

LOCALIZING BIODIVERSITY CONSERVATION IN THE PHILIPPINES: THE ALCOY AND DALAGUETE, CEBU EXPERIENCE

Hemres M. Alburo

Cebu Technological University, Argao campus

ABSTRACT

This paper investigated conservation initiatives done by two local governments in Cebu in the context of Decentralization and Participation. Key informants from the Local Government Units (LGUs), Civil Society and forest wardens were interviewed. Observations showed that local political leadership plays a vital role in advancing conservation efforts in the LGU especially in allocating funds for conservation. Similarly, environmental NGO has vital function in setting the direction for conservation being a potential source of technical expertise, funding and other logistical needs. Strong commitment of forest wardens as front liners in conservation had significantly reduced timber cutting and wildlife poaching. Although people in the communities and other sectors have expressed support to the conservation programs, incentives from the LGUs and other private benefactors are essential in sustaining the interests of forest wardens. Information, Education and Communication (IEC) activities should be undertaken to further inform people on the value of biodiversity in sustainable development. A new biodiversity conservation framework was drafted involving the academe and other interested organizations and individuals to capture a broader knowledge base in planning conservation actions. The framework also expands its components to include greenbelt development in habitat improvement and support for wardens to sustain the program.

Keywords: Localized biodiversity conservation, decentralization, participation, civil society, forest wardens

INTRODUCTION

Biodiversity is the aggregate number of species found in a certain area (Odum, 1971). Broadly, it comprises the intrinsic web of life on the planet. Global species diversity is expected at 30 million including those that are still unknown to science (NCBMEGJ, 2010). In the Philippines over half of the 52,177 recorded species cannot be found nowhere else in the world (Mallari *et al.*, 2001). The enormity of endemic species in the country, which is attributed by its being an archipelago makes the Philippines a mega diverse country (Mettemeier *et al.*, 1997, Mallari *et al.*, 2001, Maala, 2001). Moreover, the high degree of species threat due to habitat destruction also makes the Philippines the hottest of hotspot for biodiversity. Forty-four percent of the birds and 64% of mammals are Philippine endemic (Mallari, *et al.*, 2001) while the Philippine flora represents 5% of the whole world (psdn.org). In the last decade, more and more species are discovered such as the Kalayan rail (Allen *et al.*, 2004), the seven species of mice in Luzon (Quismundo, 2011), the Cebu Hawk owl together with other owl species

(Jakosalem *et al.*, 2012), *Cynometra cebuensis* (Sciendenschwarz, 2013) and Cebu brown dove (Bird Life, 2014), among others. The enactment of the Local Government Code of 1991 provides sufficient power and authority to local governments to manage the country's remaining natural resources. These resources include forests and biodiversity within its geopolitical limits of up to 50 square kilometers. In carrying out such responsibility, however, LGUs need to coordinate with the Department of Environment and Natural Resources (DENR).

Decentralization is a process by which authority is transferred from the central government to its subsidiaries i.e. regional and local units (FAO, n.d.). It is a complex issue that is connected to many aspects of governance (Hein and Pelletier, 2006a). According to Furukawa (2003) it is "fostered by the spread of democratization, growing cultural and ethnic identification, and the trend to globalization." Decentralization was initiated to trim down central government bureaucracy like in planning and decision-making. It promotes the localization of power and authority to the lower echelon of governance, giving various stakeholders the chance to participate in planning and implementing public policies. With this authority given to local government institutions, they are expected to become more efficient and effective in responding to specific issues in their respective jurisdictions. With decentralization local leaders also increase their accountability to the people (Kauneckis and Anderson, 2006). This means that with decentralization local officials will not only gain authority but will also be subject to more criticisms if they fail to respond to the local issues besetting the community. The reality that many local governments are commonly constrained by financial resources to meet demands (Kauneckis and Anderson, 2006), LGUs should prioritize projects that will give significant impacts on the needs and demands of their constituencies.

A Latin American study on decentralization and natural resource governance by Kauneckis and Anderson (2006) found out that decentralization is better compared with centralization in the delivery of public services although they highlighted that other conditions such as government transparency, competence of the civil service, political stability and good justice system may also have strong influence on it. Baumann and Farrington (2003) concluded based from a study on decentralization of natural resource management in India that "decentralization has not significantly increased access by rural poor to natural resources and that rural people valued decentralized natural resource management program for wage labor." Contrastingly however, Baumann and Farrington (2003) also pointed out that decentralization provides avenue for more partnerships, negotiation and increased participation of various groups down in the village levels. Through decentralization communities and other interested sectors are given importance to be part in the formulation of action plans on how natural resources will be managed.

