for future generations in the Potato Park and around the world.

## **7.2 Why Transform a Verbal Agreement into a Written Document?**

Customary laws of Indigenous communities are, by definition, unwritten. They are transmitted orally from one generation to another, and the agreements in such a system are adopted verbally. The Inter-community Agreement only applies among the Park communities and, in principle, it should not be necessary to put it in writing; nevertheless, a decision was made to produce a written version. A written agreement was felt to be useful:

- 1) For the purposes of research, contributing to a deeper understanding of the dynamics of customary law within a BCS, the nature of the agreements among the communities, and the similarities and differences with agreements based on Western legal systems;
- 2) In order to share the experience with other communities and experts seeking to develop creative, just and culturally sensitive schemes to define benefit sharing agreements with communities in different areas;
- 3) To contribute to a more constructive and practical debate on the definition of *sui generis* systems for the protection of TK and the role of customary law in such schemes; and
- 4) To provide an example of a practical application of the BCS approach.

It is clear that one of the great difficulties in applying norms beyond the community level is precisely their unwritten nature, though customary law does achieve the same level of clarity and precision as systems of positive law.<sup>45</sup> One way to solve this problem is to incorporate customary norms into agreements between communities and third parties.

## **7.3 Community Leadership in the Development & Negotiation of the Inter-Community Agreement**

The process for defining the Inter-community Agreement included an investigation to define its objectives, followed by a process for identifying the common interests of the communities, and then the creation of an inter-community committee. The role of this committee was to guide the negotiation process, creating a foundation for the agreement and helping the communities to create the necessary institutional framework for implementation.

After listening attentively to the communities and understanding the dynamics of and principles derived from their customary norms, the community researchers compiled the various methods of benefit sharing identified and agreed upon by the six communities of the Potato Park, which resulted in a written agreement. Subsequently, a consultation process was conducted, as a precursor to negotiations among the communities to review and discuss the draft agreement. Preparation for these consultations included the development of materials in Quechua explaining each clause of the agreement and compiling outstanding issues for discussion. At the time of writing the agreement, the researchers identified a number of issues yet to be defined and adopted by the communities, such as new instruments (like funds created for the administration and distribution of benefits) and the role of the Association of the Potato Park (created by the six communities for the administration of the Park) in the implementation of the agreement, which led to another round of consultation and negotiation.

The consultation process was long and complex, making use of a variety of techniques including focus groups, interviews, conceptual graphics, videos in Quechua, and participation in community

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<sup>45</sup> Kuruk P (2002) *African customary law and the protection of folklore*, Copyright Bulletin. Vol. XXXVI, No. 2.

assemblies. Consultations based on the initial draft document, which began in 2007, brought to light a number of issues that had not been anticipated during the definition phase of the agreement. Some of the difficulties identified by the researchers were related to varying levels of ‘biculturalism’ and the different market links of the six communities. As a result, the communities showed some differences in both outlook and expectation related to the Park, as well as with the decision-making authority they were willing to delegate to the Association. This is an example of how the Park is experiencing new challenges and opportunities as a result of its interaction with Western society (e.g. sharing cultural values, generating new sources of income, and enhancing the livelihoods of the communities). These challenges and opportunities may generate conflicts that require time to understand and resolve, particularly since the communities are struggling to adopt agreements related to intangible or future issues, such as benefits that are yet to reach the Park.

Throughout the consultation and validation process, changes were made in how the funds generated by Park activities would be distributed. In 2007, benefits which accrued to the Potato Park were distributed to the Association of Communities of the Potato Park, and the following year, equally to all participating communities. Following some reflection on the different levels of participation and contribution to Park activities, and what constitutes fair and equitable distribution of benefits, criteria were developed to ensure that the benefits derived from Potato Park activities were distributed in a manner agreed upon by all communities. In 2009, a process of validation began, with the Intercommunity Agreement being presented at community meetings in each community of the Potato Park. Some additional observations were made at this stage, and a few final changes were required before the agreement was approved by the six communities and signed by their presidents, as well as by representatives of the economic collectives. That same year, the benefits generated through tourism activities, donations and contributions from the various economic collectives were distributed based on criteria identified by the communities of the Park.

The Inter-community Agreement is not only a step forward in designing a framework for benefit-sharing, but also an example of inter-community decision making and the creation and strengthening of institutions for the betterment of the BCS. To summarize, it has contributed to the endogenous construction of an Indigenous governance model among the communities of the Park, identifying and resolving conflicts in the process.

#### **7.4 Principle Elements of the Agreement and Links to Customary Norms and Principles**

The Inter-community Agreement springs from the concept of Biocultural Systems (BCS), which represents the communities’ holistic knowledge system and, therefore, applies to all resources, activities and interactions that occur within the system. In this, it departs from similar mainstream models for ABS and TK protection. Additionally, the agreement seeks to define the general mechanisms for the fair and equitable distribution of benefits derived from the management and direct and/or indirect use of collective biocultural heritage (CBH). It is important to point out that the Inter-community Agreement has been developed according to Andean customary norms, as well as national and international legislation on ABS, TK and Indigenous Peoples’ rights (particularly those recognized by the CBD, the International Treaty of the FAO, ILO Convention 169, and the UN Declaration of Rights of Indigenous Peoples). Therefore this agreement represents an innovative approach to ABS that prioritizes Indigenous epistemologies and norms while creating a model that is also applicable at the national and international levels.

The Potato Park is managed under the aforementioned customary norms (*ayninakuy*, *yanantin*, and *rakinakuy*), which are applied to the sustainable use and conservation of BCS. In this regard, traditional knowledge is owned collectively and access to that knowledge requires the prior informed consent of the six communities. The General Assembly of the Potato Park, made up of the authorities

of each of the six communities, is responsible for making all decisions relating to third-party access to biocultural resources. In the text of the Inter-community Agreement, the communities state that common goods and collective property are key elements in maintaining traditional knowledge and practices. This reaffirms, through the functions assigned to the Association of the Potato Park, the integrated and collective nature of rights in a BCS. The communities are considered to be the custodians and holders of biocultural heritage – this is explicitly recognized in national legislation on the cultural heritage of communities and Indigenous peoples with reference to biodiversity,<sup>46</sup> and in the sections of ILO Convention 169 concerning the ownership and possession of traditional lands and the administration and management of natural resources contained therein.

The Inter-community Agreement includes provisions to regulate benefit-sharing among the six communities of the Park, guided by the principles of reciprocity, equilibrium and duality that regulate the BCS. These principles provide the basis for various derivatives that reflect distinct modalities of benefit-sharing. They take shape as norms related to exchange and ways of sharing TK and biological resources; and the distribution and re-distribution of monetary and non-monetary benefits of the Park derived from:

- a) Third party use of biological resources, seeds, and traditional knowledge of the Potato Park;
- b) Activities undertaken in the Park, such as research, ecotourism, and any other related services (such as the restaurant or lodging facilities);
- c) Repatriation of seeds, especially those derived from the agreement with CIP;
- d) Donations, projects, or similar activities; and
- e) Agreements with third parties, outside of the above-mentioned categories, related directly or indirectly to the use of biocultural resources.

