Policy recommendations

For

LGUs, the Department of Agriculture and other National Government Support Agencies regarding the replication of the Sustainable Upland Development Model

February 2006

THE UPLAND SITUATION OF FORESTLANDS IN THE COUNTRY

Forestlands are non-Alienable and Disposable (A&D) Lands, which are supposed to be covered by primary or secondary forests. As of 2003 the status of land classification by the 'Forest Management Bureau shows that the total land area of the Philippines is 30 million HAs. A&D classified lands comprise of 14,145,078 HAs, unclassified lands of 1,089,118 HAs and 14,765,804 HAs is classified as forestlands[1]. 3,272,912 HAs in these forest lands are for residential areas, so called timberlands comprise of 10,227,847 HAs, and National parks et al 893,221 HAs and 371,824 HAs are allocated for other purposes.

While in 1900 around 70% of the Philippines or more than 20 million HAs were under forest cover, thereafter and particularly since 1950 forestlands have changed enormously. In 2003 forestlands lands comprised of about 50% of the country's total land area or about 15.9 million including unclassified forestlands, out of which only 4 million HAs of residual and an estimated 1 million HA of old-growth forest remained, mostly in protected areas, reserves, concession areas and cancelled, suspended/expired concession areas[2]. This change in the forest landscape of the Philippines is visualised in the table on the next page.

Less than 60 years ago, it is estimated that the population in these forestlands was not more than 3 million or 10% of the, that time, population in the Philippines of 30 million. Indigenous peoples occupied the forestlands being their ancestral domains, and sustained themselves from consuming and selling forest products and shifting agriculture. Latest population figures estimate that 30 million people out of 85 million or 35% now inhabit forestlands[3] and these 35% are mainly supporting themselves by small-scale, often subsistence farming. As mentioned above, in 2003 the size of public forest 'timberlands' was estimated at around 10 million HAs, with 4 million ha of residual and an estimated 1 million ha of old-growth forest[4]. Perhaps it is safe to say that by now in 2006, most probably all timberlands accept say 1,5 million HAs covering protected areas etc. are somehow occupied and farmed or exploited otherwise. This would imply that today about 8.5 million HAs are farmed.

One reason for this is the indiscriminate legal and illegal logging in the past. In addition, population pressure has forced lowlanders to occupy areas already cleared through logging and encouraged unsustainable farming there. Another reason may have been the taking over by large agri-business concerns of vast tracts of gently sloping lowland plantations, forcing many poor communities with no other option than to expand cultivation onto steep to very steep slopes. The original IP inhabitants practiced the slash and burn farming while the migrant lowlanders practiced lowland technologies not suited to steep uplands. This has resulted in severe soil erosion, low productivity and therefore very low income and quality of life.

The fierce erosion has also resulted in extreme "poverty" in terms of biodiversity in Philippine uplands[5]. And what happens in the uplands has a direct effect on the lowlands. Lowland dwellers, farmers and fishermen, have suffered badly due to the damaging effects of severe floods and siltation, which have occurred as a result of this erosion.

---

[1] http://forestry.dent.gov.ph/stat2003htm

[2] www.nscb.gov.ph, National Statistical Coordination Board, 2005
FAO Corporate Document response: http:/www.fao.org/documents/show…..chapter 4. Impacts and effectiveness of logging in natural forest Philippines – Ernesto S. Guiang

