KALINGA MISSION FOR INDIGENOUS CHILDREN AND YOUTH DEVELOPMENT, INC. (KAMICYDI)
Philippines

Equator Initiative Case Studies
Local sustainable development solutions for people, nature, and resilient communities
Local and indigenous communities across the world are advancing innovative sustainable development solutions that work for people and for nature. Few publications or case studies tell the full story of how such initiatives evolve, the breadth of their impacts, or how they change over time. Fewer still have undertaken to tell these stories with community practitioners themselves guiding the narrative.

To mark its 10-year anniversary, the Equator Initiative aims to fill this gap. The following case study is one in a growing series that details the work of Equator Prize winners – vetted and peer-reviewed best practices in community-based environmental conservation and sustainable livelihoods. These cases are intended to inspire the policy dialogue needed to take local success to scale, to improve the global knowledge base on local environment and development solutions, and to serve as models for replication. Case studies are best viewed and understood with reference to 'The Power of Local Action: Lessons from 10 Years of the Equator Prize', a compendium of lessons learned and policy guidance that draws from the case material.

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Suggested Citation
Kalinga Mission for Indigenous Children and Youth Development, Inc. (KAMICYDI) works to improve food security for the indigenous Kalinga people of the Philippines Cordillera, while ensuring the ecological integrity of the area’s mountain forests. The association draws from traditional farming practices and customary forest management systems.

These traditional approaches have been augmented by a robust reforestation program and by the introduction of new food sources such as mud fish, soy and mango. Biodiversity monitoring using modern sampling techniques is conducted regularly to measure changes in forest composition and health. KAMICYDI has also played a leading role in regional indigenous peoples’ movements to resist large-scale extractive industries, including proposed geothermal projects.

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**KEY FACTS**

EQUATOR PRIZE WINNER: 2004

FOUNDED: 1996

LOCATION: Kalinga Province

BENEFICIARIES: indigenous Kalinga farmers

BIODIVERSITY: forest and watershed management
Kalinga Province is situated in the Cordillera Administrative Region of the northern Philippines island of Luzon. The Cordillera's mountain valleys are home to the indigenous Kalinga people, whose main livelihood activity is farming on hillside rice terraces. This activity relies heavily on the conservation of mountain forest biodiversity and the health of local watersheds, including the Chico River system.

A people and way of life under threat

In response to various threats to the province's natural heritage and persistently low levels of social development during the 1980s, a group of student leaders came together to found the Dananao Students Organization (DSO), a group that would lay the foundations for the formation of the Kalinga Mission for Indigenous Communities and Youth Development, Inc. (KAMICYDI) in the 1990s. These students and young people aimed to confront the widespread poverty of the Kalinga people, the loss of their traditional culture, the effects of armed conflict, poor delivery of social services, and their marginalisation within the Philippines development sphere. The Kalinga peoples' valleys were also threatened by infrastructure projects proposed by the Philippines government which endangered their communities, sacred places, rice terraces, livelihoods, and natural heritage. The Chico River Dam Project was a notable case, in which an electric power generation project threatened the Kalinga peoples' ancestral domain. The Batong Buhay Gold Mines, under the control of the Philippines government from 1979, also had significant harmful environmental impacts. Local slash-and-burn agricultural practices had further contributed to the loss of forest cover and watershed degradation.

A youth-led response to environmental threats

KAMICYDI's response to these threats was to combine traditional and indigenous practices with modern technologies to develop more sustainable agricultural practices, which were then promoted among the Kalinga tribes and other indigenous peoples in the Cordillera region. Initially beginning in 1984, the Dananao Students Organisation provided outreach services to Kalinga's indigenous communities. Ancestral domain and environmental protection were the main focuses of these efforts. From 1987, this work was replicated in other areas of the Cordillera Administrative Region by the Cordillera Association for Progress and Unity; in 1990, this led to the formation of the Kalinga Mission for Children and Youth Development, Inc. (KMCYD, Inc.), an organisation that would be legally registered in 1996, and renamed the Kalinga Mission for Indigenous Communities and Youth Development, Inc. (KAMICYDI) in 2003.
From 1990 onwards, KAMICYDI’s young leaders began pioneering their innovative approach, called “Sustainable Indigenous Peoples Agricultural Technology” (or SIPAT). Project activities were focussed on enhancing the ecological integrity of forests, directly protecting forests, and reforestation with endemic species; protecting watersheds through agroforestry; the rehabilitation of indigenous communal irrigation systems; and the production of rice, vegetables, and fish in hillside rice terraces. The primary objectives were to improve food security by increasing agricultural productivity, and helping to conserve the mountains’ biological diversity.