In addition to regulating the contributions and benefit-sharing from the fund created especially for the Park (The Potato Park Communal Fund), the agreement contains mechanisms for conflict resolution based on traditional Quechua norms and institutions.

## **7.5 The Parties and Beneficiaries**

The six communities of the Potato Park are the parties to the Inter-community Agreement. They are represented by their own authorities, formally recognized by national legislation; and the Association of the Potato Park, whose General Assembly is composed of representatives of the six communities that make up the Park. The Association of the Potato Park has functions specific to the allocation of benefits, as well as the maintenance and administration of the Park's goods and services. Additionally, the Association of the Potato Park will support the implementation of the agreement. This is one of the points over which the communities encountered the most difficulty in reaching an agreement, since while there are clear mechanisms for decision-making at the community level, some mechanisms at the inter-community level had to be defined during the negotiation process.

Furthermore, to develop the activities and services of the Park that produce revenue, the communities created a series of economic collectives organized by the type of activity performed. Members of the collectives are elected by each community in the Park to participate in groups such as the women's gastronomy, video, and medicinal plants collectives. Each collective is registered at present as a non-profit organization, and their principal objective is Sumaq Kawsay, or to improve the quality of life of their members and members of the communities of the Potato Park through provision of biocultural products and services as an alternative source of sustainable livelihoods, and through the conservation

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<sup>46</sup> See Law No. 26839 for the conservation and sustainable use of biodiversity and Law No. 27811 on the protection of traditional knowledge.

of their indigenous biocultural heritage. The economic collectives are based on Andean guiding principles of reciprocity, duality and equilibrium, and thus function under a framework of solidarity economy, taking into account the social and ethical components of economy, and addressing issues of poverty, livelihoods, knowledge systems, culture and self-determination.

The economic collectives form part of the Association of Communities of the Potato Park, and are regulated under that organization. The Intercommunity Agreement, in particular, dictates the relationship between the collectives and the Association in terms of distribution and redistribution of benefits. Within each collective, a General Assembly and elected Directors oversee and organize operations. Members of the collective have rights and obligations outlined in their bylaws, including the obligation to participate in discussion and approval of work plans and projects, and the obligation to contribute, either individually, or as a group to the Park's Communal Fund. These economic collectives generally earmark 10% of the benefits obtained through their activities to the Communal Fund, whose resources are used for the maintenance and sustainability of the Park, and are also redistributed in an equitable manner to communities of the Park at the end of the year.

Review of the organization and functioning of the economic collectives has led to a decision to transition to a model of a Multi-community Company, based on the Law of Indigenous Communities and taking from that law the basis for organization, legal recognition and management. The goal of the Multi-community Company is to ensure: broader representation at the level of the whole Park; an administration that maintains the unity of the area as a functioning principle; that assistance is available for the promotion and marketing of various products developed by the collectives; and that the profits generated by these collectives will be distributed to and/or benefit all members of the six communities that make up the Park.

To further outline the agreement, each community has three types of Park beneficiaries:

- 1) **Direct beneficiaries**, who are directly involved in commercial, cultural, and research activities of the Park (e.g. ecotourism, the restaurant, sale of handicrafts, or working in the medicinal plants pharmacy);
- 2) **Indirect beneficiaries**, who are involved in conservation, maintenance, preservation, and recovery of biocultural heritage (e.g. reforestation, trail maintenance, etc., and members of communities who will benefit from redistribution of Park funds); and
- 3) **Potential beneficiaries**, who are not actually involved in any activity related directly or indirectly to the Park, but who maintain the right to do so in the future (like future generations)

Benefit sharing among the different types of beneficiaries is determined at the level of each community.

## 7.6 Customary Norms for free Access and Sharing among the communities

The Inter-community Agreement aims to maintain the free flow of resources among the communities and their members, as is the tradition of the communities of the Potato Park, which is supported by the Nagoya Protocol<sup>47</sup>. In this regard, it establishes that all knowledge is freely accessible to all communities of the Park and their members, a clear departure from standard ABS agreements. This customary norm encompasses both responsibilities and rights. On the one hand, everyone has the right to freely access knowledge and resources and to use them according to traditional practices and their own needs; and on the other hand, they have the obligation to maintain the flow of knowledge and resources among themselves and with neighbouring communities, to transmit knowledge to

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<sup>47</sup> Nagoya Protocol, Art. 12.4

future generations to ensure continuity, and to protect TK and resources from third parties. This right has an exception in the case of sacred knowledge. Only specific individuals within communities can access sacred knowledge and resources, and they have a corresponding obligation to keep that knowledge and those resources secret. Other community members have the complementary responsibility to refrain from attempting to gain access to sacred knowledge and resources.

### **7.7 Customary Norms and Protocols for the Distribution of Benefits**

In principle, the Association of the Potato Park is in charge of the distribution and redistribution of benefits and goods to community members, through a special commission created for this purpose (the Benefits Allocation and Oversight Committee); and through the Papa Arariwa (Guardians of the Native Potato) Collective, created specifically for the distribution of repatriated potato seeds to the Park as a result of the agreement with CIP. The rules of distribution and redistribution are among the most important customary norms of Andean society, as they are based on the principle of reciprocity that maintain the functioning of the Biocultural System. Each member of the community receives benefits/goods according to the amount and time of work and effort carried out. This principle of reciprocity is embodied in the practices of *voluntad* (willingness), *ayni* (mutual assistance) and *minka* (exchange of labour), where equity in distribution of benefits/goods is a function of the equitable distribution of work. The services provided directly by a member of the community (for example, those related to ecotourism), are carried out according to the same principle applied to the land rotation system for agriculture. As is the custom with land, work is also done in shifts (job rotation), thereby ensuring that everyone has the opportunity to perform the task. Community members receive the direct benefit of carrying out the task when it is their shift. By having an equal opportunity to provide service at some point, all members receive benefits.

The Inter-community Agreement proposes that the distribution of monetary benefits arising from the marketing of native potato seeds and biological resources, and those from the use of goods and activities within the Park (such as those derived from the agreement with CIP, payment for entry to the Park, and revenues from the Potato Park restaurant), should be fair and proportionate to the needs, capabilities, responsibilities, contributions, and efforts of the communities and their members. The same criteria apply to the non-monetary benefits, such as donations, scholarships, and infrastructure. Once the benefits are distributed among the communities, the surplus is used to construct and maintain a social safety net, using the solidarity-building principles of the traditional *ayllu*, thereby providing a measure of protection against neoliberal encroachment on Indigenous societies. The benefits from scholarships, or other benefits related to education, are distributed according to the structure and rules applied to family relationships in Quechua culture, providing inter-cultural education that strengthens cultural resilience.

