FARMERS’ GUIDE ON
SUSTAINABLE UPLAND DEVELOPMENT (SUD) MODEL
Eradicating poverty remains our single biggest challenge, but we are pleased that we are making a significant headway in the uplands of Southern Mindanao, where we have uplifted the socio-economic condition of more than 10,000 farmers, their families, and indigenous peoples through the successful implementation of the seven-year Upland Development Programme (UDP), graciously funded by the European Union.

On behalf of the Department of Agriculture family, I therefore, commend the men and women of the UDP — along with the scores of individuals from the 144 upland barangays and respective local governments, partner-institutions, NGOs, and other concerned government agencies — who painstakingly devoted their time, skills and resources for leaving behind a lasting legacy: empowered communities engaged in various sustainable farming and livelihood projects, and community development activities.

Such transformation is documented in this Sustainable Upland Development (SUD) Documentation Series, consisting of six guidebooks, which we hope will serve as valuable reference or model for community development workers and agencies to follow suit in undertaking similar initiatives in marginal and fragile upland communities in other parts of the country.

Likewise, through the poignant stories in this documentation, we wish to inspire other individuals and institutions to extend assistance to alleviating the plight of our less endowed, poor and hungry countrymen in the uplands — as our mission and work has just begun, and much more remains to be done.

Once again, we express our deepest gratitude to the European Union, for making UDP a successful reality. And similar appreciation goes to the farmers, their families and indigenous peoples in the 144 upland communities, their respective local officials, partner agencies, and NGOs.

Daghang salamat kaninyong tanan!

Mabuhay ang UDP!

ARTHUR C. YAP
Secretary
MESSAGE FROM THE UDP CO-DIRECTORS

“Whatever happens in the uplands has direct consequences to the lowlands, coastal areas and other ecosystems.”

If we open our eyes to the realities in the environment around us, unregulated deforestation opens vast forestlands to unsustainable agriculture. The Philippines, and many countries in Southeast Asia, are familiar with this reality and its devastating effects on land and natural resources, which is now an issue extending beyond local and political boundaries.

The Upland Development Programme in Southern Mindanao (UDP), a special project of the Department of Agriculture, supported by the European Union, thus confirmed the need for massive adoption and application of appropriate land management, soil and water conservation methods and approaches, and farming systems that will enhance existing farms and prevent further encroachment and protect watersheds.

Since 1999, UDP has gone a long way in promoting sustainable upland development. Many sustainable development practices and technologies have been tested since then and have been found to deserve maintenance if not replication in other problematic areas. Highlighting these is the Sustainable Upland Development (SUD) Model, which was developed as a strategy to ensure sustainable management of the upland resource base and improve the living standards of the communities who derive most of their income from upland farming.

To aid in the implementation of the SUD Model, these SUD Series (Books 1 to 5) have been written purposely for farmers, non-government organizations, local government units, national government agencies, and development assistance institutions as their reference guides. The contents of these books are the products of years of experience of the Programme in close coordination with various partners.

May these publications be one of our legacies to further inspire our individual and organizational development partners in the implementation and replication of the SUD Model and to ensure that these environmentally-sound practices are carried through and sustained in the future. Let us take action towards the fulfilment of sustainable agriculture and watershed protection!

DASHIEL P. INDELIBLE
National Co-Director

WIEBE VAN RIJ
European Co-Director
The Upland Development Programme (UDP) of Southern Mindanao is a program jointly funded and implemented by the European Union and the Government of the Philippines through the Department of Agriculture. Over its many years of experience in assisting upland farmers in Southern Mindanao, it has developed, tested and refined what is now known as the Sustainable Upland Development or SUD Model. The Model has produced tangible results in the field, which are recognized by the upland farmers, development practitioners, local and national government. The implementation of the SUD Model is restricted by UDP’s project duration and geographic coverage, where it assists thirty-eight (38) municipalities in six (6) provinces of Southern Mindanao, namely: Compostela Valley, Davao del Sur, Davao Oriental, Saranggani, Davao del Norte and South Cotabato. Thus, although successful, there is still a potentially large area throughout the Philippines that could benefit from the implementation of the SUD Model. The recent initiative of the League of Municipalities of the Philippines (LMP) called “Sagip Bundok, Sagip Buhay” will boost efforts to replicate the SUD Model in all the municipalities throughout the country.

The UDP is already in its final phase of its implementation. As the programme comes to a close, it saw fit to leave a legacy to its partner individuals and organizations that had made the work of Sustainable Upland Development meaningful and worthwhile. Foremost of these partners are the upland barangays, farmer organizations and communities. They are the ultimate beneficiaries of the Programme and are recognized as the frontline cooperators who shared their precious time and effort to plant the seeds of the SUD Model in the land that they till.

This book entitled “A Barangay Local Government and Community Guidebook to the Sustainable Upland Development Model” is the first book in the Sustainable Upland Development Documentation Series of the UDP. This legacy serves, not just as a passive remembrance of the Programme and its SUD Model, but as a dynamic, down-to-earth and practical guide to ensuring that the SUD Model will continue to live and thrive in the upland communities of Mindanao and beyond.

Considering that this guide book is intended for the organized upland farmers, it is designed and written in a language and style that is simple, readable and easy to understand so that adoption, replication and sustainability of the SUD Model will be made possible.

The documented knowledge in this guide book is intended to be shared. And beyond sharing, it should also be enriched by the personal experiences of the upland farmers themselves, whose successes serve as a source of inspiration for upland farmers throughout the country.

For the upland farmer, this book is for you. May you read it, live it, share it and be forever changed by its pages.
ACKNOWLEDGEMENTS

The Upland Development Programme (UDP) in Southern Mindanao would like to thank the following for making the Sustainable Upland Development Model (SUD) and this Book Series possible:

- **The League of Municipalities of the Philippines (LMP)** – the active participation of your local government units in replicating the SUD Model gave us learning, inspiration and encouragement. Your “Sagip Bundok, Sagip Buhay” reassures us that the SUD Model is in safe hands;

- **The participating local government units and communities in Compostela Valley, Davao Oriental, Davao del Sur, Saranggani Province, South Cotabato and Davao del Norte** – in particular the Provincial and Municipal Planning and Development Offices, Provincial and Municipal Agriculturist’s Offices, Provincial and Municipal Environment and Natural Resources Offices, Provincial and Municipal Engineer’s Offices, the Barangay Captains and Barangay Officials. You made sustainable upland development a reality in your communities by investing your time, your resources and yourselves in the entire process. Because of you, these books have a story to tell;

- **The participating National Government Agencies and their Regional and Local Offices** – namely the Department of Agriculture, Department of Environment and Natural Resources, the Housing and Land Use Regulatory Board, the National Economic and Development Authority and the Department of Trade and Industry. We realized early on that the task of making the SUD Model could not be ours alone. Your contributions amidst limited resources enriched the implementation of every scheme;

- **The Technical Service Providers** – who so generously shared all your knowledge; who so humbly learned and embraced the many lessons from the SUD Model; and whose passion for the SUD Model so clearly demonstrated that replicating the SUD Model was not a job but a vocation. You are the custodians of the technology to replicate SUD and the programme is counting on you to make this happen;

- **To the women and men of UDP** – as you leave the programme that became your second home for many years, consider this not an end but a transition. You worked tirelessly and passionately so that one day, you could pass on the torch of sustainable development, and this book series is part of your legacy. To the Technical Operations Group of the UDP Project Management Office who carried this document from start to finish, your journey ends with the printing of this book series, but its words will live on long after;

- **To the Institute for Small Farms and Industries of the Ateneo de Davao University** – our work with you was more than a contractual business partnership. Throughout your thirteen (13) months of technical assistance in the completion of this Book Series, friendships and relationships have been built and nurtured. Most importantly, we are confident that you share with us the passion for sustainable upland development; and
• **And finally, to the upland farmers** – when we taught you how to plan, you inspired us to hope and dream; when we taught you how to till and sow, you kept us focused on the reaping and harvest; when we asked you to take care of your forests, you promised to guard them with your life. We, and the generations after you, thank you for saving our future.

To all of you, our sincere and humble gratitude.
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<td>PNPL</td>
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<td>PRA</td>
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Appendix B. Site Management Agreement entitled “Kasabutan Alang sa Pag Panalipod ug Pag Dumala sa Kalasangan” for Barangay New La Union, Maitum, Sarangani Province

Appendix C. Barangay Resolution entitled “A Resolution Adopting the Barangay Forest Protection Area Map Covering the Portions of Sitio Sufla Lamot, Rabylum, Kiamak, Paraiso Proper, Datal Kulay, and Ulo Muleh with an Area of One Thousand Ninety Two Point Five Hundredths Fourteen (1,094.0514) Hectares (More or Less) In Barangay Paraiso, Alabel, Sarangani Province”.

Appendix D. Barangay Ordinance entitled “Usa Ka Ordinansa nga Nagdeklara sa 952.82 ka Ektaryang Kalasangan isip “Protected Area” sa Barangay New La Union, Maitum, Sarangani Province.”

Appendix E. Memorandum of Agreement entitled “Co-Management Agreement of Declared Forest Protected Areas of Brgy. Dakudao, San Isidro, Davao Del Norte”

Memorandum of Agreement in Barangay Tubaon, Tarragona, Davao Oriental
A. Who are the Target Readers?

**FARMERS LIVING IN SLOPING LANDS.** This guidebook is designed and intended primarily for all those who are categorized as upland farmers and have formed themselves into community organizations. They are those who are living in sloping lands with elevation of more than 100 meters above sea level, including highlands or forest lands.

**BEST SUITED FOR ORGANIZED FARMERS.** The organized farmers groups are the most suitable users of this book, as there are some schemes here which are best implemented as a group. It is, therefore, suggested that the upland farmers, if not yet organized, form themselves into an organization like a cooperative, an association, a loan and savings group, a self-help group or any form of group, so they can take best advantage of the SUD Model. With the recent issuance of Executive Order No. 606 entitled “Pursuing Sustainable Upland Development Anchoring on Food, Wood, Non-wood Security and Economic Productivity and Providing the Mechanisms for its Implementation and for Other Purposes” expounded on the roles and coordinative relationship of the national government and local governments in the sustainable development of the country’s uplands¹, organized farmers could seek support from national and local government offices that are now mandated to pursue sustainable upland development initiatives.

**DESIRE, INTEREST AND WILLINGNESS TO ADOPT NEW SCHEMES AND TECHNOLOGIES.** While this guidebook is best suited for organized upland farmers, individual farmers could still make use of this practical guide, as there are schemes and upland farming technologies which can still be implemented or adopted by an individual farmer. What is important is for the upland farmer to have the desire, interest and willingness to adopt the new schemes and technologies put forth in this guide book.

**OWNERSHIP OR ACCESS TO UPLAND FARMS SUPPORTED BY “TENURIAL INSTRUMENTS”.** To maximize the schemes and technologies discussed here, the upland farmer/s should also own, cultivate or have access to the use of the upland areas. This ownership and access to the use of these upland areas can be supported by different tenurial instruments, such as the following:

a) Certificate of Land Title (CLT) - for the alienable and disposable (A&D) lands
b) Community Based Forest Management Agreement (CBFMA) – for forest occupants

¹ The full text of Executive Order No. 606 is provided in Appendix A.
c) Certificate of Stewardship Contract (CSC) - also for forest occupants  
d) Integrated Social Forestry (ISF) Certificates - also for forest occupants  
e) Certificate of Ancestral Domain Title (CADT) - for the IPs  
f) Certificate of Ancestral Land Title (CALT) - also for the IPs  
g) Individual Tax Certificates - for those who don’t have any of the above

Any of these tenurial instruments is seen as fundamental to the adoption of the SUD Model and its schemes; specifically, the tenurial instruments guarantee that the upland farmer has authorized and continuous access to the land and will be able to pursue proper land care and investment for medium and long term crops that will help preserve the uplands.