Participation on the other hand is "involvement by a local population and, at times, additional stakeholders in the creation, content and conduct of a program or policy designed to change their lives. Built on a belief that citizens can be trusted to shape their own future, participatory development uses local decision making and capacities to steer and define the nature of an intervention" (Jennings, 2000). Villarin *et al.*, (2008) identified public participation as one of the keys to sustainable development and good

governance. They also identified localization of responses as well as multi-agency, multi-stakeholder and multi-disciplinary approaches as essential considerations in combating the impacts of climate change. These same considerations too, are important in addressing habitat degradation and endangerment of species. In relation to forest development, (Porter-Balland, *et al.*, 2011) found out that deforestation is less in community-managed forest than protected forests after analyzing a total of 73 tropical forest cases.

In the Philippines, DENR has been dealing with communities in the government's efforts to reforest denuded land areas after early reforestation efforts had failed (Gascon *et al.*, 2006). These programs that involve participation among communities include the National Forestation Program (NFP) followed by the Integrated Social Forestry Program (ISFP), Community Forestry Program (CFP), Community-Based Forest Management (CBFM) and most recently the National Greening Program (NGP). It is regrettable however that biodiversity was not given importance in the early reforestation efforts because species planted were more exotic. Exotic species do not provide food for wildlife (Alburo, 2009). In this paper, I examined how decentralization and participation work in biodiversity conservation in Alcoy and Dalaguete, Cebu. Impacts, problems and challenges of the community-based conservation efforts in the said municipalities and a proposed conservation framework are also presented.

METHODOLOGY

The investigation is a descriptive qualitative research using case study method. Key respondent interview using exploratory technique was employed to generate information from local personnel representing the LGU and CBCF. On the other hand, focused group discussion was conducted to generate information among forest wardens in Nug-as. Notable information in the area was also taken into account through actual observations.

Alcoy and Dalaguete are adjacent municipalities in southeast Cebu where the largest patch of natural secondary forest (Nug-as forest) on Cebu remains (Figure 1). Many of the country's and of Cebu's threatened and endemic species are found on these areas such as the Cebu flower pecker, black shama, Cebu cinnamon, Cebu hawk owl, Cebu brown dove, Philippine tube-nosed fruit bat, golden-crowned flying fox and little golden mantle flying fox, among others.

RESULTS AND DISCUSSION

Biodiversity Conservation Initiatives

The Alcoy initiative began in 2000 when the Cebu Biodiversity Conservation Foundation (CBCF), after an island-wide biodiversity survey discovered some interesting species especially in the Nug-as forest. Putting CBCF's focus in the Nug-as forest being the largest remaining natural forest fragment in Cebu, the Forest Wardens locally known as *Bantay Lasang* was organized. Appointed wardens were mostly members of KMYLB (*Kapunungan sa mga Mag-uuma sa Yutang Lasangnon sa Bululakaw*), an existing PO in the area. As PO, KMYLB manages a certain area of the forestlands through a Certificate of Stewardship

Contract (CSC) issued by the DENR. At the start, wardens did patrolling operations only in their plantation as it first focused only on forest protection. Later, patrolling operations expanded to the natural forest areas as it included wildlife conservation. CBCF provided the wardens with the necessary training required to properly conduct monitoring operations and even in the preparations of monthly reports. Field gadgets such as binocular telescopes, flashlights and hand-held radios among others were provided to facilitate monitoring activities. CBCF has also allocated money to pay wardens in the form of honorarium for the services they rendered.

More surveys were conducted by CBCF assisted by the wardens in 2001. In 2003, Alcoy through CBCF received a grant from the United Nations Development Program (UNDP) for forest protection and wildlife conservation, which led to the Biodiversity Conservation Program of the town. In 2004, the municipal government had started giving honorarium to the wardens. Later the wardens were given PhilHealth Insurance.