Each collective of the Park is organized in a different way, depending on the type of product or services it provides. In all cases customary laws govern the distribution of monetary and non-monetary benefits. The gastronomy collective and the medicinal plants collective use collective labour to create a product or service for sale, and the monetary benefits are distributed equally among participants. The craft collective uses individual labour to produce goods for sale, so the profits from a sale go to the individual craftsman. In the case of guiding services and home stay programs, the direct monetary benefits go to an individual or family on a rotational basis.

Chart 1 outlines the distribution of monetary benefits for each collective, as well as non-monetary benefits. Members of all collectives also receive a variety of non-monetary benefits. These include capacity building, participation in social and cultural events, rewards for participation, participation in trips and exchanges, and they may also include other intangible benefits such as increased self-esteem or respect in their communities.

**Chart 1. Monetary and Non-Monetary Benefits of Participation in Economic Collectives**

Economic Collectives	Monetary		Non Monetary		
	Earnings 2010 (nuevos soles)	AIC regulation	Capacity building	Participation in socio/cultural events	Awards/rewards
<b>Gastronomy collective “Qachum waqachi”</b>	2,710.00	Direct Beneficiaries.  Equitable distribution  Articles 33, 51	Workshops: strengthening of organizational and management capacity  Training in food preparation, presentation, customer service, cleaning, hygiene	Participation in events with MINCETUR and DIRECTUR  Participation in local and regional fairs  Exchanges with other communities and gastronomy groups	Trip to Congress in Lima and Regional Government in Cusco
<b>Medicinal plants collective “Sipaswarmi”</b>	239.00	Direct beneficiaries.  Equitable distribution  Articles 33, 35, 39, 51,	Workshops: strengthening of organizational and management capacity  Horizontal learning, for identification of medicinal plants, and processing of medicinal plants products (soaps, shampoos, creams, teas, etc.)	Participation in local, regional and national fairs  Participation in regional, national and international events in the Potato Park	Award from OGD (Office of Management of tourist destinations)
<b>Botanical garden collective “Kantus”</b>		Articles 33, 51	Workshops: strengthening of organizational and management capacity  Production and conservation of genetic diversity of wild native and adapted species in botanical garden, training in seed production and preservation	Exchange of plants , seeds, and plant products, and own use of plants	
<b>Weaving collective “Ñaupá away”</b>	580.00	Individual earnings based on quantity and quality of production	Workshops: strengthening of organizational and management capacity	Participation in events at the Potato Park Craft Centre Participation in	Award from DIRCETUR-OGD

		through direct sales  Articles 33, 35, 39, 51	Work with own designs, protection of ,Intellectual Property, marketing strategies and niche markets	local, regional fairs	
<b>Biocultural interpreters “Riquchiq Waynakuna” (Local Guides)</b>		Individual earnings based on quantity and quality of service – ROTARY  Articles 33, 35, 51	Horizontal learning through work with all other collectives, Exchange of information with visiting groups and tourists	Participation in events at the Potato Park Craft Centre Participation in local, regional fairs	
<b>Papa Arariwas (Guardians of the potato)</b>		Individual direct monthly earnings – project based at present  Articles 33, 35, 51	Directed Capacity Building: Conservation and Management of the Diversity of Native Potato Varieties, identification and characterization of potato varieties, revaluing traditional knowledge and practices associated with the native potato	Responsible for providing and presenting the resource of most interest to visitors	Award from Congress, Regional Government, and OGD
<b>Homestay tourism collective</b>	520.00	Direct family earnings based on quantity of service provided – ROTARY  Articles 33, 35, 51	Workshops: Revaluing traditional knowledge, customer relations, hygiene, home improvements  Support with family activities including farming, fishing, crafts, etc.	Participation in regional exchanges organized through MINCETUR	

### 7.8 The Inter-Community Fund for Benefit Sharing

As has been mentioned, customary norms are dynamic and the communities have, over the years, incorporated various elements of national legislation. An example of this dynamism is the creation of the Intercommunity Fund to finance community projects of short- and medium-term duration, in order to support sustainability. Although the Intercommunity Agreement outlines the establishment of two funds, the Cultural Affirmation Fund, and the Fund for Reinvestment for Sustainability, the possible functioning of these funds is still in review. In the mean time, the Intercommunity Fund receives the funds which are intended to be destined to both funds. According to the Inter-community Agreement framework, particularly clauses 35 and 51, all community members must provide the fund with a percentage of the monetary benefits they receive through participation in the various economic collectives or through use of the Potato Park’s collective trademark. The amount which was decided upon by the collectives is 10% of earnings, as a measure of reciprocity with the communities of the Park and as a contribution towards the maintenance of the Collective Biocultural Heritage. The fund

is to be distributed once a year among the communities who have contributed, in proportion to that contribution.

Some of the economic collectives have been more active than others, and have begun to generate consistent profits more than others. This is because some have had training and support from specific ANDES projects, while others have had very limited support and still require organizational and technical training and development. The gastronomy collective has more members than other groups, as it requires larger numbers to provide meals to the tourist and educational groups they are contracted to provide services for. This group also has fairly consistent work, as they regularly provide services at training events organized by ANDES and the Potato Park, as well as services to tourist groups. As such, this group makes the largest contribution to the communal fund at present. The medicinal plants collective has been operating for quite some time and is relatively independent. They use their profits to buy their own materials and equipment, and pay for members' time in production of medicinal plants products. However, their sales are inconsistent, and their contribution to the communal fund is minimal at this time. Likewise, the craft collective has inconsistent sales and makes a minimal contribution to the fund. Other collectives either do not have a direct source of income in relation to Park Activities or are just beginning to function in a way that generates profit for the group. The present contributions (2010) of each group can be seen in Chart 1 above, while the earnings on the years before are exposed on the Chart 1 of the Annex. Between 2007 and 2010 the earnings of the gastronomy group grew considerably, resulting in a sizable increase in contributions to the fund.

The Intercommunity Fund is also fed by contributions from Park admission fees associated with tourism activities, educational activities, visits by journalists and donations. The amount of income generated from all tourism and educational activities has increased dramatically between 2007 and 2010, nearly doubling each year. Details of all sources of income can be seen in Chart 2. This chart includes the contributions of the economic collectives outlined above. Also note that some income was in US dollars and the rest was in Peruvian soles. Between 2007 and 2010, the Communal Fund collected and redistributed a total of 7,361.63 US dollars and 27,697.92 soles.