It is worth noting that, based on UDP’s 5-year implementation experience, the issuance of CBFMA is burdened by several constraints which hamper the effective implementation of the SUD Model. Conversely, individual tenurial instruments are fast and more effective, and therefore, highly encouraged and preferred.

B. What are its Contents?

This guidebook discusses the six (6) schemes of the SUD Model and the organized/individual farmers’ role/participation in their implementation.

These schemes are briefly described as follows:

1) Land Use Based Barangay Development Planning (LUB-BDP)

This scheme is the lynchpin of the entire Sustainable Upland Development Model. It builds on the current Barangay Development Plan, but brings it one step further by incorporating: 1) genuinely participatory planning processes, where the community is the true author of the Plan, from profiling and situational analysis to development planning and organizational management; and 2) land use planning, whereby the conflict between environmental sustainability and economic development is settled through an effective delineation of areas by their appropriate land uses, which then becomes the basis of all development interventions. In a sense, the scheme allows the stakeholders to chart their own collective destiny and requires them to be more participative in safeguarding their upland resources.

2) Upland Agricultural Extension (UAE)

Upland areas are characterized by very steep slopes and their soils are described as infertile, shallow and highly-erodible, making farming arduous and at worst, an unsustainable activity. The scheme calls for the introduction of the Diversified Farming System (DFS) and fielding of agricultural technicians who have extensive understanding and knowledge on the system as well as commitment to share knowledge. For maximum appreciation of the technology and practice being introduced, the scheme also calls for the farmers’ exposure to model farms, cross-visits, information exchange and access to reading materials and radio
programmes. In time, the farmers develop essential competencies, host learning sites and transfer their knowledge to other upland farmers, in a way that ripple effect can do.

3) **Barangay Forest Protection and Management (BFPM)**

Massive farming altered what used to be an expansive forest cover in the region. Left in its wake are pockets of small to medium-sized patches of natural and second-growth forests. To protect these pockets from further incursion, the scheme recommends incorporating the function of forest protection and management at the barangay level. This entails a solid partnership between the barangay officials and the community, diligence of a barangay forest management committee and presence of dedicated forest guards.

4) **Labor-based Routine Road Maintenance (LBRRM)**

Roads are more than links to the lowland communities. The state and length of available roads also affect the income of upland farmers. This particular scheme emphasizes the value of voluntary and regular maintenance of the road network by people within the barangay. Trained crew, appropriate road technology and proper tools are essential in ensuring that roads to and from upland communities are kept in a serviceable condition.

5) **Rural Financial Services (RFS)**

Distance, perception of high risk and limited market are what stand in between upland farmers and their access to financial services. This scheme is implemented by two Government Financial Institutions (GFIs): the Landbank of the Philippines (LBP) for agri-lending and the Peoples Credit and Finance Corporation (PCFC) for micro-finance service delivery. The GFIs wholesale loans and provide institution-building support to rural banks, cooperatives and micro-finance institutions (MFIs) that are interested to reach out to upland farming households. Potential borrowers are encouraged to save and to use the savings as capital build up. Coaching and marketing support are integral to ensuring that each financial venture will attain a degree of success.

6) **Village Enterprise Development (VED)**

Every farmer can be an entrepreneur. To veer from subsistence farming and engage in a more commercially-rewarding activity is the essence of this scheme. Farmers initially receive key concepts on entrepreneurship and avail of business development services from business development service providers. Products that are produced abundantly in a particularly upland area are then consolidated and offered to an institutional buyer for a possibility of medium-to-long term arrangements. Transparency, sound management practices, adherence to quality and clear delineation of responsibilities
likely sustain and expand such village enterprises. Support for VED is private sector led.

C. How was this Guide Book developed?

This Training Guidebook was developed over a thirteen-month period, and the process was characterized by the following:

a) Participatory Approach – from conception to publication, all stakeholders were consulted in both formal and informal settings, in order to capture their knowledge, experiences and lessons in implementing the SUD Model. Upland farmers and organizations, local government units, non-government organizations, national government agencies, development assistance institutions, and the development workers of the UDP – all of them are authors of this book.

b) Iterative Process – in each of the development phases of this book – Preparatory, Technical Design, Document Preparation, Prototyping, Field Testing, Printing and Packaging – there was a repetitive process of input development, validation through consultation, revision and finalization. This investment in time, effort and resources for this book was made with only one goal in mind: YOU, the reader.

D. How to Use this Guide Book?

The guidebook is written in a language and format that is easy to read and comprehend. Although readers have all the freedom and flexibility to use the book according to their needs and requirements, here are some practical tips that may help one better understand its contents:

PRACTICAL TIP 1: GUIDEBOOK MAY BE READ IN PART OR IN FULL, DEPENDING ON THE EXTENT OF ADOPTION OF THE SUD MODEL. The reader may choose to read this guidebook in part or in full, depending on the extent of adoption of the SUD Model. It maybe possible that for certain upland farmer groups, only certain schemes can be adopted or replicated due to some limitations; thus, the reader of this guidebook may just go directly to the chapter of the concerned scheme/s.

PRACTICAL TIP 2: TAKE A CLOSE LOOK AT THE VISUAL ELEMENTS ALONGSIDE THE TEXT. The guidebook is enriched with pictures, graphical figures, maps, drawings and sample documents that help illustrate the concepts presented. We strongly recommend that the reader refer to these visuals for easier and clearer understanding of the schemes.

PRACTICAL TIP 3: READ SUD SERIES BOOK NO. 4 FOR INFORMATION ON THE ROLE OF THE LGU. Since this guidebook spells out only the role/participation of the organized/individual farmers in the implementation of the different schemes, there may be times when the farmers also need to know certain requirements that are supposed to be provided or performed by the concerned
provincial/municipal/barangay LGU. In such cases, we suggest that they also refer to the SUD Series Book No. 2 for LGUs.

**PRACTICAL TIP 4: READ AND UNDERSTAND THE TECHNICAL TERMS IN ENGLISH.** There are technical terms in this guidebook which have no appropriate Cebuano or Visayan translation. In such cases, we maintain the use of its English term, and take the effort to define or describe it in the local dialect.

**PRACTICAL TIP 5: READ OTHER EXISTING MANUALS OR HANDOUTS REGARDING THE SUD MODEL.** There are portions in this guidebook where the other UDP-produced guidebooks, manuals and hand-outs on specific strategies and technologies are also mentioned. For more detailed information and illustrations of these technologies, it would be good to refer to them whenever these are available. Some of the most helpful guidebooks/manuals/hand-outs are the following:

- a) LGU Facilitators’ Manual on Land Use Planning
- b) Agricultural Land Management in the Uplands: Options for Land Use at the Farm Level
- c) Slope Oriented Treatment Practices (STOP 1-4) For Sustainable Upland Farming and Soil Conservation
- d) SWC Manual
- e) Trainer’s Manual in Agricultural Extension and Land Management
- f) Guidebook on Forest Management Systems
- g) Tree Farming in the Uplands
- h) LBRRM: The Practical Task in Detail
- i) Credit Guidelines for Financial Service Centers
CHAPTER 1:
Land Use-based
Barangay Development Planning

1.1 THE CONVENTIONAL WAY OF DOING THE BARANGAY DEVELOPMENT PLANNING

Before the SUD Model, the Land Use Based Barangay Development Planning (LUB-BDP) was not familiar or popular in many barangays in the country. Many barangay captains formulate the required BDP on their own or with the assistance of their barangay treasurer. Other barangay officials, purok leaders or sectoral groups in the community do not participate in the process. The Barangay Development Council, if at all organized, is not mobilized to perform its mandated function of formulating the BDP.

1.2 BRIEF DESCRIPTION OF THE SCHEME

In the SUD Model, the LUB-BDP is a fundamental requirement prior to any development intervention in the uplands. This first scheme of the SUD Model produces a 5-Year Barangay Development Plan and Annual Investment Plan that encompass the five (5) major development sectors, namely: Economic Sector, Socio-cultural Sector, Infrastructure Sector, Local Government Sector and Environment Sector.

The LUB-BDP is a fundamental requirement prior to any development intervention in the uplands.

1.3 RATIONALE OF THE SCHEME’S INCLUSION IN THE SUD MODEL

Without the LUB-BDP, there is no basis for the interventions related to sustainable upland development.

The overall flow of the SUD Model is set in place mainly by the LUB-BDP scheme. Without it, there is no basis for beginning the interventions related to sustainable upland development. Since the planning itself is preceded by land surveys and mapping processes, the resulting Plan becomes responsive to current challenges related to land use, forest protection and rehabilitation.
Because the process of formulating the plan is participatory, the corresponding sectoral plans that are produced consist of community initiatives and local equity identified by the people themselves as essential to the implementation of the said plans. Upland development actions are then planned and owned by the community, a principle that is necessary for sustainability.

1.4 OBJECTIVES OF THE SCHEME

In the over-all, the LUB-BDP Scheme hopes to achieve the following objectives:

a) Enhance the skills of the Municipal LUB-BDP Team in facilitating the Land Use-Based Barangay Development Planning process;

b) Install support systems such as the Geographic Information System (GIS) and Management Information System (MIS) that will aid the Municipal LGUs in the conduct and monitoring/evaluation of the LUB-BDP;

c) Enhance the skills and orientation of the Barangay Officials together with the Barangay Development Council in the participatory process of formulating a LUB-BDP;

d) Ensure the inclusion of a Land Use Plan in the BDP;

e) Enhance the BDC’s negotiation skills to access technical and financial support from line agencies, the MLGU, PLGU and other funding institutions for the implementation of the projects identified in the LUB-BDP.

1.5 BENEFITS FROM IMPLEMENTING THE SCHEME

There are several benefits derived by the barangay, the upland barangay association (UBAs), the upland community organizations (UCOs) and the individual farmers from the implementation of the LUB-BDP scheme. However, since this reference book is focused on the farmers, it is the corresponding benefits to them that are presented here. Basically, there are two (2) types of benefits that the organized farmers can gain from the LUB-BDP:

a) Psychological and Intangible Benefits

- The UBAs and UCOs will learn how to formulate a BDP based on a thorough analysis of their current situation (e.g. economic, agricultural, socio-cultural, infrastructure, land use and environmental)

- The knowledge and skills that they acquire in the process of doing the perimeter survey, the PRA tools and writeshop are capabilities that they can use in future planning processes

- Given that the BDP was formulated in a highly participatory manner, it also orients the UBAs and the UCOs on the value of broad-based participation in analyzing community problems/issues, in identifying action areas and in prioritizing these in a 5-year timeframe.
• The presence of the sectoral representatives from the UCOs, UBAs, women, cooperatives, etc. during the PRA and planning writeshop ensures inclusion of their felt needs and develops in them an appreciation for the process.

b) Material and Tangible Benefits

• The final written output of the scheme is a packaged LUB-BDP to which the UBAs/UCOs can claim ownership.

• Although the programs and projects listed in the plan remain as anticipatory benefits until they are implemented, they will eventually redound to tangible benefits for the community once these are realized.