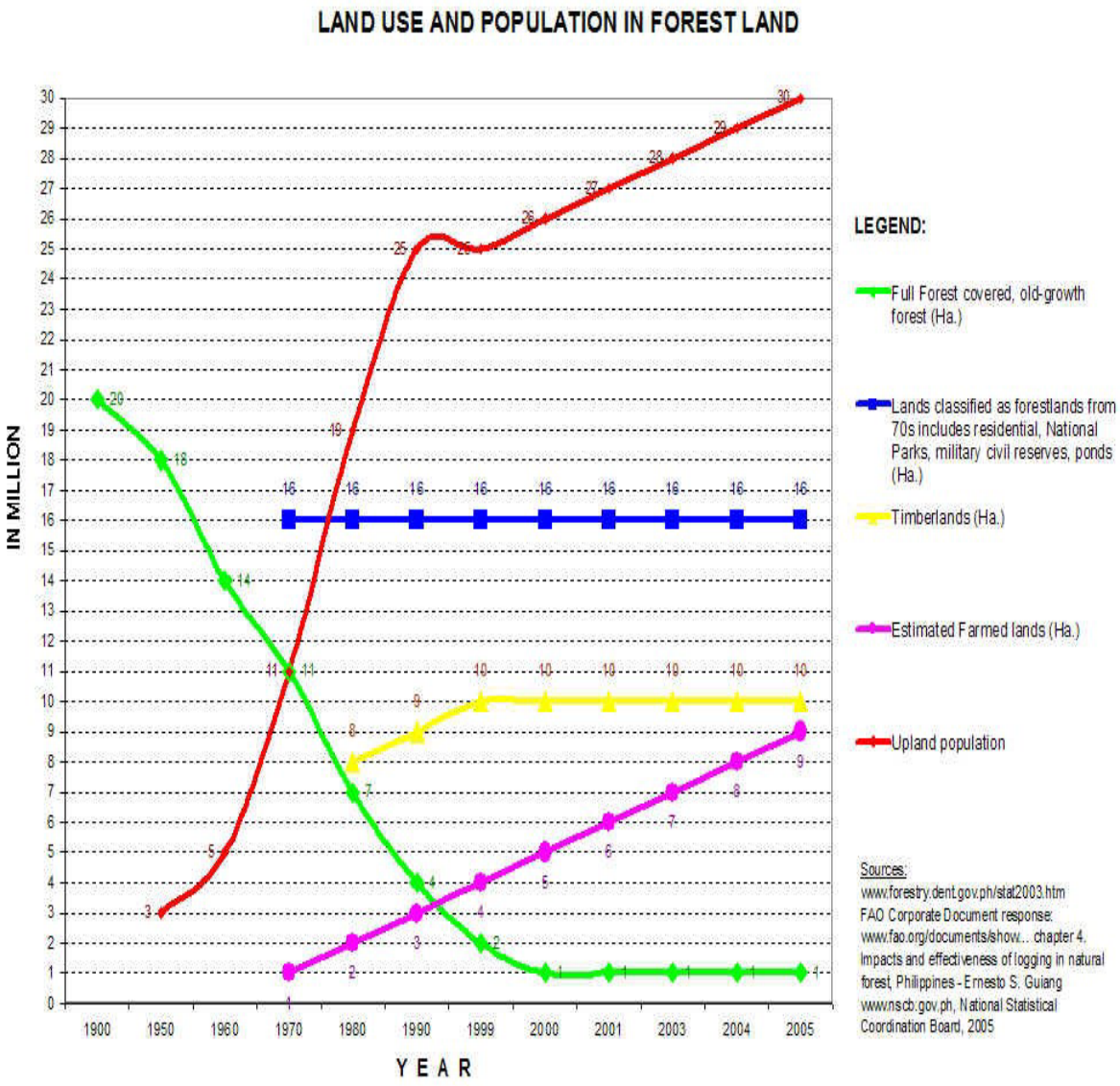
[3] Extrapolation from the figures in the FAO publication chapter 4. Impacts and effectiveness of logging in natural forest: Philippines – Ernesto S. Guiang

[4] http://forestry.dent.gov.ph/stat2003htm

[5] See Haribon Foundation, Power Point Presentation " The Scary Story", 2001

Figure 1

LAND USE AND POPULATION IN FORESTLANDS



The table shows the horrendous attack on the Philippines forest over recent decades. Particularly in the period 1970s and 80s when more than 10 million HAs were cut down. Meaning about 80% of the remaining forest was decimated in a few years only.