**Chart 2: INCOME FROM ALL SOURCES TO THE POTATO PARK COMMUNAL FUND 2007-2010**

SOURCES OF INCOME	2007		2008		2009		2010	
	Dollars	Soles	Dollars	Soles	Dollars	Soles	Dollars	Soles
1. Tourist Visits via travel agencies			210.00	251.00	98.00	620.00	3,234.00	4,081.12
2. Sharing experiences with other Peruvian indigenous communities		26.25		93.50		216.00		2,270.00
3. Visits for journalism, filming			323.00	24.00	549.75	744.30	50.00	1,890.00
4. Donations				40.00		2,720.00		236.50
5. Visits from public and private institutions		1,493.00	520.35	2,160.00	161.50	470.00	866.00	343.50
6. Visits from independent tourists	640.00	245.50	180.00	465.00	200.50	2,478.75	146.83	811.00

7. Contributions from the Economic Collectives of the Potato Park		49.50		285.00		2,155.00	181.70	3,529.00
<b>Total income ...</b>	<b>640.00</b>	<b>1,814.25</b>	<b>1,233.35</b>	<b>3,318.50</b>	<b>1,009.75</b>	<b>9,404.05</b>	<b>4,478.53</b>	<b>13,161.12</b>

In 2010, the Potato Park hosted a large number of individuals and groups interested in learning more about the Potato Park as a Biocultural Territory, its work in conservation of the genetic diversity of native potatoes, and the work of specific economic collectives within the Park. The visitors included representatives of MINCETUR (The Ministry of Commerce and Tourism); journalists and television reporters from Germany, Switzerland and France, Japan, Italy, National Geographic, Discovery Channel; researchers and scientists from China and Ethiopia; local, national and international universities; national and international Gastronomic institutions such as Gaston Acurio, Blue Ribbon; public and private institutions; tourism agencies; and local, national and international farmers and community groups. The wide range of visitors have led to increased monetary benefits for the Park, due to increased admission payments, and for the collectives who provide biocultural goods and services to tourists and exchange participants.

According to clauses 38, 39, 40 and 41 of the Intercommunity Agreement, all monetary benefits collected by the Association of Communities of the Park must be distributed in an equitable manner, and according to criteria established by the Association. To ensure fair and equitable distribution of benefits, a set of criteria for rating community participation in Park activities and contribution to the Park maintenance and promotion is established each year based on activities carried out that year. In addition, the Association agrees on a simple numerical formula for rating the participation of each community. The criteria are based on the capacity, responsibility, contributions and efforts of each community as well as the concept of solidarity.

This rating analysis has been done using a table inspired by the Multi Criteria Evaluation (MCE) tool proposed by Ecological Economics. The form that this type of evaluation takes is always a table in which there are on the one hand scenarios or spheres (in the present case the Economic Collectives) and on the other hand a series of criteria chosen to evaluate each one of the scenarios. The ultimate goal is not just to reach a unique solution or conclusion, but rather to expose all the components of the situation, and to enable a rigorous evaluation amongst all the stakeholders in pursuit of a common consensus. In this case Chart 2 in the annex highlights the different criteria that were agreed to define the rationale for the distribution of monetary benefits in the Potato Park.

Unlike other economic tools such as Cost-Benefit evaluations, MCE resists reducing evaluation to a mere financial comparison. Beyond this, MCE can be used as a tool to assess incommensurable factors, such as the aforementioned (capacity, responsibility, contribution and effort). There are multiple ways to incorporate these kind of values in the table, in this case points (from 0 to 10) were assigned to each community in order to determine what percentage of that year's monetary benefits would be distributed to each community. This decision-making process has been reached in a participatory manner by the different community representatives of the Potato Park Association. Chart 2 in the Annex illustrates the criteria used for the distribution of the communal fund, as well as the formula used to calculate points for each community, and how the criteria were applied to determine the actual distribution of benefits to the five participating communities in December 2010<sup>48</sup>.

<sup>48</sup> Note that based on a decision by the Association of Communities of the Potato Park, Cuyo Grande is not participating in Park activities since 2009, so only 5 communities, not 6, are represented in the charts.

Chart 3 below gives the actual amounts distributed from the communal fund based on the criteria applied in Chart 2 described above.

**Chart 3: Amounts received by each community from the Communal Fund in 2010**

COMMUNITY	POINTS ACUMMULATED	PERCENTAGE ACCUMULATED	AMOUNT RECEIVED IN USA DOLLARS	AMOUNT RECEIVED IN SOLES
Pampallacta	62.5	19.84 %	826.14	2 267.58
Paruparu	81.5	25.87 %	1 077.64	2 957.91
Amaru	67.5	21.43 %	892.35	2 449.31
Chahuaytire	49.00	15.55 %	647.50	1 777.26
Sacaca	54.5	17.31 %	720.37	1 977.28
Personal Travel (Official operating agency of the Potato Park)			314.54	466.78
Incentive for participants involved in services for visitors in 2010			00.00	1 265.78
<b>TOTALS</b>	<b>315 points</b>	<b>100.00 %</b>	<b>USA \$ 4,478.53</b>	<b>S/. 13 161.12</b>

### 7.9 Conflict Resolution Mechanisms

By relying on customs and traditions, customary norms are known and accepted by all community members. Nevertheless, there is always the possibility of conflicts arising from the application of these norms. The community authority is responsible for dealing with these conflicts at three levels: the family, traditional authority, and the community's General Assembly. The Inter-community Agreement proposes a conflict resolution mechanism based on this scheme. When conflicts involve more than one community, they are resolved by the General Assembly of the Potato Park. The Andean justice system has a restorative focus, so these irrevocable decisions are aimed at restoring social equilibrium. The Inter-community Agreement recognizes that good management of conflict resolution requires the rational management of the resources, which are vital to the productivity of the communities and the livelihoods of their members.

### 7.10 Prior Informed Consent

The long participatory process to develop the inter-community agreement has enabled the six communities to have in-depth discussions about the way benefits should be shared amongst them and used, and to identify and address conflicts arising from different perspectives through the process. It has also enabled the communities to develop and establish legitimate and functioning inter-community governance structures for decision-making on access to collective biocultural resources and benefit-sharing from their use, based on its own vision for PIC. As a result, the Potato Park is now in a much stronger position to grant PIC and negotiate effectively with third parties, based on a very clear understanding of its collective objectives. The agreement provides a clear statement of principles that can function as the basis for discussion with others to promote equitable agreements and Mutually Agreed Terms. At the same time, the Potato Park is now in a position to inform others about its PIC procedures (in line with the Nagoya Protocol).

## **8. Compliance with international law and the Nagoya Protocol**

The Agreement is consistent with relevant international instruments such as the United Nations Declaration on the Rights of Indigenous Peoples (Art 34)<sup>49</sup>; the International Labour Organisation Convention 169 (Article 8)<sup>50</sup> and the importance and right to cultural life more generally as enshrined in international law (United Nations Universal Declaration of Human Rights [Art. 27.2]<sup>51</sup> and the International Covenant on Economic, Social and Cultural Rights, e.g, Art. 15 [1] and Art 11<sup>52</sup>).

Although the primary responsibility for implementing the Nagoya Protocol rests with the contracting parties, the experience of the development and implementation of the Inter-Community Agreement is a prime example of compliance with the Protocol. It has fulfilled a number of the obligations relating to indigenous and local communities and to contracting parties more generally, while going a step further in the understanding of ABS beyond the Western legal context. The following table provides examples of provisions of the Nagoya Protocol and its practical implementation in the Potato Park and the Inter-Community Agreement.