1.6 QUALIFYING CRITERIA FOR IMPLEMENTATION

a) Geographic Criteria

There are no geographic requirements, i.e. the scheme can be implemented in any upland area as well as lowland area.

b) Community Criteria

• Literacy Level. Even a community with limited literacy can undergo the process. However, at least two (2) persons within the barangay should be capable of documenting the workshop outputs (e.g., barangay secretary, SK leader).

• Willingness and Openness of the Community. In terms of attitude, both Farmer Organizations and the rest of the community should be willing to learn and open to participatory planning processes.

c) Legal, Institutional and other Documentary Criteria

There are no documentary or legal restrictions. Any documents, resolutions, maps and committees will be produced/created in the process of implementing the LUB-BDP scheme.

1.7 THE SCHEME: STEP-BY-STEP

There is a series of interconnected activities that must be performed in the entire LUB-BDP Process before a final 5-Year Barangay Development Plan (BDP) and Annual Investment Plan (AIP) are generated. Some of these activities are done at the municipal and barangay LGU level.

Since this is a guidebook for organized farmers, those activities performed by the provincial/municipal/barangay LGU are not thoroughly described here; what are presented are only the title of the step and the expected output/s. Only those activities
with Farmer Organization’s roles and participation are highlighted and presented in detail in the following presentation:

**STEP 1: ORIENTATION TO BARANGAY COUNCILS (BC), SANGGUNIANG BAYAN (SB) AND ASSOCIATION OF BARANGAY CAPTAINS (ABC)**

**Expected Outputs**

- Municipal LGU’s expressed appreciation for SUD & LUB-BDP;
- Municipal LGU’s realization of the necessity of forming a Municipal LUB-BDP Team

**STEP 2: FORMATION OF THE MUNICIPAL LUB-BDP TEAM**

**Expected Outputs**

Municipal LGU’S formation of a Municipal LUB-BDP Team thru an Executive Order, specifying the team members and the team leader, roles and functions of the team. The team would ideally consist of the following sub-teams:

- Facilitators’ Team – to handle the training component of the LUB-BDP process
- GIS/GPS Team – to handle the production of maps
- Data Controllers/Encoders Team – to handle documentation of the entire process, up to the packaging of the final plan

**STEP 3: FORMATION OF TECHNICAL ADVISORY GROUP**

**Expected Outputs**

- Creation of a Technical Advisory Group (TAG) that would provide technical assistance to the Municipal LUB-BDP Team and the community in undertaking the LUB-BDP process
STEP 4: BARANGAY ORIENTATION AND ACTION PLANNING

Expected Outputs

- Barangay officials’ and residents’ expressed willingness to participate in the LUB-BDP process
- Action Plan on how to proceed with the LUB-BDP Process

Participants in the Step and their Respective Role/s

Lead Participant

- Municipal LUB-BDP Team - leads in the facilitation of the barangay orientation and action planning

Other Participants

- Barangay Captain, Barangay Kagawads, Purok/Sitio Leaders, UBA/FO/PO/UCO officers/members and other barangay constituents

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

- Attend the barangay orientation
- Express their willingness to participate in the LUB-BDP process

STEP 5: BARANGAY LGU CONSULTATION ON BARANGAY BOUNDARIES

Expected Outputs

Agreement on barangay territorial boundaries to be used for the LUB-BDP Process
Participants in the Step and their Respective Role/s

**Lead Participant**

- Sangguniang Bayan Representative and Barangay Captain – to handle all technical and administrative arrangements for conduct of the consultations

**Other Participants**

- Purok Leaders and UBA/FO/PO/UCO officers/members and other barangay constituents

**Roles/Participation of UBA/FO/PO/UCO and Individual Farmers**

- Provide inputs as to the territorial boundaries of the barangay
- Serve as guide during the actual survey of territorial boundaries

**STEP 6: ACTUAL PERIMETER SURVEY**

**Expected Outputs**

Completion of Perimeter Survey, using the barangay boundaries agreed upon during the barangay consultations (Step 5)

Participants in the Step and their Respective Role/s

**Lead Participant**

- Barangay LGU
- Municipal LUB-BDP Team (GIS-GPS)

**Other Participants**

- Representatives from adjacent barangays to provide input regarding territorial boundary
- Barangay Kagawad chairs of the following committees: Infrastructure, Economic, Agriculture or Environment
- Purok Leaders
Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

Provide inputs during the actual perimeter survey

STEP 7: PROCESSING AND PRODUCTION OF BARANGAY PERIMETER MAP

Expected Outputs

Municipal LUB-BDP Team’s completion of a Barangay Perimeter Map – that would:

- Delineate the planning unit for the land use mapping, using the natural landmarks of the barangay boundary as determined by the communities
- Situate the location of the barangay in the NAMRIA topo map

See Figure 1.1 for a sample of a Barangay Perimeter Map.
Figure 1.1 Sample Barangay Perimeter Map
STEP 8: BARANGAY CENSUS/SECONDARY DATA GATHERING

Expected Outputs

MPDC’s generation of secondary data as inputs to the LUB-BDP, such as:

- History of the barangay
- Demography
- Physical Characteristics and Natural Features (e.g. existing land use map)
- Sectoral characteristics (Economic, Socio-Cultural, Infrastructure, Local Government and Environment)

STEP 9: BARANGAY PROFILING: PARTICIPATORY RAPID APPRAISAL (PRA) WORKSHOP AND THEMATIC MAPPING

Expected Outputs

- Completion of PRA Process
- Validation of Secondary Data gathered (from Step 8)
- Production of required Venn Diagram and Thematic Maps (see Figures 1.2 to 1.11 for a sample of the Venn Diagram and Thematic Maps)

Participants in the Step and their Respective Role/s

Lead Participant

- Municipal LUB-BDP Team (Facilitators)

Other Participants

- Barangay Development Council
- Documentors (both barangay secretary and one of the documentors of the Municipal LUB-BDP Team)
- Purok leaders
- Barangay Constituents

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers
• Participate in the PRA process
• Actively participate in the preparation of the Venn Diagram and Thematic Maps
• Provide inputs in the analysis of the maps produced as well as provide suggestions/recommendations on the problems and issues that were identified
Figure 1.2 Sample Venn Diagram
Figure 1.3 Sample Water Bodies and Drainage Map
Figure 1.4 Sample Road Network Map
Figure 1.5 Sample Infrastructure and Settlements Map
Figure 1.6 Sample Land Cover/Vegetative Cover Map
Figure 1.7 Sample Protection Map
Figure 1.8 Sample Tenure Map
Figure 1.9 Sample Cultural Heritage Map
Figure 1.10 Sample Erosion Map
Figure 1.11 Sample Flood Hazard Map
Expected Outputs

From the outputs generated from Steps 5 to 9, the Municipal LUB-BDP Team should come up with a Situational Analysis along the following levels:

**LAND USE**

- Land Use Issues and Conflict Map – which is produced after doing a Map Overlay Analysis of the thematic maps produced in Step 9. See Figure 1.12.
- Proposed Land Use Map – which embodies the Land Use Plan of the barangay. See Figure 1.13.

**SECTORAL**

- Sectoral Analysis – wherein the community participates in identifying the issues and problems per sector
- Cross-sectoral Analysis – taking off from the sectoral analysis, the relationships (i.e. cause and effect) between and among the problems and issues per sector are determined, using the tools of Problem Tree, Strengths-Weaknesses-Opportunities-Threats (SWOT) and Fishbone Analyses

Participants in the Step and their Respective Role/s

**Lead Participant**

- Municipal LUB-BDP Team

**Other Participants**

- Barangay Development Council
- Documentors (both barangay secretary and one of the documentors of the Municipal LUB-BDP Team)
- Purok leaders
- Barangay Constituents

**Roles/Participation of UBA/FO/PO/UCO and Individual Farmers**

Participate in the analysis of both the geographic/land use and sectoral data
Figure 1.12 Sample Land Issues and Conflicts Map
Figure 1.13 Sample Proposed Land Use Map
STEP 11: BARANGAY PLANNING (5-YEAR LAND USE BASED BARANGAY DEVELOPMENT PLAN, ANNUAL INVESTMENT PLAN, ORGANIZATIONAL STRUCTURE AND MONITORING AND EVALUATION)

Expected Outputs

At the end of this step, the following components of the LUB-BDP should be completed:

- 5-Year Land Use Plan – that delineates protection and production forestland, agricultural land, settlement areas and other special uses
- Development Framework – to include the barangay’s Vision, Mission, Goals, 5-year Thrust and Key Result Areas
- 5-Year Sectoral Development Plan – featuring the goals, objectives, key result areas, objectively verifiable indicators, projects, activities, targets, resource requirements and policy recommendations for all five (5) sectors: Economic, Socio-cultural, Infrastructure, Local Government and Environment
- Annual Investment Plan – presented as a matrix of projects and activities, targets, resources needed and budget requirement
- Local Administration – illustrating the BLGU structure that will operationalize the plan
- Monitoring and Evaluation Plan – detailing the M & E activities to be undertaken, the indicators to be monitored and evaluated, and the individuals and persons who will conduct the M & E

A sample of the different plan components are shown in Figures 1.14 to 1.18.

Participants in the Step and their Respective Role/s

Lead Participant

- Municipal LUB-BDP Team

Other Participants

- Barangay Development Council
- Documentors (both barangay secretary and one of the documentors of the Municipal LUB-BDP Team)
- Purok leaders
- Barangay Constituents

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

Participate in the preparation of the different components of the Plan
### Figure 1.14 Sample Economic Sector Plan

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
<th>Amount Needed</th>
<th>To Request from</th>
<th>Date of Implementation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Livestock Dispersal</td>
<td>Distribution of livestock (10 carabaos &amp; 10 cows) to qualified residents of Brgy. Naga</td>
<td>P 500,000</td>
<td>UDP MLGU (M AgrO) PLGU (P AgrO) DARFU XI</td>
<td>P 300,000 100,000 50,000 50,000</td>
<td>3 Q 2004 This will succeed if the concerned committees will give this their proper attention</td>
</tr>
<tr>
<td>2. Purchase of a Tractor</td>
<td>Purchase of 1 unit of tractor (Kubota) by the barangay for used/rental by residents</td>
<td>P 4 M</td>
<td>DARFU XI MLGU (M AgrO) PLGU (P AgrO) NAFFARCO</td>
<td>P 900,000 1.5 M 1.5 M 100,000</td>
<td>1 Q 2008 This will hasten the preparation of farm lands for planting by farmers</td>
</tr>
<tr>
<td>3. Distribution of Fruit Seedlings</td>
<td>Distribution of seedlings of fruits (durian, mango, rambutan, mango-teen, lanzones) at 10 seedlings per farmer</td>
<td>390,000</td>
<td>UDP MLGU DARFU-BPI</td>
<td>P 300,000 20,000 20,000 50,000</td>
<td>3 Q 2004 This will help in the greening of the barangay as well as provide farmers with additional income</td>
</tr>
<tr>
<td>4. Agricultural Training</td>
<td>Purchase of upgraded technology for proper farming of hillsides, that also help in their preservation</td>
<td>100,000</td>
<td>UDP MLGU DA-RFU XI</td>
<td>P 50,000 30,000 20,000</td>
<td>3 Q 2004 This will increase the know-how of farmers</td>
</tr>
<tr>
<td>5. Banana Upgrading</td>
<td>Purchase of upgraded banana planting materials for local propagation</td>
<td>300,000</td>
<td>UDP MLGU (M AgrO) RCPC BPI</td>
<td>P 200,000 50,000 25,000 25,000</td>
<td>1 Q 2005 This will provide additional income to farmers</td>
</tr>
<tr>
<td>6. Contour Farming with Hedgerow</td>
<td>Provision of modern technology for proper farming of hillsides, that also help in their preservation</td>
<td>100,000</td>
<td>UDP MLGU</td>
<td>P 60,000 40,000</td>
<td>3 Q 2004 This will help stop the erosion of soil from hillsides and other steep areas</td>
</tr>
<tr>
<td>7. Financing for Corn Production</td>
<td>Provision of capital seedlings, fertilizer, pesticide, etc. and organizing of participants</td>
<td>100,000</td>
<td>UDP MLGU PLGU</td>
<td>P 50,000 25,000 25,000</td>
<td>4 Q 2004 Farmers will now have a source of capital for farming</td>
</tr>
<tr>
<td>8. Distribution of Falcata Seedlings</td>
<td>Planting of falcate to help preserve the soil on hillsides, and also to provide additional income</td>
<td>100,000</td>
<td>UDP MLGU DENR</td>
<td>P 50,000 10,000 40,000</td>
<td>4 Q 2004 This will help strengthening the hillsides (from erosion), and contribute to family income</td>
</tr>
</tbody>
</table>
**Figure 1.15 Sample Infrastructure Sector Plan**