In conclusion one may say that nowadays the Philippine upland resource base is seriously threatened and the possible near future effects are highly troublesome and should worry every Philippino. It seems also safe to say that the main cause is unsustainable farming practices inside the forestlands. Indirectly a similar threat hovers over the lowlands, which are affected by what's going on in forestlands. It seems that creative if not revolutionary solutions need to be sought to save the country from serious near future trouble and a new paradigm might be needed to address the concerns effectively. Any policy, action, support programme to stop the on-going destruction in forestlands should hence be focused on changing the upland farm practices for the better.

Although the Department of Agriculture (DA) is formally not really mandated to facilitate agricultural development in forestlands, the need to facilitate sustainable upland development to reverse the ongoing disastrous unsustainable agricultural land-use cannot be ignored anymore. Particularly as it is totally unrealistic to expect that the upland farmers in forestlands would ever return to the lowland and thereby give way to restoration of forestlands into their original condition.

The implementation by the Department of Agriculture (DA) of the Upland Development Programme in Southern Mindanao (UDP) has resulted in the piloting, testing and replicating a Sustainable Upland Development (SUD) model that has relevance for all upland areas in the country. The SUD model has the scope to stop erosion, protect remaining forest pockets, and increase productivity on farmed uplands.

Basic assumptions underlying the model and definitions of key terms are given in Chapter 1. In Chapter 2 the model and its 3 schemes are summarized and implementation strategies briefly outlined. Chapter 4 gives estimated cost of implementation per municipality. Finally in chapter 5 policy recommendations are provided for the DA and other National Agencies concerned. Detailed information on implementing the SUD model is available with UDP and some key information can also be found on UDP's website: www.saveuplands.org. Practical examples can be observed in many barangays in regions XI and XII in Southern Mindanao as indicated in the website.

CHAPTER 1: BASIC ASSUMPTIONS AND DEFINITION OF KEY TERMS

Basic assumptions

Sustainable upland development can only be achieved when upland communities are capacitated and fully involved and empowered to take up their own sustainable development activities. This implies a participatory approach towards the development process and the need for a relationship of trust between the upland communities and available support institutions like the LGUs. Experience shows that community organizing and building trust and confidence can best be established through concrete activities and projects that generate economic and/or social benefits for the concerned community at an early stage of programme implementation. Secondly, local governments at the barangay, municipality and provincial levels, must play a key role in assisting upland communities in line with their functions.

Security of tilling the land is no doubt an important prerequisite for farmers to invest and sustain the uplands. A tenurial instrument would also be a valid base for LGU taxation to enable the collection of taxes to provide for increased services delivery to the uplands. However the present situation in the uplands where a majority of the upland dwellers are in fact illegally tilling the land, has shown to be no serious constraint for the successful implementing of the SUD model.

Vital is also, the availability of well-maintained farm-to-market roads, clean drinking water, basic health and educational services as well as access to financial services. This requires the linking up of upland barangay LGUs and communities with municipality and provincial LGUs, relevant national government agencies and Non-Government Organizations (NGOs) that can provide these services.

The SUD model promoted by the UDP focuses however on the core issues regarding sustainable upland development which can be addressed within the scope of Local Governments and upland communities with support from the Department of Agriculture and other national agencies. These core issues concern: upland barangay land use and development planning, sustainable upland agricultural development, barrage level forest protection and barangay road rehab and maintenance.

Definition of some key terms

Uplands
All sloping lands that are more than 100 meters above sea level including forestlands[6].

Sustainable upland development
Development in an upland area that strikes a proper balance between ecological and economic concerns in a way that the natural resource base is maintained or improved while at the same time economic activities such as farming generate sufficient income for the inhabitants residing and making a living in the uplands.

Target area
The upland barangay is considered to be the model area.

[6] Principal criteria for upland barangay selection in annex 1

CHAPTER 2: THE SUD MODEL

Land-Use Based Participatory Barangay Development Planning through LGU and Community Capacity Building

This scheme is fundamental and should be the basis for any development support in the upland barangay. Its purpose is that the upland barangay community, the B/MLGU and the DENR-CENRO/NCIP will jointly agree on the sustainable use of the natural resources in the concerned barangay taking the existing situation as point of departure. The land-use based barangay development planning process should be highly participatory and result in a land-use based (LUB) Barangay Development Plan (BDP), that is internalised, accepted and adopted by all concerned. The outcome of this exercise would be that all stakeholders jointly agree on what areas to protect or to reforest in the upland barangay and what areas would be allocated for agricultural development.