On the other hand, Dalaguete's initiative took off as an expansion of the conservation efforts in the adjacent town of Alcoy due to the presence of some important species within its remaining forest fragments. Among these are the flying foxes that roost in the barangays of Malones and Lanao. The roost particularly in Malones is a unique mixture of four species that includes the Small Flying fox (*Pteropus hypomelanus*), Little Golden Mantled Flying fox (*Pteropus pumilus*), Large Flying fox (*Pteropus vampyrus*) and the endangered Golden-capped Flying fox (*Acerodon jubatus*) (Alburo, 2007). Other species worth giving attention for conservation also include the presence of the endemic Black Shama (*Copsychus cebuensis*), Cebu Flowerpecker (*Dicaeum quadricolor*) and the Cebu Cinnamon (*Cinnamomum cebuense*). The foregoing reasons gave way to the creation of the Dalaguete Biodiversity Conservation and Management Council (DBCMC).

The Birth of the Dalaguete Biodiversity Conservation and Management Council (DBCMC)

With the enthusiasm of Hon. Felix Villacorta, one of the eight members of the Dalaguete Municipal Council who chaired the committee on environment, a resolution was passed and unanimously approved in 2004. Resolution No. 178 S. 2004 approved municipal ordinance number 2004-57 declaring nine out of 33 barangays namely; Babayongan, Bulak, Dumalan, Lanao, Malones, Mantalongon, Panyas, Sac-sac and Ubo as bird sanctuaries.

The adoption of the ordinance led to the creation of the Dalaguete Biodiversity Conservation and Management Council (DBCMC) in the same year. It served as a focal point in the implementation of projects relevant to the protection and conservation of the municipality's forests and biodiversity. DBCMC is placed under the Municipal Agriculture and Natural Resources Office (MANRO) (Figure 2) and receives funding from the municipal government's budget in the amount of P200,000.00 in its first year of implementation. The council is composed 13 members with the MANRO officer as the chairman. Members of the council include the committee chair for environment in the municipal council, the Community Environment and Natural Resources Office (CENRO – a district office of DENR) officer or his representative and the Philippine National Police (PNP) chief of the

municipality. Other members of the council are the barangay captains (chief executive of each barangay) for the nine barangays covered.

The council holds regular monthly meetings. The main task of the DBCMC is develop local policies to protect the remaining forest patches within Dalaguete's territorial limits especially in the barangays covered by the program. More specifically, it aimed to reduce if not eliminate timber extraction, "kaingin" (slash and burn) and charcoal making. DBCMC also aimed at curbing hunting of wildlife and especially in the protection of bat roosts in barangays Lanao and Malones.



Figure 1. Site Location Map.

Civil Society (NGO and PO) Participation

Over the years, several NGOs had been working with POs in the community. However, Cebu Biodiversity Conservation Foundation (CBCF) had the most contribution towards the current conservation efforts. Its first major role in conservation took place ca. 1998 where extensive assessment was made in the whole island of Cebu. This assessment helped in rediscovering several species of great importance since prior similar undertakings were only made on few areas of the island. The involvement of CBCF as an environmental NGO in Alcoy influenced a lot in their efforts to conserve the remaining biodiversity in the area. Without CBCF's presence there would not have much importance and awareness of the people and their local political leaders on the value of biodiversity. Perhaps the presence of Cebu's endemic and other important species in the area opened the doors for this concerted conservation efforts. Thru CBCF grants from Haribon Foundation, Chester Zoo, Rufford Foundation and UNDP, field mobilization began to operate. This funding assistance has also encouraged the LGU to put up a counterpart fund for conservation.

With CBCF's expertise, technical assistance was extended to the LGU in doing surveys to establish and substantiate information regarding the number and status of the resources they have in their town. Logistics had also been provided by CBCF such as binoculars, flashlights, radios and many others to facilitate fieldwork and other conservation activities. Most importantly, CBCF organized the Forest Wardens in Nug-as, Alcoy by tapping the members of KMYLB and other POs and partly used its funds to provide meager honorarium of the wardens.

CBCF has brought together the LGU and the DENR to become partners in conservation. It has also used "benchmarking" as one of the strategies in the NPM to provide good exposures to the wardens by visiting similar undertakings in other areas of the country. Certainly, the views of Kauneckis and Anderson (2006) is true in this respect that local politicians tend to be more responsive to communities when issues are articulated through civil society organizations.

Other nature of participation includes the People's Organizations in Alcoy. The site being one of the areas of the DENR where forestlands are awarded for management and cultivation in certain areas under the Community-Based Forest Management Agreement (CBFMA), three POs are directly involved in conservation efforts. This study however, focused only on the participation of KMYLB. With too meager amounts of honorarium given to the wardens in guarding the forest and its biodiversity, their efforts are described as more voluntary. Although the extent to which participation is done is quite limited with the agencies involved, participation can be improved by soliciting from interested citizens of the town. In this way, more citizens can be involved in the program.