Preserving indigenous and traditional heritage

These twin goals have been pursued alongside efforts to preserve Kalinga traditions and culture, particularly linked to their ancestral domain lands. While the Indigenous Peoples Rights Act (1997) of the Philippines recognizes “ancestral domains” of indigenous cultural communities, this has typically concerned spatial definitions such as the barangay, which is the smallest politico-administrative unit of the Philippines, or has been applied to municipalities. The Kalinga communities of Cordillera Province typically live within an area of land known as an ili, a term in the Philippines for a geographical area historically inhabited and defended by a homogeneous people with common ancestors. KAMICYDI’s interaction with specific Kalinga communities has taken place within the context of the ili; to date, the initiative has worked with 54 such communities, or a total of 174,000 Kalinga people. Thanks to this work, the poverty rate in these communities has fallen from 72% in 1996 to 54% in 2009. The Kalinga have also been able to conserve 90% of their forest biodiversity during this time.

The SIPAT approach draws heavily on pre-existing technologies and traditional farming approaches. For instance, KAMICYDI has popularised fitu, a traditional system of hunting that has helped to conserve forest cover. Watersheds have been protected through an approach known as pinagwa, while ara is an indigenous irrigation system used for rice terraces. Decisions have been taken in a participatory manner, including communities in the management of agricultural systems, in an indigenous governance system known as amung.

Finally, KAMICYDI’s approach has also relied on multi-stakeholder partnerships to enable its large-scale education and policy advocacy campaigns.
The sustainable agricultural techniques advocated by KAMICYDI consist of five main components.

The first of these is *fitu* forest management. According to indigenous practices, when holes are dug in forested areas to trap animals such as wild boars for meat, it is prohibited to cut any tree within a 20-metre radius of the hole. This helps to conserve forest resources, while simultaneously ensuring the sustainability of meat supplies. Other activities incorporated within forest management include on-site reforestation and forest maintenance. Outputs of this system have been the maintenance of 81% of forested lands in Kalinga District, and 72% in the wider Cordillera region.

The *pinagwa* system of securing watersheds entails family ownership, maintenance, management, and protection of the agricultural and forested areas surrounding individual watersheds. Typically there are prohibitions on any activities within a nine-metre radius of the water source; trees are planted within 36 metres of the source to filter the water. Restoration of these agroforestry ecosystems has helped to maintain a total of 108 watersheds, allowing for the sustainable irrigation of rice terraces.

*Ara* – an indigenous communal irrigation system – is the system of channels that connect watersheds to rice fields. The purpose of these systems is to irrigate rice fields sustainably. Activities involved in the *ara* system include the repair of existing channels and construction of new irrigation systems. Outputs have included 90 systems that have been effectively repaired and rehabilitated, and 18 irrigation systems that have been newly constructed; these 108 systems correspond to the watersheds that have been conserved, and maintain a continuous supply of water to local rice terraces.

By integrating rice terraces with fisheries and vegetable production, KAMICYDI has worked to diversify food sources for Kalinga communities. Mud fish are reared in the rice fields, supplying an additional source of nutrition for farmers. Water lilies and watercress are also planted, while soy, nitrogen-rich mongo, and green, red, and black bean plants are planted around the terraces to reduce soil erosion and maintain the integrity of the terrace structures. A total of 126 hectares of rice terraces have been repaired and rehabilitated, in addition to 27 hectares of rice terraces being newly created.

The final element of KAMICYDI’s approach to encouraging sustainable agricultural practices has been developing partnerships with a variety of governmental and non-governmental actors working in Kalinga District. This has helped to replicate innovative agricultural approaches in new communities, and has also been important in coordinating advocacy efforts. To date, KAMICYDI has partnered with nine local government units.
Biodiversity Impacts

Thanks to the various components of the SIPAT approach, the mountain biodiversity of Kalinga District has substantially recovered from its degraded state. In 1990, for instance, one-third of the area’s forest cover had been destroyed due to forest fires and the practice of kaingin, a Tagalog phrase roughly equating to shifting, slash-and-burn cultivation. Although there is some debate over the impacts of kaingin, there is no doubt that where it was being extensively employed for commercial purposes, this had led to substantial habitat loss. One study estimated that Kalinga had lost one-quarter of its biological diversity by the late 1980s.