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Amount Needed</th>
<th>To Request from</th>
<th>Date of Implementation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Electrification of the Whole Barangay</td>
<td>P 1 M</td>
<td>MLGU CDF</td>
<td>3 Q 2004 until Jan. 205</td>
<td>Electricity will greatly benefit the people</td>
</tr>
<tr>
<td>2. Completion of Barangay Hall</td>
<td>250,000</td>
<td>BLGU MLGU PLGU SP-RDF CDF</td>
<td>4 Q 2004 until Jan. 2005</td>
<td>Barangay folks should be able to use this already</td>
</tr>
<tr>
<td>3. Construction of GKK Building</td>
<td>150,000</td>
<td>Parishioners Religious Parish Diocese of Tagum Priest</td>
<td>1 Q 2005 until Jan. 2006</td>
<td>All GKK members in the barangay will work on this</td>
</tr>
<tr>
<td>4. Post-Harvest Facilities for the Barangay</td>
<td>250,000</td>
<td>PLGU CDF</td>
<td>2 Q 2005 up to Dec. 2005</td>
<td>There is need for constant follow-up on committee tasked with this</td>
</tr>
<tr>
<td>5. Construction of Health Center</td>
<td>250,000</td>
<td>BLGU MLGU PLGU</td>
<td>4 Q 2004 till May 2005</td>
<td>Provide the people with a facility they can use</td>
</tr>
<tr>
<td>6. Completion of Barangay Mini-Gym</td>
<td>250,000</td>
<td>BLGU MLGU CDF</td>
<td>1 Q 2005</td>
<td>For residents to have seats to sit on</td>
</tr>
<tr>
<td>7. Construction of More School Bldg. at Centro</td>
<td>700,000</td>
<td>DepEd MLGU PLGU CDF</td>
<td>4 Q 2005</td>
<td>To accommodate more children</td>
</tr>
<tr>
<td>8. Purchase of a Mini-Dump Truck</td>
<td>700,000</td>
<td>Nat'l Fund (Office of the Pres.) CDF PLGU RDF</td>
<td>2 Q 2005 until Jan. 2006</td>
<td>This is needed for barangay road maintenance and other services</td>
</tr>
<tr>
<td>9. Construction of Watering Shed (Centro)</td>
<td>75,000</td>
<td>BLGU MLGU RDF PLGU</td>
<td>3 Q 2005</td>
<td>Provide a waiting place for barangay residents</td>
</tr>
<tr>
<td>10. Construction of Farmers-MarketRoad (Centro – Naga II)</td>
<td>1.5 M</td>
<td>MLGU CDF PLGU UDP</td>
<td>4 Q 2004 until May 2005</td>
<td>This is badly needed by farmers in the area</td>
</tr>
</tbody>
</table>
**Figure 1.16 Sample Socio-Cultural Sector Plan**

**Objective:** Enable the residents of Barangay Katipunan to attain good active and long lives

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
<th>Location</th>
<th>Beneficiaries</th>
<th>Responsible</th>
<th>May Help</th>
<th>When</th>
<th>Budget Requested</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Brgy. Pharmacy (blg. &amp; medicine)</td>
<td>The Brgy. will have its can stocks of medicine which are commonly used by its residents</td>
<td>Brgy. proper</td>
<td>Barangay residents</td>
<td>Midwife &amp; BNS &amp; BHW</td>
<td>MLGU/MHO/PLGU/DOH/CDF</td>
<td>3rd qtr. 2007</td>
<td>100,000</td>
<td>BLGU - P 5,000, MLGU - P 15,000, DOH - P 30,000, CDF - P 50,000</td>
</tr>
<tr>
<td>2. Construction of a Barangay Feeding Center</td>
<td>The size dimension of the center is 10 ft. x 12 ft.</td>
<td>Brgy. proper</td>
<td>Barangay residents</td>
<td>BNS &amp; BHW</td>
<td>MLGU/MHO/MSWDO/PLGU</td>
<td>4th qtr. 2005</td>
<td>50,000</td>
<td>BLGU - P 5,000, MLGU - P 20,000, PLGU - P 25,000</td>
</tr>
<tr>
<td>3. Shelter Improvement Assistance</td>
<td>Funds will be allotted for improving the housing of the indigenous people</td>
<td>Puroks</td>
<td>Identified indigenous people</td>
<td>BDC &amp; BNS &amp; BHW &amp; DSWD</td>
<td>MLGU/MSWDO/PLGU/CDF</td>
<td>3rd qtr. 2006</td>
<td>100,000</td>
<td>BLGU - P 10,000, MLGU - P 20,000, PLGU - P 50,000, DSWD - P 20,000</td>
</tr>
<tr>
<td>4. Implementation of the Ordinance regarding Environmental Sanitation</td>
<td>DOHs sanitation standards – which are reflected in the ordinance - will be followed</td>
<td>Whole barangay</td>
<td>Barangay residents</td>
<td>Brgy. Residents &amp; BDC &amp; Midwife &amp; BNS &amp; MENRO</td>
<td>MLGU</td>
<td>1st qtr. 2005</td>
<td>2,500</td>
<td>BLGU - P 2,500</td>
</tr>
<tr>
<td>5. Continuation of the program on Responsible Parenthood</td>
<td>Continuous information/teaching of parents on proper ways to care for their children</td>
<td>Whole barangay</td>
<td>Barangay residents</td>
<td>BDC (health committee) &amp; Midwife &amp; BHW</td>
<td>MLGU/MHO</td>
<td>4th qtr. 2005</td>
<td>3,500</td>
<td>BLGU - P 3,500</td>
</tr>
<tr>
<td>6. Construction of fence and construction of cabinet for the health center</td>
<td>Provide for a secure place to keep the implements equipment and the Health Center</td>
<td>Barangay proper</td>
<td>Barangay residents</td>
<td>BDC &amp; BHW &amp; Midwife</td>
<td>MLGU/MHO/PLGU</td>
<td>1st qtr. 2005</td>
<td>30,000</td>
<td>BLGU - P 5,000, MLGU/MHO - P 5,000, CDF - P 20,000</td>
</tr>
</tbody>
</table>

What is meant by each acronym used above:  
BDC – Barangay Development Council; BHW – Barangay Health Worker;  
BLGU – Barangy Local Government Unit; IP – Indigenous People (mga Lumad);  
MENRO – Municipal Environmental & Natural Resource Officer; MHO – Municipal Health Officer; MLGU – Municipal Local Government Unit; MSWDO – Municipal Social Welfare & Dev't. Officer; PLGU – Provincial Local Government Unit
### Figure 1.17 Sample Local Governance/Barangay Administration Plan

**Objective:** Put in place a democratic mode of barangay governance with active participation by the people of Barangay Katipunan

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Location</th>
<th>Beneficiaries</th>
<th>Responsible</th>
<th>May Assist</th>
<th>When</th>
<th>Budget Estimated</th>
<th>To Request from</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Clarification of Barangay Boundaries (w/ Tandik, Tulas, &amp; New Bataan)</td>
<td>Barangay Katipunan</td>
<td>Barangay and Municipality</td>
<td>BLGU</td>
<td>Barangay Residents MLGU DENR UDP</td>
<td>1st Qtr 2005</td>
<td>P50,000</td>
<td>DENR- P30,000 UDP- P20,000</td>
<td></td>
</tr>
<tr>
<td>2. Application for Community Based Forest Management (CBFM)</td>
<td>Barangay Katipunan</td>
<td>Barangay People</td>
<td>BLGU</td>
<td>Barangay Residents DENR UDP</td>
<td>1st Qtr 2006</td>
<td>P50,000</td>
<td>DENR- P50,000</td>
<td></td>
</tr>
<tr>
<td>3. Organization Of the various sectors</td>
<td>Barangay Katipunan</td>
<td>Members of the Different Organized Sectors</td>
<td>BLGU</td>
<td>MLGU</td>
<td>4th Qtr 2005</td>
<td>P10,000</td>
<td>DA-P10,000</td>
<td></td>
</tr>
<tr>
<td>4. Purchases of 1 unit computer with printer, scanner and supplies</td>
<td>Barangay Katipunan (Centro)</td>
<td>Barangay People</td>
<td>BLGU</td>
<td>MLGU</td>
<td>1st Qtr 2005</td>
<td>P60,000</td>
<td>CDF- P60,000</td>
<td></td>
</tr>
<tr>
<td>5. Barangay Hall Renovation</td>
<td>Barangay Katipunan (Centro)</td>
<td>Barangay People</td>
<td>BLGU</td>
<td>MLGU</td>
<td>1st Qtr 2006</td>
<td>P50,000</td>
<td>MLGU- P20,000</td>
<td></td>
</tr>
<tr>
<td>6. SK Building Construction</td>
<td>Centro, across the Health Center</td>
<td>Youths in the Barangay</td>
<td>SK Chairman</td>
<td>MLGU</td>
<td>3rd Qtr 2006</td>
<td>P300,000</td>
<td>PLGU/RDF – P300,000</td>
<td></td>
</tr>
<tr>
<td>7. Library &amp; Reading Center Construction</td>
<td>Barangay Katipunan (Centro)</td>
<td>Barangay People</td>
<td>BLGU</td>
<td>MLGU</td>
<td>1st Qtr 2005 up to 2009</td>
<td>P100,000</td>
<td>National Govt and/or Private Agencies – P100,000</td>
<td></td>
</tr>
</tbody>
</table>

What each acronym used above means: BLGU=Barangay Local Government Unit; CDF=Countryside Development Fund (Sa Congressperson); DENR=Department of Environment & Natural Resources’ MLGU=Municipal Local Government Unit; PLGU=Provincial Local Government Unit; UDP-Upland Development Programme
Figure 1.18 Sample Land Use/Environmental Restoration, Rehabilitation and Protection Sector Plan