Public-Private Partnership

Public-private partnership had been forged by and between the municipal government and a private mining company that operates in the town. This mining firm is extracting the rich limestone deposits in the town specifically dolomite. On June 8, 2009 Alcoy signed a Memorandum of Agreement with the Philippine Mining Service Company (PMSC) for the conservation of its forest and biodiversity as part of the company's corporate social responsibility. This partnership provides an opportunity to continue conservation efforts in the town. Under the MOA, PMSC will provide annual funding assistance of Php500,000 (11,904 US dollars) to finance reforestation and assisted natural regeneration projects in a 65 hectare area. The said area is part of the 1769 hectares open forestlands, which is under a co-management of the town and DENR. It is not, however, clear until when this allocation is given by the company according to the town's Municipal Environment and Natural Resources Office. Nevertheless, this amount of money will surely help advance the town's conservation efforts.

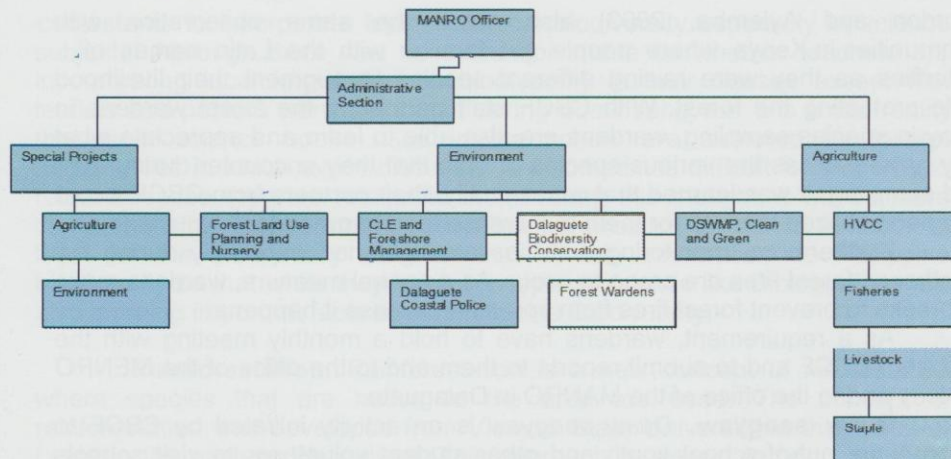


Figure 2. Dalaguete Municipal Agriculture and Natural Resources Office (MANRO) showing where the Dalaguete Biodiversity Conservation and Management Council (DBCMC) is attached. (source: Municipality of Dalaguete).

Conservation activities

Regular monitoring. Monitoring activities are the basic function of the Forest Wardens. Doing the monitoring regularly was one of the key factors that deter violators from cutting or hunting in the forest thereby reducing timber poaching, hunting and charcoal making. In the case of the wardens in Nug-as, their chief makes arrangement on the routine of patrolling the forest to ensure that violators will restrain from cutting trees or hunting wildlife. This task of the wardens is enormous because they have to do it on top of the other works they have in their farms for livelihood. With the amount of honorarium, which only started at P200 per month, the duties they perform are commendable.

It was noted during the interview of the wardens that they feel part of the conservation project because protecting the forest also means protecting them. When they were asked what encouraged them to accept the task as wardens, many answered the will to “help” in protecting the environment. One of the wardens in Alcoy said “I am encouraged to work as warden because of the importance of wildlife to man; birds are seed dispersers and pollinators.” Such scientific response indicates that the wardens are convinced of the idea why there is a need to protect the forest and biodiversity in Nug-as. Also part of doing monitoring is the recording of wildlife species encountered such as birds and bats. Bird monitoring is easier because it is done during the day while monitoring bats is more difficult because it is done during the night. Additionally, wardens have to be in contact with the animals during sampling so extra skills on the part of the wardens are required. These skills are handed to them during series of trainings facilitated by CBCF staff. While wardens most commonly know the “local names” of the birds and other animals, it was also surprising that some of them knew even the English and Scientific (Latin) Names of many species in the area. In another study

(Gordon and Ayiemba, 2003) also noted the same observation with communities in Kenya where people get familiar with the Latin names of butterflies as they were raising different species to augment their livelihood while protecting the forest. With CBCF staff partnering the forest wardens in Alcoy in species sampling, wardens are also able to learn and appreciate what they have such as the various species of bats that they encounter during their field sampling. It was learned that occasionally, their partners from CBCF would give personalized lessons for them to increase their knowledge.