<b>NAGOYA PROTOCOL</b>	<b>INTER-COMMUNITY AGREEMENT AND POTATO PARK</b>
Objective of the Protocol (Art.1) Equitable benefit-sharing, as a contribution to conservation	Fair and equitable sharing of the direct and indirect benefits derived from the biocultural resources of the Potato Park amongst the communities, contributing to conservation and sustainable use of GR. Transfer of technology through the CIP Agreement.
Fair and Equitable Benefit-Sharing (Art. 5.2 and 5.5)	Example of framework for benefit sharing. Criteria developed to ensure that the monetary and non-monetary benefits derived from the Potato Park activities were distributed in a manner agreed upon all communities. Creation of Intercommunity Fund, Cultural Affirmation Fund and the Fund for Reinvestment for Sustainability.
Development of legal, administrative or policy measures (several articles)	Ordinances passed by the regional government of Cusco against biopiracy and GMO. Development of intercommunity decision making processes and structure.
Access to Genetic Resources, Prior Informed Consent of ILCs with the right to grant access (Art. 6.2)	Negotiation of the Repatriation Agreement between the Potato Park and CIP for reciprocal access to genetic resources.
PIC to access to TK associated with GR (Art 7) and PIC to access GR (Art.6.3)	Intercommunity governance system structure for decision-making has been strengthened. Stronger position to grant and negotiate PIC
Food Security (Art.8)	Assurance of survival and livelihood of communities. Access to adequate food and natural resources, free from adverse substances, and acceptable within the

<sup>49</sup> United Nations (2007) ‘United Nations Declaration on the Rights of Indigenous Peoples’ Adopted at General Assembly Resolution 61/295 13<sup>th</sup> September. Available at: <http://www.un.org/esa/socdev/unpfii/en/drip.html> (Last accessed 10.04.11)

<sup>50</sup> International Labour Organisation No, 169 (1989) ‘Convention concerning Indigenous and Tribal Peoples in Independent Countries’, adopted on 27 June 1989 by the ILO General Conference at its 26<sup>th</sup> session Available at: <http://www.ilo.org/ilolex/cgi-lex/convde.pl?C169> (Last accessed: 10.04.11)

<sup>51</sup> United Nations (1948) ‘Universal Declaration of Human Rights’ Paris 10<sup>th</sup> December Available at: <http://www.un.org/en/documents/udhr/index.shtml#a27> (Last accessed 10.04.11)

<sup>52</sup> Office of the United Nations High Commissioner for Human Rights (1966) ‘International Covenant on Economic, Social and Cultural Rights’ Adopted and opened for signature, ratification and accession by General Assembly resolution 2200A (XXI) of 16 December 1966 entry into force 3 January 1976, in accordance with article 27. Available at: <http://www2.ohchr.org/english/law/cescr.htm> (Last accessed 10.04.11)

Contribution to conservation and sustainable use A(rt. 9)	communities' culture. Integrated in-situ-ex-situ model of conservation. 1345 varieties of potato in 2011. Restoration of local habitats and ecosystems, ensuring cultural survival promotion of local rights and sustainable use of GR.
Taking into consideration ILCs customary laws (Art. 12.1) Development by ILCs of Community Protocols, MAT and Model Contract (Art.12.3)	Key feature. The research, consultation and negotiation processes that resulted in agreement based on customary law. The principles of reciprocity, duality and equilibrium are the pillars of the agreement and the decision-making structure. The Agreement is a Community Protocol for equitable Benefit-Sharing.
Information to potential users about their obligations Art.12.2	Provides example of a practical application of a benefit sharing agreement and a methodology to develop future agreement based on customary laws.
Customary use and exchange of GR amongst ILCs Art. 12.4	Free flow of resources among communities and their members.
Dispute Resolution (Art. 6.3.g, 7, and 18)	Intercommunity conflict resolution mechanism based on family, tradition and the community's General Assembly.
Model Contractual Clauses, best practices, guidelines (Art. 19 and 20)	Provides examples of best practice. The experience and methodology could be used in similar schemes to define benefit-sharing agreements. Clarifies the definition and representation of the beneficiaries of collective rights.
Awareness Raising (Art. 21)	The development of the inter-community agreement has shown that supporting community protocols can be a powerful tool for raising awareness of these issues amongst ILCs.
Capacity (Art.22)	Contribution to the construction of an Indigenous Governance Model and to the definition of sui generis system for the protection of TK and the role of customary law. Stronger capacity to negotiate MAT, develop and implement measures, legal and institutional development.
Technology Transfer (Art.23)	2004 Repatriation Agreement with the International Potato Center renewed. First community organization to make agricultural genetic resources available under the multilateral benefit sharing mechanism of the ITPGFA. Submission of potato varieties to the Svalbard Global Seed Vault in response to concerns about the long term in situ conservation of the varieties in the context of climate change in the Peruvian Andes

The Nagoya Protocol requires parties to take measures to raise awareness of the importance of genetic resources and traditional knowledge and related ABS issues (Art 21). The development of the inter-community agreement has shown that supporting community protocols can be a powerful tool for raising awareness of these issues amongst ILCs.

## **9. Conclusions**

For decades, Indigenous Peoples have been calling for a holistic and more sensitive approach to their cultures; one that values the protection and preservation of, and that nurtures, their traditional knowledge systems and biocultural diversity - an approach that does not privilege the economic considerations of third parties at the expense of other priorities. In this debate, the role of Biocultural Systems (BCS) – a concept inspired by the interdependence between Indigenous Peoples and their environments – has become critical for the survival of Indigenous cultures and for generating appropriate, effective responses to global change. Benefit-sharing agreements involving biological resources and traditional knowledge, such as the one presented in this case study, should be consistent with the concept of BCS. This study, through participatory methodologies, sought to provide a pioneering example in the development of a broader approach to ABS that does not only include the benefits derived from access to genetic resources and TK, but also those which come from *all* direct and indirect uses of biocultural resources.

Through research on traditional norms, it has been shown that there are longstanding customary laws for the distribution of benefits among communities and their members. Additionally, in some cases, these laws have been adapted to deal with specific situations arising from the use of elements of collective biocultural heritage by third parties; these are now expressed in a concrete agreement that represents the vision and expectations of the communities on these issues. The Inter-community Agreement aims to serve as an example or model to other communities of the region and the world, and to strengthen the ability of communities to negotiate equitable agreements on ABS with third parties. An example of a Biocultural Protocol in praxis, it provides an alternative to most models based upon Western legal systems in that it prioritizes the well-being of Indigenous and local communities over the potential generation of profit for third parties. Moreover, this agreement constitutes an opportunity to explore elements of customary law that could be incorporated into national and international legislation related to the access to biodiversity-related TK and benefit sharing. Finally, the Inter-community Agreement represents a chance for both researchers and communities to improve mutual understanding and strengthen their abilities vis-à-vis these issues, enabling communities to create alternative development models capable of confronting the negative effects of globalization.