**Objective:** Develop areas with tourism potentials in the barangay, and protect its environment

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
<th>Location</th>
<th>Beneficiaries</th>
<th>Responsible</th>
<th>May Assist</th>
<th>When</th>
<th>Budget (Estimated)</th>
<th>To Request from</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Planting of more trees on banks rivers and creeks</td>
<td>Riparian zones (20-40 m river/creek embankments) will be planted with trees; an &quot;adopt a river&quot; scheme for Agusan/Tandik Rivers will be studied</td>
<td>Sitios/Puroks with rivers and creeks</td>
<td>Barangay Residents</td>
<td>UDp MLGU DENR</td>
<td>1qtr 2005</td>
<td>P80,000</td>
<td>BLGU-P5,000 MLGU-P5,000 PLGU-P10,000 CDF-P30,000 DENR-P30,000</td>
<td>This will assure the people of abundant water supply and help prevent soil erosion</td>
<td></td>
</tr>
<tr>
<td>2. Development of ecotourism (caves &amp; falls)</td>
<td>Resting huts for ecotourists and visitors will be constructed near potential ecotourism sites and other beautiful places in the barangay</td>
<td>Sitios New Negros and Luzimin</td>
<td>Brgy Residents</td>
<td>Brgy Council Purok Leaders</td>
<td>2nd Qtr 2006</td>
<td>P200,000</td>
<td>BLGU-P5,000 MLGU-P5,000 PLGU-P20,000 Dept of Tourism – 170,000</td>
<td>These will provide the barangay with additional income</td>
<td></td>
</tr>
<tr>
<td>3. Banning of cutting and burning of trees around springs and protected areas</td>
<td>Local forest guards will watch the protected areas and confiscate illegally-cut trees</td>
<td>Known and possible exit point for illegally cut trees</td>
<td>Whole barangay</td>
<td>Brgy Council Purok Leaders Brgy Residents</td>
<td>4th Qtr 2004</td>
<td>P15,000 (P3,000 matag tuig)</td>
<td>BLGU-P5,000 MLGU-P5,000 PLGU-P5,000</td>
<td>A Barangay Committee to Protect the Forest will be set up</td>
<td></td>
</tr>
<tr>
<td>4. Examination of samples of Agusan River to see if it is polluted, as alleged and what polluted it</td>
<td>The actual status of the river will be ascertained (so that the adopts river scheme may be implemented)</td>
<td>Barangay Proper (Centro)</td>
<td>Whole Barangay</td>
<td>Brgy. Council Ourok Leaders and Members</td>
<td>1st Qtr 2005</td>
<td>P5,000</td>
<td>BLGU-P2,000 UDP-P3,000</td>
<td>The examination of water samples shall be done by an independent Davao/Tagum Laboratory</td>
<td></td>
</tr>
</tbody>
</table>

What each acronym used above means: BLGU=Barangay Local Government Unit; CDF=Countryside Development Fund (Sa Congressperson); DENR=Department of Environment & Natural Resources’ MLGU=Municipal Local Government Unit; PLGU=Provincial Local Government Unit; UDP=Upland Development Programme
STEP 12: GENERAL ASSEMBLY/PUBLIC HEARING: VALIDATION AND APPROVAL OF BARANGAY ORDINANCE

Expected Outputs

- The draft LUB-BDP is presented, validated and approved by the Barangay Assembly
- Ordinances from the Barangay Council on the adoption of the LUB-BDP and accompanying annual evaluation of the implementation of the same shall have been produced.

Participants in the Step and their Respective Role/s

Lead Participant

- Barangay Captain – take the lead in presenting the draft of the LUB-BDP and in ensuring the preparation of the ordinances

Other Participants

- Barangay Kagawads – take turns in presenting the different parts of the LUB-BDP.
- Municipal LUB-BDP Team – assists in explaining the process of how the LUB-BDP was produced.
- Municipal LUB-BDP Team (Documentors) – captures comments necessary for the finalization of the LUB-BDP
- Purok leaders
- Other barangay constituents

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

During the Barangay Assembly, the community residents who participated in the LUB-BDP process should work with the Municipal LUB-BDP Team in presenting and defending the Plan.
STEP 13: DIGITIZATION OF THEMATIC MAPS

Expected Outputs

Digitized copies of the Thematic Maps (as shown in Figures 1.1 and 1.3 to 1.13) by the Municipal LUB-BDP Team (GIS-GPS).

STEP 14: LUB-BDP/AIP MIS DATA ENCODING

Expected Outputs

Computer encoded textual information generated from barangay census/secondary data gathering, barangay profiling, situational analysis and barangay planning activities, using the word processing software regularly used by the Municipal LGU, e.g. Microsoft Word.

STEP 15: WRITESHOP ON LUB-BDP

Expected Outputs

Properly formatted LUB-BDP, integrating the encoded information from Steps 13 and 14.

STEP 16: CROSS-SECTORAL TECHNICAL VALIDATION

Expected Outputs

Inputs from Municipal Heads of Offices and Line Agencies incorporated into the LUB-BDP.

STEP 17: PRESENTATION TO THE MUNICIPAL DEVELOPMENT COUNCIL (MDC) AND SB AND FORMULATION OF RESOLUTION APPROVING THE LUB-BDP
Expected Outputs

- MDC Resolution adopting the LUB-BDP and endorsing the same to the SB
- SB resolution concurring and approving the LUB-BDP

**STEP 18: INTEGRATION TO THE MUNICIPAL COMPREHENSIVE LAND USE PLAN, MUNICIPAL COMPREHENSIVE DEVELOPMENT PLAN AND MUNICIPAL ANNUAL INVESTMENT PLAN**

Expected Outputs

Incorporation of the LUB-BDP in the Municipal Comprehensive Development Plan, Municipal Land Use Plan and Municipal Annual Investment Plan

**STEP 19: IMPLEMENTATION, MONITORING AND EVALUATION OF THE LUB-BDP**

Expected Outputs

Realization of the LUB-BDP, with the corresponding M&E measures.

Participants in the Step and their Respective Role/s

**Lead Participant**

- BLGU – takes the lead in overseeing the implementation of the development interventions embodied in the LUB-BDP, as well as all relevant legislation

**Other Participants**

- Municipal LUB-BDP Team – handles the training of the M&E Team
- Purok Leaders and Barangay Constituents – to compose the M&E Team to handle monitoring and evaluation of the LUB-BDP

**Roles/Participation of UBA/FO/PO/UCO and Individual Farmers**

- Attend/participate in the M & E training
- Conduct the actual M&E activities at the barangay level.
2.1 THE CONVENTIONAL WAY OF PROVIDING THE UPLAND AGRICULTURAL EXTENSION

In the past, the delivery of agricultural extension services to communities was done mainly through the services of the Agricultural Technician (AT) from the Municipal Agricultural Offices of the Local Government Units (MAO-LGU). The presence of an AT in some areas emanates from their mandates to implement specific program assistance. The frequency of the service delivery, however, varies. In some areas, the AT would only visit on a per request basis. Hence, often times, the farmers are generally left on their own to fend for themselves.

2.2 BRIEF DESCRIPTION OF THE SCHEME

Since most of the upland communities rely heavily on upland farming and forest products gathering for their daily sustenance, any assistance or interventions should be primarily directed towards the development of sustainable upland farming practices. These practices are designed to protect the remaining upland resources of the communities while at the same time provide for the necessary economic benefits to its farming households.

As such, the core competence of the Upland Agricultural Extension Scheme is in pursuing the sustainable agricultural development of upland communities through the promotion of diversified farming systems.

The core competence of the Upland Agricultural Extension Service is in pursuing the sustainable agricultural development of upland communities through the promotion of diversified farming systems.
2.3 RATIONALE OF THE SCHEME’S INCLUSION IN THE SUD MODEL

Crucial to the successful transfer of technology on DFS is that farmers have access to quality extension services on how to establish a diversified farm. Extensive capacity building, training and exposure, of Agricultural Technicians, Barangay Extension Workers and Farmers Training Groups, are therefore a necessary condition. Establishment of learning sites/model farms is another important activity under this scheme, and provision of seedlings as incentives to farmers to adopt, particularly soil and water conservation technologies, is also essential.

Farmer cross-visits have proven 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 the scheme. In addition, awareness campaigns for LGU officials and upland communities on the need for sustainable farming are also necessary.

2.4 OBJECTIVES OF THE SCHEME

The Upland Agricultural Extension Scheme hopes to achieve the following objectives:

a) To introduce the proven process of the Upland Agricultural Extension Scheme – its processes, mechanisms and structures;

b) To introduce diversified farming systems (DFS) to upland farmers for them to increase productivity and hence, reduce the need to open up more lands, particularly in forest areas.

c) The ultimate aim is that all steep slopes presently farmed with short-term crops like corn, will ultimately be planted with fruit and forest trees.

2.5 BENEFITS FROM IMPLEMENTING THE SCHEME

The upland agricultural extension scheme promises to render the following changes in the upland community:

- Gradual switch from mono-cropping to diversified farming system of short-term and long-term crops, thereby increasing farmer's income and productivity;
- Wider option to engage in other sustainable livelihood activities such as poultry and livestock raising, fishponds, handicrafts;
- Heighten confidence in venturing to other activities;
- Stronger bargaining power due to collecting, processing and marketing of produce; and
Access support from network partners.

2.6 QUALIFYING CRITERIA FOR IMPLEMENTATION OF THE SCHEME

a) Geographic Criteria

- **Farm Elevation.** To qualify under this scheme, the potential area must be sloping, and located more than 100 meters above sea level.

- **Slope.** The area should be dominated by slopes more than 18%. Farms that put in SWCM; are not cultivating; or have planted tree crops in slopes not more than 45%; and farms not within the areas declared as conservation or protected zones, could also qualify.

b) Community Criteria

The population is a mixture of IPs and other tribal groups

c) Legal, Institutional and other Documentary Criteria

Although the scheme could be implemented in any upland area as described above, the following conditions would optimize and/or facilitate the success of the scheme:

- **Depressed communities.** While the land use study provides information, it is also best to consider the areas that are officially categorized as depressed, belonging to municipalities classified as 4th to 6th classes.

- **No Mining Activities.** There should be no mining activities in the area.

- **Stable peace and order condition.** This is to guarantee that extension workers will be safe and secure in these areas.

- **Deployment of one (1) Agricultural Technician.** The municipal LGU should be able to assign one (1) properly equipped and trained Agricultural Technician (AT) for every barangay where the SUD Model will be introduced. In addition, the BLGU is expected to appoint a Barangay Extension Worker (BEW), who should also be an outstanding farmer, to work hand in hand with the AT.

- **Repair of critical access roads.** Lastly, either the barangay or municipal LGU should consider opening or repairing critical roads that are access or entry points for sustainable agricultural development.
2.7 THE SCHEME: STEP-BY-STEP

STEP 1: APPOINTMENT AND DEPLOYMENT OF AN AGRICULTURAL TECHNOLOGIST (AT) BY THE MAYOR

Expected Outputs

- Agricultural Technician (AT) designated and deployed by the Municipal Mayor to a particular barangay/s.

STEP 2: TRAINING OF AGRICULTURAL TECHNICIAN (AT) ON EXTENSION, FACILITATION, COMMUNITY ORGANIZING AND LAND MANAGEMENT USING THE STOP MANUAL

Expected Outputs

- Agricultural Technician (AT) trained on Agricultural Extension and Land Management

Participants in the Step and their Respective Role/s

Lead Participant/s

- ATI designs farm-based or on-site training identifying the nearest and appropriate Learning Site. The design must also include budget and cost-sharing by MLGU, ATI, DA-RFU, relevant institutions in the established Extension Network, or projects that may support extension.

- ATI and the Regional and Provincial Trainers of Agricultural Extension and Land Management train the ATs.

- These Regional and Provincial Trainers are those who have undergone and have passed the Training of Trainers (TOT) on Agricultural Extension and Land Management.