Furthermore, monitoring activities are tightened especially during dry months, as forest fires are prone to occur. As a control measure, wardens make firebreaks to prevent forest fires from spreading in case it happens.

As a requirement, wardens have to hold a monthly meeting with the staff from CBCF and to submit reports to them and to the office of the MENRO in Alcoy and to the office of the MANRO in Dalaguete.

Duaw sangyaw. *Duaw sangyaw* is an activity initiated by CBCF to utilize some out-of-school youth and other student volunteers to visit schools and communities to hold exhibits and/or lectures about the importance of biodiversity conservation. This activity is aimed to disseminate information among elementary and high school students and the constituents in the town. Lectures are especially tailored to include what species can be found in the town of Alcoy and most particularly those that can only be seen in Cebu throughout the world. Strategies include the use of good visual materials such as posters and power point presentations. In some instances, documentary videos on the importance of biodiversity are shown to raise consciousness and to develop more appreciation among the students and the community.

Youth camps. Youth camp is also an activity used to develop awareness among youth particularly students. This is usually held as an annual event that would highlight activities that can help participants acquire knowledge and appreciation on biodiversity. Participants are generally high school students from the town but later organizers i.e. the CBCF expanded participation by inviting students from other towns to join. Camping usually lasts for three days and usually held in the mountain at or near the forest. Activities during a youth camp would include dramatization, group race and tree planting among others. Facilitators of the said activity had noticed that participants were really enjoying the activity.

This activity enables the participants to reflect human interaction with nature. It also develops the participant's leadership capabilities towards becoming responsible citizens in the future with love and respect to the environment.

Siloy Quiz Bee. The town of Alcoy through CBCF had also initiated a biodiversity quiz dubbed as Siloy Quiz Bee. The quiz was named after the Black Shama locally known as Siloy, which had the biggest population remaining on the island in the Nug-as forest. Participants of the quiz were high school students from Alcoy and neighboring towns. The activity is held as one of the highlights of the town's fiesta celebration. Activity like this is a very good initiative in encouraging (at least) the student participants to study and know the species not only those that are generally found in the Philippines but most specifically those that can be seen in the locality, where conservation initiatives are taking place. It will also encourage teachers who serve as coaches of the

contestants to incorporate topics on local biodiversity especially in science subjects. Although there was no evaluation made on whether teachers are incorporating local knowledge on biodiversity in their classes except that leaflets and posters were distributed during *duaw sangyaw*. It is a sad reality that most science books used in the school are authored by foreign personalities in which topics discussed are sometimes difficult for students to relate because they are foreign to them. Along this thought, it will be more comprehensible if government authorities will produce a science textbook at least for the elementary students that contain information on Philippine biodiversity so that while they learn concepts in science like Biology, they are also learning important facts about Philippine Biodiversity.

Rainforestation. Rainforestation is a new concept of reforestation where species that are native to the area are used. The concept of rainforestation was developed from Visayas State University in the island of Leyte in the eastern Philippines. This approach is viewed to bring back the lost vegetation. The old approach to reforestation in the 1970s primarily used exotic species, which do not bring good impacts on wildlife. As you visit some of the successful reforestation projects established 30-40 years ago, you can seldom see birds and other wildlife species. Birds and other species of wildlife can usually be found in those reforestation sites mixed with native vegetation. Native plant species provide natural food to wildlife while the exotic reforestation species do not hence, re-establishing them will surely benefit biodiversity.

As regards to this project, a nursery is established for growing seedlings. Planting stocks are either obtained as seeds from mother trees or as wildlings (seeds that have germinated in the forest floor which grow naturally). They are raised and conditioned in the nursery before out planting.

Another strategy used in Nug-as, Alcoy is natural regeneration. The vegetation was just allowed to develop. It was observed that for a decade of protecting the forest with the forest wardens, there is a significant improvement of the forest. Trees have grown in size and birds that were strictly confined in thickly vegetated areas have started to perch on the growing vegetation.