Approach and strategy

By mandate it is the responsibility of the MLGU to help its barangays in coming up with a BDP that is formulated through a participatory aproach. However there is a great need to built capacity within the Municipal Local Government Units (MLGUs) to facilitate such a participatory planning process with stakeholders, particularly the upland barangay community.

This capacitating of MLGUs, with the Municipal Planning and Development Office (MPDO) in the lead, is best done by a suitable NGO, well versed with participatory land-use based barangay development planning through a hands-on process.

Activities

The hands-on training of the MPDO team last approximately 40 working days. It includes both theoretical inputs and practical aspects at one barangay practicum site. At the end of the activity, the MPDO Team's main indicator that they have enhanced their facilitation skills on land-use based participatory planning is the 5-year land-use based barangay development plan with an investment program, endorsed by the Barangay Development Council, approved by the Sangguniang Barangay, endorsed by the Municipal Development Council and adopted by the Sangguniang Bayan. In this process, the MPDO Team learns how to facilitate land-use based participatory planning processes; gets first hand experience in community mobilization and realizes that communities indeed need their technical expertise specially in critiquing and validating the formulated plans. Hand in hand the barangay development council of the practicum site barangay also acquires land-use based barangay development planning. In some instances, the barangay planning facilitators are able to help the MPDO Teams co-facilitate their neighbouring barangays' planning sessions. Once the MPDO is capacitated it can now replicate the LUB-BDP process in all barangays of the municipality.

Agricultural extension aiming at the introduction of Diversified Farming Systems (DFS) and adoption by upland farmers

Commonly upland farms are small, less than 3 HAs, and farmers are mostly subsistence farmers. Biophysical and socio-economic environments in upland areas are poorly endowed and the majority of farmers use inappropriate agricultural land care technologies, leading to severe erosion of topsoil. The crops they plant are usually not really suitable/appropriate for uplands (corn). Switching to a Diversified Farming System (DFS) has the potential to ensure food security, both in terms of increased production and productivity and in terms of income generation and DFS protects farmlands against erosion and improves productivity of the land.

Approach and strategy

The diversified farming scheme implies the gradual switching from mono-cropping like corn to growing short (to address his/her immediate cash requirements), medium (for income needs in the medium term) and long-term crops (for farmers' pension). This lessens dependence on a single crop, promotes moving to dualistic cropping systems with an ever-increasing area under perennial crops and switching to better marketable crops as well as diversifying into small animal production. The basis for establishing a DFS farm is a farm plan based on slope treatment oriented practices or STOP. The STOP approach can assist extension workers identify site-specific solutions that take into account the wide range of soil and environmental conditions, farm sizes and farmer objectives. The ultimate aim of the DFS is that all steep slopes presently farmed with short-term crops like corn, will ultimately be converted into tree (fruit and forest) cropped lands. The introduction of diversified farming systems also prevents further encroachment into forest lands as productivity and income increases reduce the need to open up more lands.

Activities

Crucial is that farmers have access to quality extension services on how to establish a DFS farm. Extensive capacity building, training and exposure, of Agricultural Technicians, Barangay and sitio extension workers, are therefore necessary activities to do. Establishment of learning sites/model farms is another important activity under this scheme and provision of seedlings as incentives to farmers to help them adopt, particularly soil and water conservation technologies, is essential too. Farmer cross-visits have been shown to be quite effective in the transfer of appropriate technologies for upland farming. Distribution of extension materials, farmer gatherings to exchange experiences, and field days where producers, buyers and service providers are brought together are also effective means of achieving the purpose of this scheme.

The promotion and success of DFS with upland farmers is very dependent on the strength and quality of the extension services available. Therefore there is a need to build up effective upland extension system.