A History of Protection of Indigenous Ancestral Domain

KAMICYDI’s early efforts concentrated on coordinated advocacy efforts to halt environmentally-destructive infrastructure projects, as part of a wider effort on the part of the Kalinga and Bontok indigenous people. The Chico River Dam project was finally shelved in 1987, while extraction at the Batong Buhay Gold Mines was halted in the mid-1980s in the face of local resistance. Although both projects have subsequently been revived by successive Philippine governments, their interruption was seen as a significant victory for the Kalinga people, and a landmark ancestral domain case. Against this backdrop, KAMICYDI began to introduce sustainable agricultural practices in local communities, helping to further relieve pressure on the area’s resources and encourage the regrowth of vegetation. Between 1990 and 2009, the area saw a 15.2% improvement in its biological diversity, according to a study by researchers from the University of the Philippines in Bagiou City. Two bird species returned to the area thanks to improvements in habitat resulting from reforestation and watershed protection schemes.

Forest Conservation and Reforestation Benefits

Biodiversity monitoring is carried out on a continuous basis by KAMICYDI volunteers. Sampling is conducted in cluster plots over time to measure changes in flora and fauna composition. One such method has involved 360-degree transect walks, involving 45 community members. This walk has been repeated every five years. Over 2,700 species have been recorded in the conserved forest and watershed areas. Monitoring has also been carried out in partnership with the Philippine Tropical Forest Conservation Foundation (PTFCF) in one Kalinga community.

Specific benefits have been seen in reforestation and watershed protection, under the fitu and pinagwa components of the SIPAT approach. In the former case, a total of 50,400 trees have been planted since 1990. This has involved 2,790 women volunteers: it has been observed that women volunteers have typically been more committed to maintaining tree seedlings after planting, ensuring that these regrowth efforts have been sustainable. To date, 90% of Kalinga’s forests have been rehabilitated.
Over 126 varieties of rice are planted in Kalinga; of these, 18 are highly productive. This livelihood activity relies heavily on healthy watersheds and functioning irrigation systems. Rice production had decreased by 30.6% by 1996 due to the destruction of forest cover and watersheds that in turn affected soil nutrient recycling and reduced water supplies. The *pinagwa* component of KAMICYDI's approach to sustainable agriculture entailed the protection of 126 watersheds. By 2009, rice production had increased by 36% as a result of KAMICYDI's intervention; the decrease resulting from deforestation had been recovered, and production had increased by a further 5.4%, testament to the benefits of KAMICYDI's holistic approach to ecosystem management.

**SOCIOECONOMIC IMPACTS**

This increase in rice production has generated income for Kalinga farming families. Based on a 28.8% increase in household incomes for the project's direct beneficiaries, poverty rates fell by 18% between 1996 and 2009.

Rice fields are typically family owned, passing from fathers to sons; land is also bought and sold as a transaction, however. Each family, measured as at least six people, has at least 5-10 rice fields. One hectare of land, or 20 rice fields, produces approximately 145-180 sacks of rice. Each sack holds 50kg of raw rice, meaning that the average Kalinga household produces a minimum of 2-4 tonnes of rice per harvest.

To supplement this, KAMICYDI's integrated vegetable and fishing activities have seen 153 hectares of rice fields rehabilitated, and a further 72 hectares of fields newly constructed, allowing families to diversify sources income through rearing fish and growing vegetables. This work has been supported by the promotion of sustainable irrigation systems, or *ara*. The maintenance of 135 such communal systems of canals supplying rice fields with water, plus the construction of 54 new systems, has ensured that rice, fish and vegetable production has been sustained over time.

**Secondary benefits for communal wellbeing**

The economic benefits of increasing agricultural production and diversified income sources have led to further social benefits for Kalinga communities. In 1984, the school completion of the region's indigenous children was only 6%; out of 100 pupils enrolled in Grade I, only 6 would graduate to attend college. By 2009, this rate had increased to 18% across all of the communities KAMICYDI works with. This indicates that increases in income allowed parents to keep children in school for longer, rather than using them as labour in the rice fields.