Conservation Impacts

The conservation of biodiversity in these parts of Cebu has reached milestones. With the heroism of the forest wardens, the forest in Nug-as has significantly improved since the wardens were organized. Illegal cutting of timber and wildlife hunting had significantly reduced as claimed by both the key informant and the wardens. The cumulative number of birds species recorded in different occasions has increased. Records have shown that aside from the three species endemic to Cebu namely the Cebu Flowerpecker, Black Shama and the Cebu Cinnamon, 10 out of the 12 reportedly extinct bird species on the island were rediscovered in the area. Moreover, surveys have also encountered several first island records for Cebu. This makes Cebu and the Nug-as forest a hotspot for conservation among the remaining natural forest fragments in the island. With these, Alcoy becomes potential eco-tourism destination. Bird/wildlife enthusiasts and many

scientists from within and outside the Philippines visit Alcoy to see most especially the endemic species of Cebu. Bird enthusiasts are challenged especially to take a photo of the Cebu Flowerpecker being very small and not so gregarious. It was revealed that to date, no photograph is yet taken of the said bird. In a related development, the Nug-as Forest in Alcoy is also listed as one of the 13 bird watching sites in the Philippines (Libosada Jr., C.M., 2008). In 2009, Birdlife International also declared the Cebu Flowerpecker as species champion during the British Bird watching Fair in the UK. Such recognition puts the Philippines and the Nug-as forest in Alcoy in particular in the list of bird watching places to visit. Birdwatchers may flock the Philippines and Cebu in particular to see this very small and critically endangered bird before it becomes extinct. On the other hand, the declaration signifies the much-needed effort to conserve the bird together with other species and their habitats.

With the advancement of conservation initiatives in Alcoy, a research station was constructed sometime in 2008 through the funding from the CBCF. The said research building serves as venue for meetings of the wardens and the PO in general. It also serves as a venue to accommodate researchers and other guests who visit the area.

One of the sectors benefitting these developments is the forest warden themselves. With birdwatchers, scientists, researchers and others visiting Nug-as, they earn compensation by serving as tour guides. One warden knows how to mimic the call of the black shama so with him in the group visitors can easily see the bird in the forest. Although the cash incentive is not big, this has in some ways helped the wardens earn decently.

Above these, the media had been good enough in communicating this success story from the field. In fact, a number of print and TV programs have written/shot and featured the conservation efforts most especially in Alcoy town. In another development, the town of Alcoy has created the Siloy Festival. Just like the quiz bee, the festival got its name too from the bird Siloy, which thrives in abundance in the Nug-as forest in Alcoy. The festival is a street dancing accompanied by a music telling the story of Siloy and the people in Nug-as (Jakosalem and Paguntalan, 2007). This festival is participated by different schools within the town. It is held every August as one of the highlights of the town in celebrating its annual fiesta. With this festival, local and foreign tourists also visit Alcoy. In some little ways, this event contributes to the economic activity of this small town in the southern part of Cebu, although the researcher was not able to access statistics as to how much.

Problems/challenges faced **Local Political Leadership**

For five years of operation some of the challenges faced by DBCMC were the changing political leadership and limited budget. Political leadership is very vital in the context of mobilizing the government in the protection and conservation of biodiversity. Conversely, changing of political leaders also brings risks for new policies that will lead to new priorities. The same risk can even be seen within same political leadership as priorities may change. For the first four years of operation DBCMC received an allocation of P200,000 to

cover the remunerations of staff and other project costs. The honorarium of bantay lasang (forest wardens) was subsidized by CBCF however; its nature is very temporary, as the organization also depends on their budget from donor agencies. In its fifth year, the budget was reduced to only P150,000 which tightened DBCMC's operations. This budgetary reduction was attributed by the change in political leadership of the town as a new mayor was elected. Failure of political leaders, most especially in appreciating and understanding the value of biodiversity puts little chance for this area to get funded. Without prior understanding, we cannot do a good plan for anything. Birdlife International (2010) quoted Dr. Leon Bennun as saying "because we receive benefits from biodiversity for free, we take it for granted." This is very true to many of us. Political leaders as key players for development should consider biodiversity as an integral part of it. However, the complexity of problems and issues that political leaders need to address against budgetary constraints, the idea of "good enough governance" by Grindle (2004) maybe more fitting. Such however, should include environmental protection encompassing biodiversity conservation as one of the priorities.

Increasing Population in the Upland Areas

Another major challenge that is faced by the towns in their efforts to conserve biodiversity is the continued poverty and increasing population of forest occupants and nearby areas. Hunting may not be a very serious problem since it is not for subsistence in nature. The increasing human population in upland areas coupled with marginal economic conditions however, can create a new shadow that will put more pressure on utilization of the forest. Report showed that Alcoy has an annual population growth of 1.6% between 2007 and 2010 (Municipality of Alcoy, 2011).