The upland agricultural extension system has two closely interlinked operating levels:

1. The Regional Research and Development Extension Network (RRDEN) composed of DA-Regional Field Unit, Agricultural Training Institute (ATI), State Universities and Colleges, Provincial Local Government Units and NGOs. Through a MOA, the member-institutions signify their support to local extension systems. The RRDENs are responsible for capacity building of the municipal extension teams, especially the Municipal Agriculturists (MAs) and Agricultural Technicians (ATs) and for addressing the research needs from the field.

2. The second level is the Community based Extension Service System, which is basically composed of the Community-Based Extension Team (CBET) and of Learning Site that serve as a mechanism to deliver extension services and access external support for research, development and extension through the MLGU. The CBET forms part of the municipal extension team. The CBET is composed of the Barangay Extension Workers (BEWs) and Farmer Training Groups (FTG) members/sitio extension workers and together with the ATs and MAs for the Municipal extension system.

The Municipal Agriculture Office (MAO) is the crucial factor in the whole of the extension system where needs from below and responses from above have to be coordinated and facilitated. In terms of planning, this effort by the MAOs is detailed in the municipal extension plan (MEP), that should be adopted and provided for with resources by the Sangunian Bayan (SB).

Barangay Forest Protection

The Barangay Forest Protection and Management Scheme can prevent further destruction of the remaining forests in the uplands and contribute to rehabilitation of depleted forestlands.

Most uplands have lost their vegetation due to logging and unsustainable farming. Remaining forest pockets are generally small to medium size patches of natural and second growth forests surrounded by massive grazed- and croplands.

Give this situation, there is an urgent need for a more "rational" land-use policy in the uplands to guide and coach upland barangay communities in protecting and regulating the use of their forestlands and try to ensure that no further destruction of the upland resource base takes place by:

- Introducing better farm technologies and switching to DFS, that increase productivity and hence should prevent further opening of farmland in forests (see above)
- Effective protection of remaining forest pockets, particularly on the steeper slopes, around springs and riverbanks through alternative options that are achievable by LGUs and upland barangay communities.

This scheme results in the protection of the remaining forestlands from further expansion of farming and other destructive activities; it organizes and mobilizes the Barangay Local Government Units and the local community organizations in protecting and managing the remaining forest lands in the barangay; appropriate community-based and site-specific forest management activities are put in place and a strong co-management partnership between BLGU, MLGU, DENR-NCIP and the local community organizations is forged in managing the forestlands in the barangay through devolving forest management functions to the barangay level.

Approach and strategy

The on-site forest management approach aims at empowering the Barangay Local Government Units and the Local Communities in managing the natural resources within the barangay by incorporating forest management functions into the barangay governance systems and structures. The guidelines for this scheme are based on the devolved functions of the DENR-DILG JMC 98-01 and 2003-01 which advocates a co-management system involving the community, BLGUs and the DENR/NCIP. It is recognized that the barangay LGU and community can play an important role in protecting the forest and in rehabilitating degraded forestlands within their territorial coverage and in managing the natural resources by embedding such functions in existing local governance systems and structures through integrating barangay land-use planning into the barangay development planning process.

Activities

A thorough orientation with all stakeholders is fundamental as well as regular environmental awareness campaigns for the same and particularly for the occupants of the forest. Capacity building of the LGUs and community organizations including training and coaching of forest guards is crucial as is the formal established of and a sufficiently capacitated Municipal Environmental Office to do EAC and training of barangay officials and communities and coach and protect the forest guards to do their duties. Unfortunately in many MLGUs the MENRO duties are still a side job of the Municipal Agricultural Officer, which is seen as insufficient. Furthermore protected areas have to be identified, delineated and clearly marked and a formal declaration has to be made of the identified sites based on the Barangay Land Use Plan integrated in the Barangay Development Plan. A Memorandum of Agreement between the BLGU, MLGU, DENR-CENRO or NCIP with local community organization being the partners in the co-management scheme, has to come into force. A barangay forest management committee should be

established to formulate and oversee the implementation of the forest management plan. The committee also has to facilitate the appointment/ recognition/accreditation of forest guards tasked to implement certain activities under the plan.