### **9.1 Community Biocultural Protocols: Promoting real equity and benefits**

The mechanisms for benefit sharing described in this study diverge sharply from those that characterize Western models, as both monetary and non-monetary benefits contribute to the communities' growth and *Sumaq Kawsay*. In Western models, communities are compensated for their knowledge or resources, while those extracted goods are privatized and used to make third-party profits out of all proportion to the compensation paid. The goal of the present agreement is to improve the socio-economic, cultural, ecological, and political situations of the communities themselves. This is posited as an alternative, fair and equitable resolution to the inequality and injustice which currently characterise existing uses of traditional knowledge and biodiversity, which strengthen the positions of the already formidable agricultural and pharmaceutical industries. Therefore, in the Inter-community Agreement and other similar Biocultural Protocols, one can find an alternative to the inequality, material accumulation, and exploitation brought on by globalization and deepened by national and international legislation (such as free trade agreements).

Furthermore, Biocultural Protocols, such as the Inter-community Agreement developed in the course of this project, take a different approach to ABS than market-driven initiatives, which separate components of a BCS. A key contribution of this investigation is the development of the Biocultural Systems concept, which understands cultures, lands, peoples, and resources as parts of co-evolving systems. Viewing biocultural resources in this way necessitates the development of holistic tools that do not separate traditional knowledge from the customary norms and principles or the Indigenous Peoples' that guide its use. Other methodologies do not provide a "bottom-up" approach that: conserves biocultural resources; supports the rights of Indigenous Peoples; and that ensures that all heritage elements of BCS are protected. The revaluing of a holistic approach, based on the concept of Biocultural Systems, gives rise to a model capable of confronting the obstacles that Indigenous Peoples face, to protect and deliver real and appropriate benefits from the use of their resources.

Attempts at protecting traditional knowledge and genetic resources through property law and other market-friendly mechanisms have not produced either just, nor culturally sensitive resolutions to the equitable sharing of benefits arising from the use of such knowledge and resources. Biocultural Protocols re-plot that path by taking Indigenous customary law, rather than Western law, as the appropriate starting point. Principles of customary law are consulted, derivatives of these principles are created, and from these derivatives written rules are developed by community researchers. The

end product is a written document that Indigenous and local communities can recognize and affirm because of its familiarity – not a contract but a living agreement that reflects the complex systems and relationships of the Andean *ayllus*, and which can be further evolved should customary laws change.

Biocultural Protocols also have great utility across different levels of the concept of ‘community:’ they can support relationships within a given community by providing a common understanding when a community is subject to external pressures; they can facilitate cooperation among related communities by emphasising common principles, beliefs and objectives (for example, the Potato Park); they can facilitate cooperation among like-minded distant communities by providing a medium of communication (for example, efforts to link Potato Park with communities in other countries); and they can facilitate cooperation between or across knowledge systems by providing a clear statement of principles that can function as a basis of discussions (for example, the agreement with CIP). The importance of this last point cannot be overstated. While discussions on biocultural heritage often involve asymmetrical information and power relationships, Biocultural Protocols establish fair and transparent parameters for discussion that are identified by the communities involved and that promote equality. Thus they are means of respectful communication within and among biocultural heritage systems and between these systems and extrinsic economic, social or legal systems.

## **9.2 Recognition of customary laws and legal coupling**

Other, extrinsic elements function to make Biocultural Protocols an effective, adaptive response to external influences acting on – and often threatening – Indigenous and local communities. ‘Legal coupling’ is one such extrinsic element that greatly increases the utility and efficacy of protocols; through it, a Biocultural Protocol can originate in customary law and also be anchored in modern legal systems, which increases the likelihood of respect for the protocol or, in extreme cases, its enforcement. Because the management of the Potato Park collection is done under a Biocultural Protocol which is legally binding under national law, and is additionally consistent with international law (UNDRIP, the CBD, and ILO Convention 169), the communities are in a position to hold outside actors accountable to their customary laws and to insist on adherence to the local principles and goals rooted therein. For example, any access must be carried out according to the communities’ vision of prior informed consent, and said access does not allow for any type of gene privatization, patenting, or GMO application (since these compromise the communities’ ability to produce food and to fulfill their obligations as stewards of Indigenous biocultural heritage). In the present case then, Biocultural Protocols help to ensure that Quechua farmers continue to freely grow food and protect agrobiodiversity as a biocultural heritage, whilst affirming their historic and contemporary right to, and responsibility toward, territorial governance. They are thus an important means by which to protect Indigenous and local communities’ farmers in the present, and ensure the continuity of activities that are crucial for their Biocultural Systems in the future.

The coupling within Biocultural Protocols also links modern legal systems with their traditional and customary forebears in a positive manner – a kind of legal pluralism, with similar advantages, including the reflection of mutual respect and the tendency to promote equal treatment (and, by extension, empowerment). Further, Biocultural Protocols can be used as mutually reinforcing frameworks with international treaties (such as the CBD, the International Treaty of the FAO, ILO Convention 169, and the UN Declaration of Rights of Indigenous Peoples) in an integrated approach to collective rights. Broadly: treaties promote Biocultural Protocols, while Biocultural Protocols, in turn, provide pathways for the practical implementation of treaties *per se*. By providing a link to treaty processes, Biocultural Protocols also have relevance for technical and policy issues *within* international treaties. In fact, insofar as they articulate Indigenous experiences with treaty issues (including long histories of resistance to treaty-mandated impositions), and reveal critical alternatives

to mainstream approaches, Biocultural Protocols are amongst the most important contributions Indigenous Peoples can make to technical, legal, academic and policy-led discourses<sup>53</sup>.

### **9.3 Strengthening Governance, in-situ conservation and poverty reduction**

The inter-community agreement provides a powerful tool for meeting both conservation and poverty reduction goals because it is based on customary laws that promote these goals, and the process to develop it has led to a collective affirmation of these customary laws and values amongst the people of the park. The agreement has strengthened the role of the Association of Potato Park communities as an inter-community governance and decision-making institution – not only because it established new mechanisms for collective decision making, but because these were negotiated openly amongst the communities giving them the legitimacy they need to operate effectively. This serves as a collective institution with responsibility for promoting and monitoring conservation of biocultural systems and wellbeing (sumaq causay) of the park – which is important for achieving both conservation and poverty reduction goals. The governance system is entirely community driven, devised and controlled, ensuring full ownership and strong responsibility with the community, and truly self-determined development.

The agreement has also led to a strengthening of the economic collectives of the park that generate revenue from biocultural resources and aim to sustain biocultural heritage and wellbeing. This means that the potential for generating benefits is much wider than just agreements with third parties – and hence the potential for benefits to provide incentives for sustaining biocultural systems and to promote wellbeing is much greater. Similarly the agreement and its strong emphasis on equity means that the benefits will reach many community members and hence conservation incentives and wellbeing benefits are also spread widely.