- At present, the pool are from DA –RFU, ATI 11 and 12, State College and Universities, Regional Research Consortia, and the LGUs in the Provinces of Davao Oriental, Davao del Norte, Compostela Valley, Davao del Sur, Sarangani Province and South Cotabato, Sultan Kudarat, Cotabato Province, and the City of Davao
STEP 3: ENTRY OF THE AGRICULTURAL TECHNICIAN (AT) INTO THE BARANGAY

Expected Outputs

- Agricultural Technician (AT) enters the barangay to perform the following:
  - Introduces himself or herself to the barangay captain/barangay officials, informing the local leadership of his/her assignment in the barangay and the agriculture program.
  - Get the basic information tool, which is the approved LUB-BDP. If the barangay has not yet undergone or completed the LUB-BDP, the AT should ask for an alternative official document that provides information on declared forest lands and agricultural lands.
  - Gather information on existing community organizations and other interest groups whose goals and activities relate to agriculture, natural resource management or community development.
  - Get to know the organization leaders.
  - Get to know the opinion leaders.
  - Get to know progressive farmers who are practicing recommended farming practices (good cropping systems, soil conservation/land management).
  - Plan and arrange with the BLGU officials for a meeting with as many as local leaders/stakeholders as possible.
  - Get to know more leaders, potential partners that can help advance the extension agenda.
  - Facilitate a multi-stakeholder assessment of the situation in the agricultural lands in terms of farming productivity, adaptability and systems.
  - Work on trust building by being visible in the village, mingling among the people, interacting with groups and organizations, acting as observer, listener and absorber of information, and not an arguer. In the process, he/she should be able to see the different dynamics that may affect/guide your extension strategies.
  - Make a more thorough inventory of existing groups, organizations and institutions, with the knowledge of the BLGU and a few volunteers from the community.
Present to the BLGU the community managed extension scheme needed to be organized.

Facilitate the appointment of a Barangay Extension Worker or BEW by the barangay government.

**STEP 4: APPOINTMENT OF BEW BY THE BARANGAY CAPTAIN**

**Expected Outputs**

- Barangay Extension Worker (BEW) appointed by the Barangay Captain
- BEW given orientation by the AT

**STEP 5: FORMATION OF FARMERS TRAINING GROUP (FTG)**

**Expected Outputs**

FTG is constituted whose composition is from the community (organization). There should be at least one (1) member from each sitio in the barangay.

**STEP 6: IDENTIFICATION AND ESTABLISHMENT OF A LEARNING SITE (LS)**

**Expected Outputs**

A Learning Site (LS) is identified and established.

The LS can be a farm of one FTG member that is most accessible and highly visible to all the members of the group or another model farm with a willing owner. The topography of the farm preferably represents the general landscape of the area and the farm technologies that are being demonstrated apply to the common marketable commodity grown in the area. It is more advantageous for the local extension team if the owner of the LS is also member of the FTG because he/she can always be available for FTG extension activities in the LS. It would be ideal to have one LS in each upland sitio.
STEP 7: CAPACITY BUILDING FOR THE COMMUNITY BASED EXTENSION TEAM (CBET)

Expected Outputs

- The CBET, composed of the AT, the BEW and the FTG is convened
- CBET Training Needs are identified, among them:
  - Cross visits
  - On site training on technology, extension and facilitating skills
  - Knowledge enhancement or updating through various media and sources
  - Team building
  - Managing extension
- The trained AT can be the resource person or he/she may invite other trained ATs within the municipality

STEP 8: ESTABLISHMENT OF PARTNERSHIP FOR AGRICULTURAL EXTENSION NETWORK (UAE)

Expected Outputs

- In Regions 11 and 12, the extension delivery network has been formally established to include the following:
  - Department of Agriculture (DA)
  - Agricultural Training Institute (ATI)
  - Provincial Local Government Unit (PLGU) and the Office of the Provincial Agriculturist (OPAG)
  - Municipal Local Government Unit (MLGU)
  - University of Southeastern Philippines (USP)
  - University of Southern Mindanao (USM)
  - Southern Philippines Agribusiness & Marine & Aquatic School of Tech. (SPAMAST)
  - Davao Oriental State College of Science and Technology (DOSCST)
  - Integrated Development Services (IDS)
  - Balay Davao Sur, Incorporated
STEP 9: SECURING LOCAL GOVERNMENT SUPPORT, RECOGNITION AND ADOPTION

Expected Outputs

Local government actively supporting the Upland Agricultural Extension Scheme

STEP 10: MANAGEMENT OF EXTENSION RESOURCES

Expected Outputs

Human resources involved in Upland Agricultural Extension are properly compensated, updated and empowered for their work

STEP 11: COORDINATION WITH THE UPLAND EXTENSION NETWORK

Expected Outputs

- Strong linkage established between municipality/barangay and the network
- Readily available pool of technical assistance

STEP 12: FACILITATION OF EXTENSION PLANNING IMPLEMENTATION, MONITORING UG EVALUATION (PIME)

Expected Outputs

- Information and Extension needs identified, among them:
  - No. of farmers trained at Learning Site
  - No. of Model Farmers produced by LS and CBET
  - No. of Adopters of STOP, SWC, DFS
  - Quality of DFS and STOP/SWC
  - No. of IEC activities
  - Increase in income
  - Policy/Ordinance support to Land and Natural resource Management
  - Extent of BLGU and MLGU support
STEP 13: TRAINING OF MA/AT ON PARTICIPATORY MONITORING AND EVALUATION (PME)

Expected Outputs

- MA/AT trained on participatory monitoring and evaluation (PME)

STEP 14: DESIGN AND IMPLEMENTATION OF PME

Expected Outputs

PME Design prepared and implemented

2.8 THE DIVERSIFIED FARMING SYSTEM (DFS)

Since the purpose of the Upland Agricultural Extension Service is to introduce diversified farming systems (DFS) to upland farmers, this guidebook will also present some of the basic upland farming technologies introduced under the DFS. Under this approach, the farmer grows short term crops to address his/her immediate cash requirements, medium term crops for income needs in the medium term and long-term crops to serve as the farmers’ source of pension. With UDP’s SUD model, the application of DFS is based on Slope Treatment Oriented Practices (STOP). This approach has evolved as the best solution to protect the upland resource base against erosion and at the same time generate more income for upland farmers, with the ultimate goal that farmers will fully shift from short-term crops to tree crops, which of course are most appropriate for upland, sloping watershed areas.

To date, four (4) forms of STOP intervention have been developed under the UDP-SUD Model. These four forms are briefly described as follows:

**STOP 1: Land Unit Farming**

This aims to extend the area suitable for annual crops by using cross-slope barriers and contour ploughing to promote terracing on the upper slopes where erosion risks and run-off rates are lower. Since poorly designed and laid out hedgerows can damage a farm’s potential, an improved design for cross-slope barriers is presented which combines 2-m wide natural vegetative strips with contour hedgerows. This increases the distance between the hedgerows and improves soil conservation.
Figure 2.1 Landscape Formed after Land Unit Farming
STOP 2: Multi-Storey Tree Cropping

This involves the mixtures of fruit trees of different heights to replace annual crops on slopes too steep or too long for cross-slope barriers.

Figure 2.2 Profile of a Newly-established Multi-storey Farm
STOP 3: **Mulching and Zero Tillage**

This is to be applied when soils are too shallow for forming terraces under STOP 1. As its name implies, zero tillage is a system of crop production where the soil is not ploughed or loosened with hand tools. Instead of tillage, the seed is planted directly into the soil.

**Figure 2.3 Profile of a Farm Using Zero Tillage Farming Approach**
STOP 4: *Intensive Production of Annual Crops on Small Level Plots*

As the name implies, the level of the soil in raised beds is higher than the surrounding soil. Upland farmers currently use temporary beds formed from ridges of soil, but these need to be built up every season because the impact of rain and cultivation flattens them out. On the other hand, permanent raised beds are surrounded by a framework or border, such as boards or bricks. This contains the soil and maintains the shape of the beds from season to season.

**Figure 2.4 Profile of a Farm with an Extensively Cultivated Annual Crop**
The objective of the UDP is to arrest the environmental degradation in the uplands by changing the present farming system of annual corn-based cropping and root crops to one which is more appropriate with diversified cropping systems and perennial crops. The choice of conservation measures and land use options depends on the slope, soil type and soil depth.

2.9 STEPS TO USING STOP

**STEP 1:** Draw a “bird’s eye view” map of the whole farm.

**STEP 2:** Measure the slope using the Slope Indicator.

**STEP 3:** Determine the soil type and dig a hole and measure the depth to the “hard pan”.

**STEP 4:** Locate the appropriate conservation treatment and intensity of land-use on the STOP table.

Note that with STOP, as slopes get steeper and soils become sandier:

- Annual crops are replaced by agroforestry and forestry.
- The spacing of cross-slope barriers gets closer.
- On 45-55° slopes: plant tree crops in micro-basins, preferably using seeds to encourage a long taproot. No hedgerows needed.
- Only forest cover is to be developed from seed above 55%. Tap-rooted species preferred.

Encourage the farmer to use an A-frame (See Figure 2.5) to layout and plant appropriately spaced cross-slope barriers (hedges plus NVS – Figure 2.6) on the upper slopes and hilltops of his farm, and intensify and diversify annual crop production there. On the steeper areas, start to replace corn and root crops by planting bananas and fruit trees such as mango, durian and lanzones.

**STEP 5:** Fill in a land prescription form detailing the proposed crops and SWC measures for each land unit. If necessary, indicate the number of Napier grass or vetiver splits needed, and the expected incomes for different fruit trees and annual crops from the land unit.

**STEP 6:** Draw a second map showing the layout of the proposed SWC measures.
Figure 2.5 Using an A-Frame
Figure 2.6 Hedges plus NVS
CHAPTER 3:
Barangay Forest
Protection and Management

3.1 THE CONVENTIONAL WAY OF DOING THE BARANGAY
FOREST PROTECTION AND MANAGEMENT

There was a failure to consider the local communities’ intimate knowledge of their forest resources as a critical factor in sustainable forest management.

For many decades prior to the release of the Community Forestry Programme (DENR Administrative Order No. 123) in 1989, forest protection in a given barangay was vested with the Department of Environment and Natural Resources (DENR), the government agency mandated to ensure protection and management of the environment and natural resources. In 1995, the Local Government Code was enacted, recognizing the important role of the local government in the enforcement of forest protection laws. This was reinforced thru the Joint Memorandum Circular of 2001 between the DENR-DILG-LGU on the transfer of forest management functions from the DENR to the LGUs. The local communities were finally recognized as a critical group in protecting the forests, and the Community-Based Forest Management (CBFM) Program was adopted as the national strategy for the sustainable development of forestlands. When the CBFM Program was developed, the forest protection and management functions of the DENR were then devolved to the local government units.

While planning for forest protection did transpire in the past, local communities were not included – they were not consulted nor were their intimate knowledge of forest resources considered vital. Their non-inclusion only heightened the feeling of indifference toward fractional forest protection efforts.

3.2 BRIEF DESCRIPTION OF THE SCHEME

The Barangay Forest Protection and Management Scheme is one strategy integrated in the SUD model that enables communities and other key players to actively participate in all aspects of barangay forest planning and management. Implemented using tested steps and approaches, this scheme ensures a community-based

The scheme ensures active community participation in barangay forest protection and management using tested approaches.
approach in the protection, rehabilitation and preservation of the ecologically critical areas within a barangay.

### 3.3 RATIONALE OF THE SCHEME’S INCLUSION IN THE SUD MODEL

It is just proper that Forest Protection and Conservation should be included in the SUD Model so that the people residing in the forest will still benefit from the bounty of its resources.