Routine Maintenance of Barangay Roads

Access to markets and services are crucial for promoting diversified farming systems to improve living standards and prosperity of the upland barangay community and protect their resource base. In uplands barangay access roads are often old logging roads of poor design and badly maintained. This leads to very high transport costs resulting in high prices of upland produce in non-barangay based markets thereby eroding the competitiveness of upland farm produce. Services brought to the uplands are also disproportionately costly for upland dwellers. The almost total lack of effective maintenance schemes to address the grossly inadequate state of farm to market roads in the uplands, is seen as the main cause. Sustainable routine road maintenance is vital to ensure good access to markets and services and fundamental to the upland barangay economy including farm- as well as the village/UBA off-farm enterprises. Hence there is a great need to improve the farm to market roads in the uplands. This scheme puts a system in place that will ensure that vital farm to market roads are upgraded and maintained properly by and within the capacities and capabilities of the barangay LGU and community with support from the P/MLGU.

Approach and strategy

The community, represented by a local organisation is contracted to assist with upgrading and maintaining the selected road(s). For that purpose a permanent maintenance crew, responsible for a certain stretch of road, is put in place with the support of the B/MLGU concerned. An underlying reason for contracting the community is to strengthen and empower its organizations so they can deal with their LGU on an equal footing and attract support. Furthermore this scheme creates direct employment and income for the upland residents and hence triggers multiplier effects in the barangay economy. The scheme should be properly adopted by the LGUs, to ensure that there is sufficient budget allocated for road maintenance and the chance that roads are maintained properly is maximised.

Activities

Key activities focus on the following: Extensive awareness campaigns on the need to maintain vital barangay roads for LGUs and communities; bring vital roads up to a level that they can be maintained labour intensively; establish permanent maintenance crews on vital barangay roads; build capacity of municipal engineers to supervise and train the maintenance crews in technologies appropriate for the upland infra; hands-on training of maintenance crews by LGU engineers and the provision of tools is essential. To ensure maintenance programs are effective, monitoring and supervision by LGU engineers of actual implementation is critical.

CHAPTER 4: COSTS AND BENEFITS

Costs

Land-use based barangay development planning

The training cost for an MLGU team to facilitate barangay land-use/development planning is about **PhP 200,000**. This is a hands-on training over 40 days with a land-use based barangay development plan as output and covers the costs of the NEDA/HLURB/LUPC accredited CSO for building the necessary capacity of the LGU in helping its barangays to formulate the barangay land-use plan within the context of a BDP. The cost for preparing such plans per barangay, assuming the facilitation by the MLGU team is taken care of, is estimated at **PhP 50,000** (perimeter survey, meetings, stationery, meals etc)

Barangay forest protection schemes

Investment per barangay (for perimeter surveying and survey pegging (monumenting), fencing, billboards, incentives to Bantay Lasang, and EAC by CSO/NGO, depends on the size of the area agreed to be protected or reforested. This cost is around **PhP 75,000**. Annual maintenance and protection costs per barangay are estimated at **PhP 50,000**.

Agricultural extension and upland farm inputs

The initial investment cost for establishing the system (meetings, TOT and hands-on farmer trainings, transport facility, equipment/tools for extension workers etc) is estimated at **PhP 250,000**. The annual cost (mainly salaries, transport costs, refresher trainings, upgrading skills), per barangay for operating the system is estimated at **PhP 200,000.** Farm inputs **Php 3000**/farm

Barangay labour-based routine maintenance schemes

The financing of the maintenance schemes should be a joint effort of the barangay, municipal, provincial LGUs (B/M/PLGU) and they will, according to their capacity, share their internal revenue mobilization funds as well as Internal Revenue Allotment (IRA) funds for that purpose. Investment costs in tools for and training of maintenance crews is estimated at **PhP 25,000 per barangay**. Actual rehab/maintenance costs are approximately **PhP 80,000 /** kilometre/year.