The strong focus of the agreement and the economic collectives on strengthening inter-linked biological and cultural systems means that they are important mechanisms for implementing articles 10 (c) on encouraging customary use of biological resources and 8(j) on the maintenance of TK. The agreement recognizes the link between collective ownership and the maintenance of traditional knowledge and practices and obliges open access and sharing of resources amongst the communities – thus strengthening collective rights and corresponding responsibility. This also strengthens the basis for a collective solidarity economy, which helps the poor, while the agreement sets aside benefits to provide a safety-net against poverty.

## **10. Recommendations: Rooting ABS and Community Protocols in Customary Law**

Although specific elements of traditional knowledge have been unjustly commodified and appropriated by third parties, traditional knowledge as an integral part of an Indigenous Biocultural System cannot be reduced to a commodity to be bought and sold. The reasons for this are both conceptual and practical – it is not possible to account for incommensurable values and knowledge in purely economic terms; and correspondingly, the practical success of efforts to generate effective mechanisms for the sharing of benefits is impeded by a failure to recognise alternate (and equally important) conceptions of value. Furthermore, traditional knowledge forms part of the inalienable heritage of the Indigenous Peoples who have generated, propagated and co-evolved with this knowledge.

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<sup>53</sup> See, for example, Abrell, Elan, Kabir Bavikatte, Harry Jonas, Ilse Köhler-Rollefson, Barbara Lassen, Gary Martin, Olivier Rukundo, Johanna von Braun and Peter Wood, *Biocultural Community Protocols: A Community Approach to Ensuring the Integrity of Environmental Law and Policy* (Nairobi/CapeTown: UNEP/Natural Justice, 2009).

As one of many resources within BCS, traditional knowledge relies for its continued prosperity upon customary, collective modes of transmission and exchange. Insofar as national and international legislation has sought to separate traditional knowledge from the biological, or genetic resources, landscapes and peoples to which it relates, national and international attempts to facilitate the conservation of biodiversity, and to promote and respect the Human and Cultural Rights of Indigenous Peoples, have been hampered. The aims of the Convention on Biological Diversity, the United Nations Declaration on the Rights of Indigenous Peoples, the Nagoya Protocol and other pertinent international instruments cannot be implemented through a view of benefit-sharing which fragments the integrity of the ecosystems that it seeks to protect. Customary laws and norms, are vital constituents in balanced, effective and culturally appropriate modes of benefit sharing because they are *already* effective in regulating the relationships that indigenous people have with the land they inhabit and the resources (including traditional knowledge) found on that land.

Customary law must be central to any well devised strategy of sustainability, of biodiversity conservation, or of protecting traditional knowledge. The integrity of indigenous territories, rights, resources and knowledge, cannot be maintained, much less promoted, without extensive recourse to the traditional structures, norms, values and beliefs embodied in customary law. It is customary law that has historically regulated societal and human-non human interactions and maintained the rich biocultural diversity that is so attractive to third parties, and which has latterly been the subject of intense commercialisation, particularly by the pharmaceutical, agricultural, cosmetic and nutraceutical sectors. Customary laws embody Indigenous Peoples' understandings of the world, which have a tendency to see people, land, resources and knowledge as being reciprocally linked. Insofar as 'western' or 'northern' lifestyles are based on the view that phenomena – e.g. biodiversity – are alienable from related phenomena (for example cultural diversity) the impact of such lifestyles has been the unprecedented erosion of both. Indigenous cosmovisions, in stressing the reciprocity of related phenomena have largely maintained, or propagated *all* diversity – biological, cultural, linguistic, spiritual, etc. Models for the equitable sharing of benefits from the uses of traditional knowledge or associated resources which do not embrace the potential of customary law to both ensure the continued existence of biocultural diversity *and* protect Indigenous Peoples human, cultural and territorial rights, are ultimately ineffective and disempowering.

When a discursive and legal framework which is completely alien to Indigenous Peoples is used as the basis for an analysis of their rights, this is akin to a means of cultural and legal domination (Glenn 2000<sup>54</sup>). Similarly, the requirement to defend collective rights in a legal or technical framework which is discordant to traditional mechanisms and sociopolitical or spiritual values is for Indigenous Peoples a real threat. In such conditions, asserting rights to knowledge or resources may mean furthering the hegemonic influence of dominant cultural paradigms such as scientific knowledge (Turpel 1992<sup>55</sup>). To avoid this discriminatory condition in the equitable sharing of benefits from the use of traditional knowledge and genetic resources, customary laws and norms must provide the basis for the development of protective mechanisms. To fail in this regard is contrary to the requirement to establish 'mutually agreed terms' set out in the Nagoya protocol (Art. 5 [2,5]) as well as the requirement to take Customary Law into consideration (Art 12 [1]).

Traditional Knowledge does not spring forth *ex nihilo* (ie. from nothing). To this end, strategies for the protection of traditional knowledge must simultaneously focus on the preservation and

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<sup>54</sup> Glenn, H. (2000) 'Legal Traditions of the World' Oxford, Oxford University Press

<sup>55</sup> Turpel, M. E. (1992) Indigenous People's Rights of Political Participation and Self-Determination: Recent International Legal Developments and the Continuing Struggle for Recognition' Cornell Int'l Law Journal. 579 p25-

propagation of the relationships, biocultural values and customary laws which accompany this knowledge. Strategies which do not pursue this aim are ultimately ineffective because they fail to preserve the territorialities and livelihoods that generate traditional knowledge. As such, there is an increasingly urgent need for Biocultural Protocols, such as the present Inter-community Agreement, that are based in, and strengthen, customary laws and practices. There is significant international recognition of the role of the customary laws of local communities and Indigenous Peoples in the protection, preservation and maintenance of TK systems, primarily at the Convention on Biological Diversity and World Intellectual Property Organization.

The United Nations Declaration on the Rights of Indigenous Peoples (Art 34)<sup>56</sup> and the International Labour Organisation Convention 169 (Article 8)<sup>57</sup> also expressly refer to the importance of customary law; and the importance and right to cultural life more generally is enshrined in international law (United Nations Universal Declaration of Human Rights [Art. 27.2]<sup>58</sup>; International Covenant on Economic, Social and Cultural Rights [Art 15 [1]]<sup>59</sup>). In addition, the recent Nagoya Protocol calls for states to support ‘Community protocols’ in relation to both access to and the sharing of benefits from the utilisation of traditional knowledge associated with genetic resources. Such moves are well placed to support the development of Biocultural Protocols such as proposed by this case study. It is imperative for the successful implementation of the aforementioned legislation, that such Biocultural Protocols are concordant with - and arise from - customary norms and laws.