Health and nutrition also improved due to KAMICYDI's intervention. In 1984, third-degree malnutrition rates ranged from 30-36% among indigenous children (ages 1-5 years). By 2009, rates had fallen to between 9-18% in the communities benefitting from KAMICYDI's SIPAT programme. This indicates that increased agricultural production translated into improved food security as well as higher incomes for farming families.

KAMICYDI has developed a programme focussing on Kalinga's youth, targeting young people who in many cases have few economic opportunities, and achieve only limited educational attainment. The Young Entrepreneurship Skills programme provides development opportunities to both in-school and out-of-school youth. Through workshops and trainings, KAMICYDI has helped students acquire skills in entrepreneurship and business development.

Finally, KAMICYDI's Microfinance Programme for Indigenous Women Entrepreneurs (MPIWE) has helped to underpin the sustainability of the initiative's work by supporting indigenous women's groups to develop weaving and organic household farming enterprises, relieving pressures on ecosystems from slash-and-burn farming of cash crops. This programme builds the capacity of enterprising Kalinga indigenous women by providing entrepreneurship and business planning training and provision of start-up capital for their environmentally friendly micro-enterprise businesses. By helping
women and youth to develop micro-enterprises, the initiative has attempted to support the development of long-term economic alternatives to intensive agriculture.

**POLICY IMPACTS**

The main policy successes of the Kalinga Mission for Indigenous Communities and Youth Development, Inc. have been in resisting projects that would have resulted in the destruction of the Cordillera’s biological diversity or Kalinga’s cultural heritage. These projects have either been directly proposed or sponsored by the Philippines government, and have included various aspects of the Chico River Dam Project and Batong Buhay Gold Mines. Both of these projects were shelved during the late 1980s, largely as the result of the efforts of local and indigenous communities, with support from the international community. In this regard, the Kalinga people have achieved a substantial degree of success in making their voices heard at the national policy level. These projects remain in development, however, and continue to pose threats to the Kalinga peoples’ way of life.

The importance of organizing for collective bargaining

A contrasting case is that of a geothermal energy project recently begun in Kalinga, sponsored by Aragorn Power and Energy Corporation and Guidance Management Corporation in partnership with Chevron Corp., the largest producer of geothermal energy in the world. The coalition of investors signed agreements with local communities inhabiting ancestral domains within the proposed areas for development, after a majority of these communities gave their free, prior, and informed consent. These agreements stipulated compensation for local people in the form of communal irrigation, waterworks, construction and repair of roads, construction of school buildings and day-care centres, support for local school boards, and scholarship schemes for students. Of these, only the scholarships have so far been implemented, however, while some communities have argued that work began without their consent. The Cordillera Peoples Alliance (CPA) and the National Commission on Indigenous Peoples (NCIP) in Kalinga are attempting to ensure the development of the geothermal project is undertaken in an equitable fashion. This case illustrates the mechanisms through which a high degree of organisation within the Cordillera’s indigenous communities can help to ensure that they benefit from proposed investments in the region.

Positive impacts on public policy resulting from community organising have been seen in other areas. Kalinga communities played a role in the formation of a commission for the Banaue Rice Terraces, part of the Ifugao Rice Terraces, a Philippines National Cultural Treasure. KAMICYDI was also one of the community-based organisations that influenced the introduction of regulations permitting indigenous groups to make ancestral domain claims. In 1993, the Philippines Department of Environment and Natural Resources (DENR) issued Department Administrative Order No. 2 that sought to recognize, identify and delineate areas occupied by indigenous peoples. The Order provided for the issuance of Certificates of Ancestral Domain Claim to eligible groups. Finally, KAMICYDI also played a role in advocating for the passage of the Indigenous Peoples Rights Act of 1997, which laid the foundations for the recognition of indigenous groups’ tenurial rights to their ancestral domains.

**Network development and international advocacy**

KAMICYDI has also been able to have significant impacts on policy-making through a variety of tactics and strategies, both legal and illegal. These have included direct advocacy through street protests, although the organisation has only used peaceful methods. Within the Philippines, the organisation’s executive director has represented indigenous groups on several committees and advisory bodies at the local and national level, including provincial and municipal planning and development councils. KAMICYDI has also played a role in various networks of civil society actors which have helped to raise environmental awareness on a large scale within the Philippines. These include KAPODON, CORDNET, and the Caucus of Development NGO Networks (CODE-NGO). With six national networks and six regional networks, representing more than 1,600 development NGOs, people’s organizations and cooperatives in the Philippines, this network is the country’s largest coalition of NGOs working for social development.