Per municipality

Assumptions

- 5 upland barangays per municipality
- Forest protection schemes average 50 hectares per barangay
- 100 farmers per barangay to be supported
- 5 km of road/barangay to be maintained

One time investment (including services from providers)

	PhP
Land-use based BDP	450,000
Forest protection schemes	375,000
Agricultural extension	1,250,000
Farm inputs (seedlings/seeds)	1,500,000
Barangay road maintenance	125,000
Total investment	**3,700,000**

Annual recurrent costs

	PhP
Forest protection schemes	250,000
Agricultural extension	1,000,000
Barangay road maintenance	2,000,000
Total annual recurrent cost	**3,250,000**

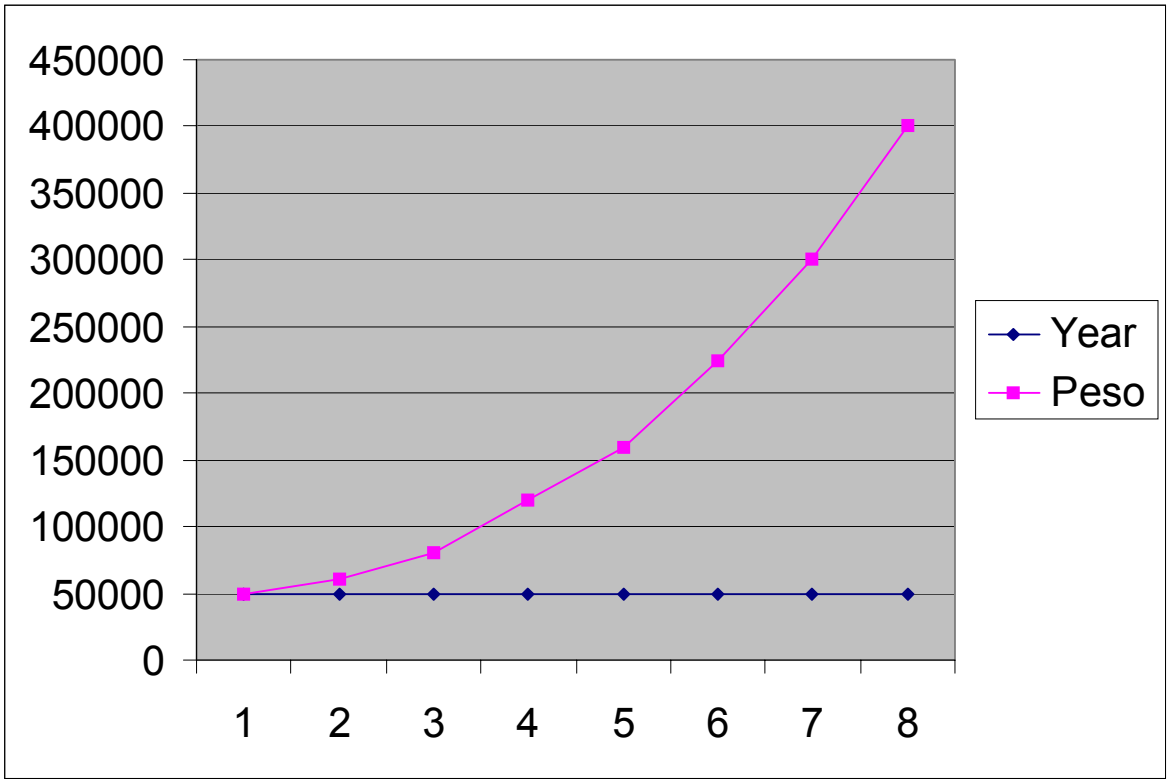
Benefits

Only the direct benefits from agricultural development are provided. Indirect benefits such as less benefits from less erosion, preserved forest etc. are hard to quantify at this stage.