Such increase may not be very big but would still contribute to the increase in the number of mouths to feed in these areas. This reality coupled with low farm productivity, gathering of timber is more tempting as an additional source of income. Most importantly livelihood opportunities in the community should be improved. The concept of "Satoyama" in Japan where people live in harmony with nature is worth emulating. However, it maybe difficult to undertake considering the economic gap between these two countries is very wide, Japan being too economically advance while the Philippines is still developing.

Illegal Cutting of Timber and Lack of Support from DENR

Although the contribution of the wardens in controlling illegal cutting of timber was very significant, occasionally few forest violators still cut timber in both towns. Trees cut are made into charcoal or sold as timber. Some cases are related to economic hard-ups especially during season not favorable for farming. Selling firewood or charcoal also becomes an alternative livelihood of some individuals. While it is true that the number of cases is few, the impact on the existing vegetation is still great because the growth of the vegetation is very slow due to poor soil fertility.

In order to control these violators, the town of Alcoy offers a 10% share of the collected fines as an incentive to wardens who will be able to apprehend them.

Depending on the scale of the offense, violations are either settled in the LGU or the DENR. Minor offenses are generally settled and discussed within the LGU while those that are of larger scale, settlement are forwarded to the DENR. For the part of the NGO which worked hard to establish the conservation efforts in the two towns, the empowerment of the wardens is sometimes put in vane due to lack of support from DENR. It was learned that "DENR right away dismiss cases even before filing" (personal interview confidential).

Construction of Road Close to the Forest

Taking advantage of the resources especially those that are found in the Nug-as forest, the Alcoy LGU wanted to construct a road close to the forest. After the mapping was done by the Department of Public Works and Highways (DPWH), experts from CBCF overlaid the map on the biodiversity data they obtained from field investigations and it showed that a number of Black Shama territories and Cebu Cinnamon will be hit by the road construction. Moreover the very rare Cebu Flowerpecker was also sighted in the area. With only four households to directly benefit from the said farm-to-market road, the NGO wrote a position paper opposing the said plan. The PO had also submitted a position paper bearing the same stance of the CBCF. Upon evaluation of the CENRO-DENR, an Environmental Impact Assessment (EIA) is required because of the adverse impacts the project would bring to the area. Convinced with the opposition of the people on the ground, the LGU withdrew its plan to push through the project.

Situation like this is likely to happen especially when LGUs are over excited. Finding revenues out of fees from ecotourism is sometimes a common disgrace of our unique natural treasures including biodiversity. LGUs handling ecotourism activities sometimes fail to consider the carrying capacity of nature and later they realize that they need technical experts to review their plans. In the case of Alcoy, the presence of a strong NGO and PO has helped check the balance of development and conservation that local governance wants to attain. To attain greater heights toward this endeavor, more participation must be encouraged by local governments to ensure that proposed programs and projects are deliberately planned and discussed prior to its implementation.

Extraction of Birds' Nest

Bird's nest is an important ingredient for making bird's nest soup. This Chinese cuisine is famous among Chinese restaurants not only in the Philippines but also abroad. Its demand both from the domestic and overseas market has attracted some people to venture into collecting bird's nest in caves and in other limestone formation in the locality. Its local price ranged from P2000 to P3000 per kilogram.

Bird's nest collectors intruded into the Nug-as forest being primarily a karst limestone area. As a conservation site wardens were alarmed upon knowing that bird's nest is being collected in the area. With their concerted efforts the collection of the nests was eventually stopped.

Proposed Biodiversity Conversation (Bio Con) Taskforce

Conservation initiatives taking place in Alcoy and Dalaguete has displayed the important roles of LGUs and multi-sector organizations in a joint effort to conserve biodiversity. However, a more improved management framework can be designed. A way to improve it is creation of a Bio Con Task Force (Figure 3) which will expand participation from other sectors most especially the academe and private organizations or individuals.