The Kalinga Mission for Indigenous Communities and Youth Development, Inc. has also been able to leverage its voice on the international stage to advocate for change through organisations such as the United Nations Development Programme (UNDP) and international media. The initiative gained international recognition through the award of the UNDP Equator Prize 2004. The group was represented in the Sub-Committee on Biological Diversity as part of the Philippines party to the COP 9 to the Convention on Biological Diversity (CBD) in Bonn, Germany, in 2008.
SUSTAINABILITY

The sustained success of KAMICYDI's work owes much to their capacity building work with Kalinga communities, which has incorporated financial and organisational management trainings as well as instruction in sustainable agricultural techniques. These agricultural and environmental practices have been rooted in indigenous and traditional knowledge systems, giving KAMICYDI's client communities a high level of ownership of their adoption. To date, the organisation has facilitated 27 training sessions in SIPAT practices. Organisational and financial management systems have been co-created with 72 development NGOs, 18 women's organizations and 36 Local Government Units (LGUs).

External support has also assisted the initiative's work, with technical advice and financial resources being provided by international NGOs. MPIWE has been supported by the Tribal Link Foundation, while the Global Fund for Children has supported KAMICYDI's Youth Entrepreneurship Skills programme.

The continued success of sustainable agriculture in Kalinga communities is threatened by various factors, however, including the potential impacts of the Batong Buhay Gold Mines and the Chevron geothermal energy project. The key to resisting environmental degradation from these projects is coordinating advocacy efforts through the networks of indigenous NGOs working in Kalinga, the Cordillera Region, and across the Philippines. Among these, KAPONDON (the Kalinga-Apayao People-Oriented Development Organizations Network) works at the provincial level, bringing together 45 non-governmental and community-based organisations and farmers associations. This network has focused on building capacity around the issues of mining and geothermal energy exploration.

REPLICATION

The Kalinga Mission has achieved its success within Kalinga through a process of rapid replication of its model of sustainable agricultural practices. Beginning in one indigenous community (ili) in 1984, the organisation had expanded to include a presence in 54 communities by 2009. The fast pace and ease of replication of KAMICYDI's package of sustainable agricultural skills is due to their basis in traditional methodologies and practices. As an indicator of the uptake rate, an estimated 90% of the 174,000 community members across the 54 communities are actively employing SIPAT techniques.

Replication has been achieved through both farmer-to-farmer and community-to-community knowledge exchanges. A “Farmers Field School” centre was also used to help train Kalinga farmers, supplemented by formal training and educational outreach sessions.
organised by KAMICYDI. SIPAT is taught in four modules: two of these are formal, and are taught in workshops, while the latter two modules are taught via practical demonstration sessions.

Funding limitations have in some cases restricted the rate of replication from community to community. Among the challenges to knowledge exchange are traditional inter-tribal conflict, limited literacy, and a lack of infrastructure for storing knowledge for transfer between generations. Problems of linguistic barriers have meant that knowledge exchange has often been highly expensive and time-consuming, requiring translation into different tribal languages. KAMICYDI has also recently begun seeking funds to establish a community knowledge centre that would act as a forum for conducting training sessions and as a repository for storing data and information for use by farmers.

PARTNERS

KAMICYDI has benefitted from numerous partnerships with local, regional, national, and international organisations, including eighteen local government units, three NGO networks, two private sector organisations, two national funding agencies, and five international organizations, all of which contributed to the success of the project.

Local Government Units (LGUs) within Kalinga Province: these eighteen units have been KAMICYDI’s primary partners in the implementation of SIPAT practices in indigenous communities.

Networks: Kalinga-Apayao People Oriented Development Organizations Network (KAPODON); Cordillera Network of Development NGOs (CORDNET); and Caucus of Development NGOs (CODE NGO). These networks have provided technical assistance in implementation of the project, and have coordinated advocacy efforts between indigenous peoples NGOs.

Private sector partners: Chamber of Kalinga Apayao Producers, Inc. (CKAPI) and ARANG Bank. These partners have supported KAMICYDI’s micro-finance component.

Funding agencies: Philippine German Development Foundation (PhilGerFund) and UNDP-implemented GEF Small Grants Programme (USD 46,327, 2004-6).

FURTHER REFERENCE

- KAMICYDI website: kalingamission.webs.com
- KAMICYDI PhotoStory (Vimeo) vimeo.com/16732562

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