As a result of improved extension services and seedling inputs to farmers, it is projected that for a 3 ha farm (which presently generates an income of approximately PhP50,000/annum), the income increase over the years will have the following trend:

Figure 2

ESTIMATED INCOME TREND FOR AN UPLAND FARM THAT SHIFTS FROM SEASONAL TO TREE CROPS



CHAPTER 5: POLICY RECOMMENDATIONS

Policy implications/recommendations:

<u>For Provincial, Municipal and Barangay LGUs and upland communities</u>

- P/MLGUs should support BLGUs and the upland communities with the formulation of a barangay landuse plan within the context of a Barangay Development Plan (BDP), which is prepared in a participatory manner and properly backed up by legislative action. In such a case the chances that the plan is adopted and successfully implemented are maximised. All barangay development interventions should then follow the landuse plan

- All MLGUs with upland areas should fill up the MENRO post. The MENRO must be well trained in coaching and advising the barangay LGU and communities, migrants as well as Indigenous Peoples, regarding the application of appropriate soil and water conservation measures, forest protection and the like. Together with other law enforcers, this office will also be equipped and mandated to enforce the implementation of the agreed barangay landuse plan as mentioned. Furthermore, were CBFMAs, CADTs and CALTs haven been awarded, the office will act as chief Advisor to the POs and IPs in respect of ensuring sustainable environmental utilisation and protection of the areas concerned. The MENRO will be capacitated by the Provincial ENRO which will draw upon the DENR and NCIP Regional Offices for resource persons inputs.

- All MLGUs must put in place and fund an effective agricultural extension system for agriculture in forestlands under the supervision of the Municipal Agricultural Office (MAO), which is backed up by appropriate legislative action. The extension system would consist of:
    a. A barangay based Agricultural Technician (AT) who is well trained and familiar with sustainable agricultural practices on sloping lands and an 'expert' in facilitation and communication skills, and who provides his/her services on a full time basis to the farmers making a living in sloping forest lands in the concerned barangay
    b. A barangay extension worker volunteer (BEW) who is well trained and familiar with sustainable sloping agricultural practices and an 'expert' in facilitation and communication skills, to complement the work of the AT in providing the required services by the farmers making a living in sloping forest lands in the concerned barangay. The BEW should be appointed by the BLGU and confirmed by the MLGU, which provide him/her with some incentives
    c. A group of farmer trainers, at least one from each sitio in the barangay with sloping forestlands, who are familiar with and have applied appropriate Soil and Water Conservation Measures (SWCMs) on their own farms and have acquired the skills and knowledge on growing the relevant and suitable crops in their respective sitios
    d. A farmer based learning site in each barangay that demonstrates the technologies and can accommodate hands-on training to upland farmers in the barangay

- The P/MLGU should ensure that appropriate engineering services and support funds are made available to the BLGUs and community contractors in respect of rehab/maintenance of the relevant barangay access roads as referred to above.

The Department of Agriculture

- The DA shall formulate and implement this upland agricultural policy to support/facilitate LGU efforts towards sustainable agricultural development in those upland areas that have been reserved for agriculture in the adopted barangay landuse plans
- It will instruct its ATIs and RFUs with its supporting bureaus to strengthen the LGU extension mechanism outlined above, through fulfilling the research needs of upland BLGUs and its farmers and through training and accreditation of BEWs, key farmers and farmer learning sites.
- The DA will design a nation-wide sustainable agricultural upland development programme to support the implementation by LGUs and upland communities

Other National Agencies

NEDA/HLURB

- The NEDA/HLURB to monitor through its RPEMS the LGUs' adopted resource base policies for protection or utilisation of forestlands and ensure enforcement
- The NEDA/HLURB to train, build capacity and accredit at least one CSO per province that can take care of training the municipality teams that will facilitate the barangay landuse/BDP process, assist with adoption of the plans by all stakeholders and facilitate that sufficient budget is allocated by the various councils to ensure smooth implementation

DENR

- The DENR will devolve all its present functions in respect of protection measures in non-NIPAS forestlands, reserves et al, including the awarding of tenurial instruments, to the M/BLGUs, who from then onwards will be the only responsible legal parties for ensuring the sustainable use and protection of forestlands following the policy recommendations made above
- Relevant sections of the DENR will be transformed into a capacity building institution that will service the P/M/BLGUs and their upland community/community organisation in sustainable resource management as outlined above