The uplands basically consist of forest areas that are now inhabited by poor farmers who derive most of their income from upland farming. Thus, the inclusion of the barangay forest protection and management scheme in the SUD model is imperative in order to sustain the forest resources from on-going agricultural and other economic activities.

Without this scheme, the environmental threat to the uplands will not be addressed, forest resources will not be sustained and the already vulnerable upland forest-dependents will be pushed even deeper into poverty. Thus, the scheme is critical to the success of the other schemes and the SUD Model as a whole.

### 3.4 OBJECTIVES OF THE SCHEME

In the over-all, the Barangay Forest Protection and Management Scheme hopes to achieve the following objectives:

a) To protect the remaining forestlands from further destruction, further expansion of farming and other destructive activities

b) To enable declaration of Barangay Forest Protected areas through a barangay ordinance and have the same endorsed by the Sangguniang Bayan of the municipality.

c) To enhance awareness of the entire barangay on the importance of protecting and managing the remaining forests and ecologically critical areas within the barangays

d) To organize and mobilize the Barangay Local Government Units (BLGUs) and the local community organizations such as the Upland Barangay Associations (UBAs) and other people’s organizations (POs) in protecting and managing the remaining forest lands in the barangay

e) To introduce appropriate community-based and site-specific forest protection and management activities based on plans participated in by the community and all other key players of the barangay

f) To forge strong co-management partnerships between the BLGU, MLGU, DENR, NCIP, the local community and other interested parties like barangay schools (Department of Education), local Philippine National Police (PNP) forces and other NGOs in managing the forestlands by devolving forest management functions of the DENR to the local government units at the barangay level
3.5 BENEFITS FROM IMPLEMENTING THE SCHEME

The benefits from implementing the scheme are difficult to quantify. They are more qualitative in nature, specifically the following environmental and social benefits:

a) Environmental Benefits

- Protection of the barangay forest, which will result to increased forest cover
- Increased number of wildlife in the area
- Sustainable potable water supply
- Low incidence of soil erosion
- Protection of nearby coastal areas.

b) Socio-Cultural Benefits

- Strengthened Community, BLGU, MLGU, DENR, DA and NCIP partnership
- Skilled and knowledgeable forest protection officers or forest guards
- Increased environmental awareness
- Increased community participation in the management and protection of forest resources
- Increased IP participation in forest protection

3.6 QUALIFYING CRITERIA FOR IMPLEMENTATION OF THE SCHEME

a) Geographic Criteria

**Elevation.** The scheme can be implemented in any forest area in upland or even lowland barangays, and in areas that are environmentally critical and qualified to be declared as protected areas, such as: natural forest, head water areas, riverbanks, ecotourism sites, barangay parks, lakes, springs, caves, steep slopes and others.

b) Community Criteria

**Heightened Community Concern for the Environment.** This scheme can be successfully implemented in communities where people have a heightened concern for the protection of their forest, that is, they are willing to participate in the schemes activity. In case the community would want to tap funding institutions or banks in order to implement this scheme, it is a requirement that they form themselves first into cooperatives or organizations.

**Support from LGUs and line agencies.** The different levels of local government, as well as devolved national government agencies should be willing to
participants and commit resources to the implementation of the scheme. The sources and types of support needed are:

- **Barangay and Municipal Level.** The BLGU and Municipal Environment and Natural Resources Office (MENRO) should support BFPM by including the scheme as a regular programme with fund appropriation in their Annual Investment Plan, Municipal and Barangay Development Plans.

- **Provincial Level.** The PLGU can play a role in consolidating all declared forest protected areas in the municipalities and come up with province-wide watershed protected areas. Likewise, the Provincial Environment and Natural Resources Office (PENRO-LGU) should include this as their regular programme with a budget allocation in the Provincial Annual Investment Plan and Provincial Development Plan.

- **Line Agencies.** It is also important to secure the support from local officials and concerned government agencies such as the DENR, DA, NCIP and other government agencies. The DENR at the CENRO/PENRO level should provide Technical Assistance to the MLGU and BLGU and integrate the BFPM in their forest protection and rehabilitation programmes. The NCIP on the other hand should also facilitate the issuance of FPIC in areas covered with BFPM and ensure participation of the IPs in the area. Other NGAs such as the Department of Education (i.e., barangay schools) and the local PNP are also encouraged to be partners of the programme.

**Organized Farmers.** In case the community would want to tap funding institutions or banks in order to implement this scheme, it is a requirement that they form themselves first into cooperatives or organizations.

c) **Project Proposal Requirement**

**Project Proposal.** The MENRO should take the lead in coaching the barangays in the preparation of project proposals on BFPMs, following the processes involved. A project proposal should contain attachments such as the barangay’s present land use map, the SB resolution on the conduct of a perimeter survey, and the result of the perimeter survey with SB approval.

### 3.7 THE SCHEME: STEP-BY-STEP

Barangay Forest Protection and Management involve a series of interrelated activities that must be performed in relation to the implementation of the SUD Model. Some of these activities are done at the provincial, municipal and barangay LGU level.

This guide book details the steps undertaken by the community, while the steps performed by the provincial/municipal/barangay LGU are discussed briefly:
STEP 1: IDENTIFICATION AND SELECTION OF THE BARANGAYS

Expected Outputs
- Initial meetings and consultation with barangay captain conducted
- Barangay for implementation identified and selected

STEP 2: FORMULATION AND APPROVAL OF BUDGET PROPOSAL

Expected Outputs
BFPM Proposal with budget is submitted to the Municipal Mayor by MENRO/MAO and the barangay LGU with necessary attachments such as barangay map, land use map and barangay profile.

STEP 3: FACILITATION OF BARANGAY ORIENTATION AND CREATION OF BARANGAY FOREST PROTECTION AND MANAGEMENT COMMITTEE

Expected Outputs
- Courtesy calls with MLGU and BLGU conducted
- Potential participants of barangay orientation determined, specifically barangay officials
- Barangay orientation held
- Report of barangay orientation completed
- Barangay Forest Protection Management Council (BFPMC) created.

Participants in the Step and their Respective Role/s

Lead Facilitator
- MENRO, MAO or whoever is designated by Municipal Mayor - leads in the facilitation of the barangay orientation

Other Participants
- Members of the Barangay Council and Barangay school principals or teachers
- PO representatives
- DENR to be in-charge in the discussion of environmental laws related
to Forest Protection.
- MA to be in charge of the discussion on sustainable farming practices.
- Funding institution to discuss the package they can offer to the barangay.

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

- Attend the barangay orientation
- Express willingness to participate in the Barangay Forest Protection and Management activities

STEP 4: CONDUCT OF PERIMETER SURVEY AND COMMUNITY MAPPING

Expected Outputs

- BLGUs tapped to assist in the conduct of perimeter survey
- Barangay Forest Protection area zoned
- Barangay Forest Protected Area Map prepared

Participants in the Step and their Respective Role/s

Lead Participant

- MENRO, MAO or whoever is designated by the Municipal Mayor - leads in the conduct of perimeter survey
- MENRO – facilitate in the conduct of community mapping

Other Participants

- BLGUs – assist in the conduct of the survey
- DENR – assists in the review of existing land use and other activities related to forestry.
- Representatives from CENRO and NCIP – the latter’s participation is to ensure that IPs rights are not violated.
- Barangay Captain, Barangay Kagawads, Purok/Sitio Leaders, Barangay constituents

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

- Participate/assist in the conduct of perimeter survey to be able to identify different zones such as production, protection and buffer zones
- Participate in the conduct of community mapping to gather data on
the following vegetation cover and existing water bodies

STEP 5: CONDUCT OF ENVIRONMENTAL AWARENESS SEMINAR AND PRELIMINARY COMMUNITY MAPPING

Expected Outputs

• Conduct of environmental awareness seminar and some preliminary activities prior to site selection, namely: review of existing land use of the barangay; and formulation barangay action plan for forest protection site identification
• Identification of forest protection area by considering the following factors: elevation; areas near rivers; and environmentally critical areas, if any
• Identification of actual forest area occupants taking into consideration the IPs’ concern

Participants in the Step and their Respective Role/s

Lead Facilitator

• MENRO, MAO or whoever is designated by the Municipal Mayor – facilitates the conduct of the seminar and community mapping

Other Participants

• Barangay Captain, Barangay Kagawads, Purok/Sitio Leaders, NCIP representative/s, Barangay constituents

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

• Participate in confirming or contradicting the result of the survey and initial assessment
• Participate in identifying the actual forest areas occupants
• Participate in the preparation of action plan for forest protection site identification
STEP 6: FORMULATION OF SITE MANAGEMENT AGREEMENT (SMA) AND CONDUCT OF INFORMATION DRIVE TO FOREST OCCUPANTS

Expected Outputs

• Site Management Agreement (SMA) prepared and well understood by the forest occupants – The SMA is an agreement between the forest occupants staying within the area and the BLGU for the active involvement and participation of the occupants in forest protection activities. See Appendix B for a sample of Site Management Agreement
• Barangay Forest Guards selected and designated by the Barangay Captain

Participants in the Step and their Respective Role/s

Lead Player

• MENRO – prepares the SMA

Other Participants

• BLGU – assists the MENRO in the conduct of Information Drive.
• NCIP – represents the IPs and to ensure IPs concerns are noted.

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

Participates in the conduct of Environmental Awareness Campaign (EAC).

STEP 7: FORMULATION OF A BARANGAY ORDINANCE FOR THE DECLARATION OF A FOREST PROTECTED AREA

Expected Outputs

• A Barangay Resolution Adopting the Forest Protected Area passed by the Sangguniang Bayan (see Appendix C)
• A Barangay Ordinance declaring the Forest Protected Area (samples in Appendix D)
• The Barangay Forest Protected Area presented and approved and ratified by the General Assembly thru a Public Hearing
• Barangay Forest Protected Area endorsed by the Municipal Council and Local Chief Executive
STEP 8: FORMULATION OF MEMORANDUM OF AGREEMENT (MOA) ON FOREST PROTECTED AREA

Expected Outputs

Formulation of a Memorandum of Agreement (MOA) – the basic difference between the SMA and the MOA is the parties to the agreement. While the SMA involves the forest occupants and the BLGU, the MOA is more inclusive and multi-party in nature. More specifically, the MOA is actually a Co-Management Agreement on Forest Management forged by key partners, to include: BLGU, MLGU, PLGU, DENR, NCIP, the community (represented by their PO), PNP and the Tribal Council. A sample is provided in Appendix E.

Participants in the Step and their Respective Role/s

Lead Player

• MENRO – prepares the MOA

Other Participants

• Barangay Council
• Forest Occupants
• All parties to the Co-Management Agreement

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

Provides inputs to the MOA

STEP 9: DECLARATION OF BARANGAY FOREST PROTECTION AREA AND SMA AND MOA SIGNING

Expected Outputs

• A formal declaration of the Barangay Forest Protected Area through a General Assembly
• Co-Management MOA signed by the key partners
• SMA signed by the forest occupants and BLGU
Participants in the Step and their Respective Role/s

Lead Participant

• Barangay Captain – takes the lead in the conduct of the barangay assembly and officially declares the barangay forest protection area.