Additionally, some sectors of the international community are beginning to accept the unsuitability of traditional knowledge for incorporation into existing legal instruments. Progress has been made towards the need to design schemes for the protection of traditional knowledge and for the equitable sharing of benefits arising from its utilisation that consider the interdependence between TK, culture, and biodiversity. Incorporating the concept of BCS in national and international laws and policies is a coherent and necessary a first step. A second step would be to design *sui generis* systems for the protection of traditional knowledge which incorporate the perspectives, traditional socio-political and legal structures and cosmovisions of indigenous peoples. This is most effectively achieved by following a ‘bottom up’, participatory approach to the development of biocultural protocols. In this regard, the Inter-community Agreement for Benefit Sharing, adopted by the communities of the Potato Park, serves as a practical example and flexible template with which to stimulate further research into the potential for developing shared mechanisms for the implementation and design of Biocultural Protocols. Yet because of the need for Biocultural Protocols to be consistent with the spirit of existing international legislation – and to resist the problems inherent in an inflexible, uniform approach to ABS - it is essential that the design of such systems, be based on the specific customary laws of individual Indigenous and local communities.

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<sup>56</sup> United Nations (2007) ‘United Nations Declaration on the Rights of Indigenous Peoples’ Adopted at General Assembly Resolution 61/295 13<sup>th</sup> September. Available at: <http://www.un.org/esa/socdev/unpfii/en/drip.html> (Last accessed 10.04.11)

<sup>57</sup> International Labour Organisation No. 169 (1989) ‘Convention concerning Indigenous and Tribal Peoples in Independent Countries’, adopted on 27 June 1989 by the ILO General Conference at its 26<sup>th</sup> session Available at: <http://www.ilo.org/ilolex/cgi-lex/convde.pl?C169> (Last accessed: 10.04.11)

<sup>58</sup> United Nations (1948) ‘Universal Declaration of Human Rights’ Paris 10<sup>th</sup> December Available at: <http://www.un.org/en/documents/udhr/index.shtml#a27> (Last accessed 10.04.11)

<sup>59</sup> Office of the United Nations High Commissioner for Human Rights (1966) ‘International Covenant on Economic, Social and Cultural Rights’ Adopted and opened for signature, ratification and accession by General Assembly resolution 2200A (XXI) of 16 December 1966, entry into force 3 January 1976, in accordance with article 27. Available at: <http://www2.ohchr.org/english/law/cescr.htm> (Last accessed 10.04.11)

## Annex

**CHART 1: CONTRIBUTIONS OF THE ECONOMIC COLLECTIVES TO THE POTATO PARK COMMUNAL FUND 2007 -2010**

SOURCE OF CONTRIBUTION	2007		2008		2009		2010	
	Dollars	Soles	Dollars	Soles	Dollars	Soles	Dollars	Soles
1.- Jewellery Craft Collective “Munay Kanchariq Qori Kente”						15.00		
2.- Medicinal Plants Collective “Sipaswarmi”						581.00		239.00
3.- Gastronomy Collective “Qhachun Waqachi”		49.50		280.00		1,190.00	181.70	2,710.00
4.- Weaving Craft Collective “Ñaupá Away”						149.00		580.00
5.- Ceramic Craft Collective “Pachamamanta Sumaq Llankariy”						15.00		
6.- Biocultural Interpreters Collective “Riquichí Waynakuna” (Local Guides)				5.00		40.00		
7.- Botanical Gardens Collective “Kantus”								
8.- Los “Papa Arariwas” (Guardians of the Potato)						35.00		
9.- Homestay Tourism providers						130.00		520.00
<b>Total contributions...</b>	<b>0.00</b>	<b>49.50</b>	<b>0.00</b>	<b>285.00</b>	<b>0.00</b>	<b>2,155.00</b>	<b>181.70</b>	<b>3,529.00</b>

**Chart 2: Application of criteria for rating participation in the Potato Park activities for distribution of funds 2010**

ACTIVITIES*	COMMUNITIES					Observations
	Pampa llacta	Paruparu	Amaru	Chahuay tire	Sacaca	
1. Participation in ordinary and extraordinary meetings of the directors of the Association of communities of the PdP	8	10	10	4	10	
2. Participation in different activities in the Potato Park.						
a. National Day of the Potato	7	10	8	8	8	
b. International Events	1.5	3	1.5	0	1.5	
c. Evaluation Workshops (CIP)	3	3	0	3	0	
d. Representation:						
1. march against GMOs (FAO) in Cusco	3	3	3	3	3	
2. Signing of CIP agreement renewal in Lima	3	3	3	3	1.5	
3. Participation in training workshops						
a. climate change	5	5	5	3	5	
b. validation and ratification of intercommunity agreement	3	5	4	5	5	
4. Participation in the agro ecotourims activities in each community						
a. role in Andean reception of visitors	2	2.5	2.5	1.5	2.5	
b. local guides	0.5	2.5	2	0	1	
c. gastronomy collective	0.5	1.5	2.5	0.5	1.5	
d. traditional dress	0	0	0	0	0	
5. Participation in the Conservation of Potatoes						
a. participation of Papa arariwa technicians	2	2	1	1	0.5	
b. participation of the community in planting	2	2	2	2	1	
c. participation in cultural labour (aporque, control and others)	2	2	2	2	1	
d. participation in the harvest	2	2	2	2	1	
e. traditional celebrations	2	0	0	0	0	
f. identification and community empowerment in conservation	2	2	1	1.5	1	
6. Participation in the economic collectives						
a. Medicinal plants	1	2	1	0	1	
b. gastronomy	0	1	3	1	1	
c. botanical gardens	0	1	1	0	0	
d. Papa arariwa (Potato Guardians)	3	3	2	0	0	
e. local technicians	3	3	3	1.5	1	
f. craft collective	0	1	2	1	3	
g. local guides	0	3	0	1	1	

h. video collective	1	0	0	0	1	
7. Initiatives for the betterment of the Potato Park						
a. community signs	0	2	0	0	0	
b. trails and roads	2	2	2	2	0	
c. camps	0	0	0	0	0	
d. maintenance of buildings and greenhouses	1	2	1	0	1	
e. environmental clean-up	--	--	--	--	--	
8. Internal and external communication						
a. reports on park activities by technicians in community assemblies	3	3	3	3	2	
b. willingness of community assembly to receive reports on Park activities	--	--	--	--	--	
c. use of money received from comunal fund for productive projects	--	--	--	--	--	
<b>TOTAL DE PUNTAJE ACUMULADO</b>	<b>62.5</b>	<b>81.5</b>	<b>67.5</b>	<b>49.0</b>	<b>54.5</b>	
<b>TOTAL DE PORCENTAJE OBTENIDO (100%)</b>	<b>19.84</b>	<b>25.87</b>	<b>21.43</b>	<b>15.55</b>	<b>17.31</b>	

**\* Points assigned for community participation - 0 to 10**  
**Poor: 0 points; regular: 5 points; good: 10 points**