The BioCon Task Force shall focus on five interrelated programs, all towards conservation. These shall include (1) Forest Restoration and Greenbelt Development, (2) Biodiversity Monitoring, (3) Forest Warden, (4) Support-a-Warden for Conservation, and (5) Training and Advocacy. Although some of these proposed programs have already been practiced particularly in Alcoy and Dalaguete, Forest Restoration and Greenbelt Development as well Support-a-Warden for Conservation components are new approaches. To reduce financial burdens of putting forward conservation of biodiversity, Forest restoration will be more of assisted natural regeneration in which volunteer citizens and organizations will do the tree planting activities. Furthermore, as to the greenbelt development, public places such plazas, parks and school grounds among others must be required to establish a greenbelt to provide patches of vegetation that will connect existing vegetation. This approach should strictly use indigenous species in order to develop patches or strips of natural forest. Species to be used must be carefully selected by experts such that these trees will provide food to wildlife among others. Initially, (Alburo, 2007) came up with a list of 19 species that are potential food plants by large bats (flying foxes). To move this agenda, the BioCon Task Force has to lobby for the passage of local ordinance that would require the management of those places earlier mentioned. Seedling production maybe coordinated with the DENR or the municipal government.

Due to the possibilities that the LGU may not have budget to pay for the honoraria of wardens who will be doing regular patrolling in identified key conservation areas or that the task force will start as an independent body composed of a pool of experts and interested individuals, funding will be solicited from various organizations (public and private) and from benevolent individuals to sponsor for the honorarium of a particular warden. As for Alcoy and Dalaguete's experience, an amount of P500 or roughly Y1000 per month is already something on the part of the wardens as an added earning. At this rate, it will translate to only P6000 per year per warden. With two or three wardens per village, the cost of honoraria will only range from P12000 to P18000.

Lastly, for the three other components of the task force, experts from the academe, DENR and NGO shall do the biodiversity monitoring to update the existence of species in the area and their status. As to the forest warden, the task force shall closely coordinate with the respective villages as to the selection of wardens. For trainings and advocacies experts and volunteers will conduct school visits, exhibits and other related activities to instill awareness among citizens on the value of biodiversity. If finances warrant, brochures and other Information, Education and Communication (IEC) materials will be produced and distributed to the public.

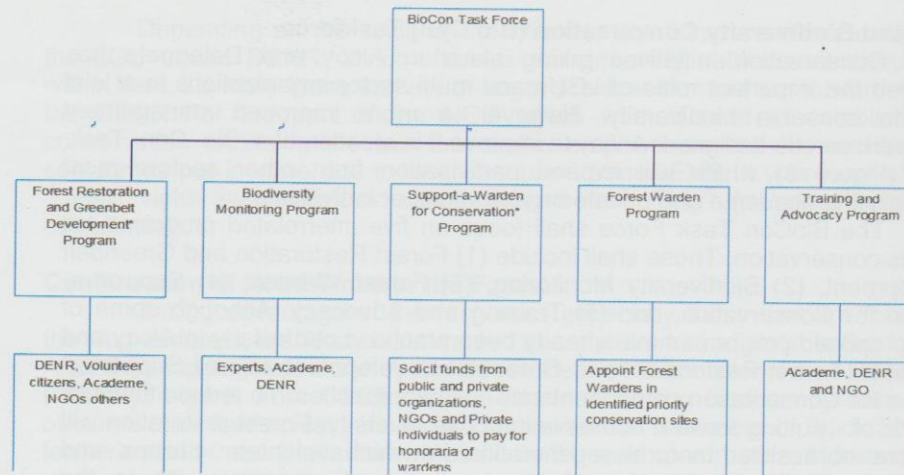


Figure 3. Proposed Biodiversity Conservation (BioCon) Task Force.

CONCLUSION

Both decentralization and participation displayed significant contribution to the success of localized conservation initiatives in Alcoy and Dalaguete. With decentralization, the LGUs take control in its conservation plans such as funding allocation and manpower support without the need from the national government's approval. Participation on the other hand, has allowed Civil Society to take part in conservation planning and implementation. The role of CBCF in both Alcoy and Dalaguete was very significant in setting directions of conservation. Since the creation of Municipal Environment and Natural Resources Office (MENRO) is not mandatory under the Local Government Code, biodiversity conservation rely more on the interest of local political leadership.

RECOMMENDATIONS

Base from the results of the case study the following recommendations are given:

1. All LGUs should include biodiversity conservation in its environmental management plan and link with environmental NGOs and academe to help set directions of their conservation efforts.
2. LGUs (from the provincial level to city/municipality) should allocate manpower and funding to institutionalize conservation activities especially in areas where there are significant habitats and unique species.
3. Local Government Code of 1991 maybe amended making the establishment of MENRO in each city/municipality mandatory.

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