Other Participants

• Barangay Kagawads, Purok/Sitio Leaders, DENR and NCIP representative/s, UBA/UCO/PO officers/representatives, and the identified actual forest occupants

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

Participates in document signing as both witness and signatory

STEP 10: POST-WORKSHOP AND ASSESSMENT PLANNING ON BFPMS

Expected Outputs

A Five-Year Action Plan for the implementation of the BFPMS on an annual basis, to include:

• Barangay Forest Management Plan
• Capability Building Activities
• Specific Projects and their corresponding Activities

Participants in the Step and their Respective Role/s

Lead Participant

• Barangay Forest Protection and Management Council (BFPMC) – conducts the workshop

Other Participants

• MENRO – provides technical assistance to BFPMC

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

Provides inputs to the Five-Year BFPM Action Plan
STEP 11: CONDUCT OF CAPABILITY BUILDING AND TRAINING ACTIVITIES

Expected Results

- Training on environmental laws for BLGU and BFPM Committee conducted
- Training on site-specific forest management activities and the implementation of support projects for forest management are conducted:
  - Training on nursery establishment
  - Tree planting
  - Maintenance of planted forest seedlings
  - Buffer zone development
  - Planting of bamboo and other trees along the river banks
  - Training of BFPM Committee, forest occupants, forest guards on RAINFORESTATION
  - Training of Forest Guards on Foot Patrolling and implementation of Forest Protection Laws
  - Training on how to conduct mapping activities
  - Training on the formulation of Barangay Forest Management Plan
  - How to prevent and deal with forest fires
  - Continuing Information, Education and Communication campaign

Participants in the Step and their Respective Role/s

**Lead Participant**

- BLGU and BFPMC – determines the training needs of the BFPMC

**Other Participants**

- DENR, MENRO and NCIP - assists in the conduct of all forest management rehabilitation activities as well as conduct of information campaign on environmental laws

**Roles/Participation of UBA/FO/PO/UCO and Individual Farmers**

- Helps in identification of training needs
- Participates in capability building activities
Expected Outputs

Some of the recommended outputs are:

- Fencing of forest lines/protected zone
- Nursery establishment
- Tree planting in delineated area and buffer zone development
- Mounting of billboards
- Working out of Barangay ordinance on “no cutting of trees” in protected area
- Establishment of forest fire lines
- Conduct of foot patrol to ensure that no illegal cutting of trees occurs in the protected area.
- Conduct of replanting activities when necessary.
- Conduct of continuous information campaign

Participants in the Step and their Respective Role/s

Lead Participant

- Municipal LUB-BDP Team, MENRO and Barangay Captain – they will work together to facilitate the conduct of the capability building activities

Other Participants

- Barangay Kagawads, Purok/Sitio Leaders, NCIP representative/s, UBA/UCO/PO officers/representatives, and the identified actual forest occupants

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

- Participates in coming up with an IEC plan and in the actual conduct of IEC activities
- Participates in the actual conduct of any or all of the activities related to barangay forest protection and rehabilitation
3.8 DETAILED PROCEDURES IN TREE PLANTING

Tree planting is one of the major activities in the barangay forest protection and rehabilitation undertaking. It is given primary importance in this guidebook because it is in this aspect where the organized/individual farmers who are actually occupying the forest areas are most extensively involved.

The following steps and procedures are extracted from the UDP Manual on “Tree Planting in the Uplands”. Whenever possible and if the document is available at hand, it is also suggested that the manual be read because there are certain portions there that are also relevant to the scheme but were no longer incorporated in this guidebook.

a) Procedures in Establishing a Tree Plantation

Trees are classified into three (3) categories: forest, fruit and industrial trees. You may first consider setting up a fruit tree plantation, since the produce of the trees will provide your family with a sustainable source of food and income in the near future. Before establishing your orchard, take the following points into consideration:

- Give the orchard a high priority in your Farm Plan.
- Visit successful small-scale orchards or tree plantations in your area. Inquire about the costs, income, problems, etc.
- Determine the area of the orchard according to the labour available in your farm, your own financial resources, the transport conditions and proximity to a market. You can establish your orchard gradually, over a period of a few years.
- If you are a member of the Savings and Loan Group and the Rural Finance Centre in your barangay, you may be eligible to obtain a Production Loan.
- Establish your orchard near your house if possible, to ease maintenance operations and to ensure optimal supervision.
- With regards to the slope, follow the recommendations of the sitio land use map:
  - Seasonal crops are grown on flat land, forest
  - Plantations on steep land, fruit and industrial tree
  - Plantations occupy intermediate areas.
- Do not establish a fruit tree orchard on marginal lands, such as shallow rocky soils, eroded areas.
- Choose the species to plant according to the following factors:
  - Which species or varieties already grow well and produce good quality fruits in the area, at the same elevation and on similar soil conditions?
  - Which species are recommended in the sitio land use, on the basis of the agro-ecological zoning?
The climate (rainfall and temperatures) and the soil characteristics (thickness of topsoil and pH) prevailing locally are important factors to consider before choosing the species. What is the expected return of the species?

- Always plant two (2) or three (3) species, in order to compensate for the market price fluctuation of a single species.
- In a new orchard, a single storey is preferable to a multi-storey orchard. If two (2) or more species are planted, they should not be inter-mixed, but arranged in pure stands. This will ease management operations.
- Before the main trees start fruiting, optimize your income by planting crops between your trees:
  - A seasonal crop, during the first two years;
  - A fast bearing perennial crop, such as banana, guava or calamansi.

- After the canopy of the main trees closes, which usually occurs 4-5 years after the tree plantation, remove the fast producing species.
- Most municipal nurseries are operating in the "Plant Now Pay Later" (PNPL) programme scheme and produce mainly trees of durian, mango, lansones, rambutan, and calamondin propagated by grafting or budding. Ask the assistance of the UBA, UCO or PO leader in order to be eligible for the programme. Payment of the trees usually starts six (6) to eight (8) years after delivery.
- Commercial private nurseries are producing trees at a price of ₱40.00 to 50.00 per tree for most species propagated by budding or grafting, ₱100.00 to 120.00 per tree for large planting materials.
- You can also source your planting materials from communal nurseries.
- Individual nurseries, however, represent the cheapest and easiest way for motivated farmers to obtain planting material. A nursery for the establishment of a medium size orchard (0.5 ha) is easy to establish and only requires limited financial investment.
Figure 3.1: Ideal Crop Establishment According to the Slope
b) Establishment and Maintenance of Fruit Tree Orchard

b.1 Land Preparation

- Prepare the land for growing a seasonal crop
- Demarcate the contour lines with an “A” frame
- Establish soil conservation works, to reduce soil erosion and maintain fertility (hedgerows, grass strips)
- Plough the field on the contour lines
- Locate the emplacement of your trees with bamboo pegs planted on the contours; the spacing varies with the species

Figure 3.2: The Proper Way to Prepare the Field for the Orchard
b.2 Planting Holes

- Before sowing the seasonal crop, dig large holes, 90 cm in all directions.

**Figure 3.3: Proper Hole Making**

- Apply a basket of manure in each hole, refill the whole holes with top soil only

**Figure 3.4: Proper Hole Filling**

- Plant back the bamboo peg in the centre

**Figure 3.5: Placing the Bamboo Peg**
b.3 Planting Technique

- Carry the trees to the planting site with care. Plant only large planting material of good shape, grown in large containers.

**Figure 3.6: Selecting Good Planting Materials**

![Diagram showing different types of planting materials](image)

- In the centre of the refilled hole, dig a hole slightly larger than the container. Carefully remove the polyethylene bag.
• Lower the tree into the hole. Fill the space around the root ball with soil and press firmly with the fingers.

Figure 3.8: Transplanting the Seedling

• Replant the bamboo peg next to the tree, and tie the stem to the peg
• Plant your trees in the beginning of the rainy season. If planting takes place during a sunny period, water each tree immediately after planting.
• Provide shade to the newly planted seedlings for a period of one (1) or two (2) months.

Figure 3.9: Watering and Shading of Newly Transplanted Seedling
b.4 Orchard Maintenance

- If grazing animals are present, erect tree guards around each tree.

Figure 3.10: Inplace the Tree Guard

- Replant dead trees as soon as possible, depending on weather conditions
- During the first years, weeding is done while maintaining the seasonal crop. Later on, weed regularly
- Twice a year, apply a chemical fertilizer (NPK 14-14-14) at the rate of 100 g per tree for the first 2 years. Increase application progressively to 4 kg during the 8th year
- Hoe the soil around every tree before applying fertilizer

Figure 3.11: Fertilizer Application

- During the dry season, mulch the trees with dried straw, leaves etc.
- Prune, remove dead, broken or diseased branches and water sprouts to obtain the desired canopy
Figure 3.12: Tree Pruning

- Shading will be provided by the temporary perennial crop (banana, guava, calamondin).
- Remove the intercropped species as soon as the canopy of the main tree crop closes. When they start producing fruit, most tree species do not need any shade.
- If forest or grass fires are frequent in your area, clear a circle of 3 m diameter around every tree, during the dry season.

c) Recommendation for Forest Tree Plantation Establishment

   c.1 Preparing the Plantation

- Establish your forest plantation preferably on marginal land, unsuitable for seasonal crops or fruit trees: heavily eroded soils, gullies, field with steep slope.
- You can also plant trees on the boundary of your farm
- Choose the species according to the intended use of the produces and the potential market
- The area of your woodlot will depend on your priorities and your resources
- Plant your forest trees at a close spacing in order to reduce the planting and maintenance works. A spacing of 2 m x 2 m requires 250 trees per 0.10 ha; a spacing of 2 m x 3 m requires 111 seedlings per 0.10 hectares.
- If you grow a seasonal crop on the land, do not forget to establish grass strips to reduce soil erosion.
- If your plantation is established on marginal land, do not grow any seasonal crop.
- Plant bamboo pegs, 1 m long, at the planting spot
- Produce the seedlings in your backyard nursery. It is an easy and cheap task, requiring little labor
c.2 Planting

- Plant only seedlings of good quality: straight stem, of at least 40 cm long, 0.5 cm thick.

Figure 3.13: Selection of Forest Tree Seedlings

![Diagram of good quality plant]

- Plant at beginning of the rainy season, during humid and cloudy weather. Before planting, water thoroughly the seedlings
- Dig a hole 20 cm deep at the planting spot
- Remove with a knife the polythene container, without disturbing the ball of soil around the roots
- Lower the seedling in the hole, fill the space with good soil and press firmly with your hands
- Replant the bamboo peg next to the seedling, to single the tree out of the vegetal cover

c.3 Woodlot Maintenance

- Replant the dead trees as soon as possible
- Weed and hoe regularly around each tree, during the first two (2) years following planting
- In areas where forest fires are frequent (in particular cogon lands) build a firebreak around the whole plantation. This is done by clearing the whole vegetation in a line 3 m wide
- If timber production is the main goal of your plantation, prune the lower branches, to reduce knot formation
- Seven (7) to eight (8) years after planting, thin your woodlot, to leave an approximate 4 m x 4 m spacing. The produce of thinning is used for firewood or poles
CHAPTER 4: Labor-based Routine Road Maintenance

4.1 THE CONVENTIONAL WAY OF IMPLEMENTING ROAD MAINTENANCE

Traditionally, road maintenance was lodged solely with the municipal and barangay LGU and are done based on budget allocation and availability of funds; thus under the conditions of irregular maintenance, barangay roads deteriorate at a much faster rate.

In the past, access to barangay roads was difficult and restricted because these were always in a sorry state of deterioration, brought about by inadequate and irregular maintenance. Road repairs are carried out usually only in emergencies, e.g. major road slips. Critical road structures such as culvert crossings are not maintained on a regular basis, thus leading to a general deterioration of barangay roads over time. As a result, every few years, an expensive rehabilitation is required.

Traditionally, road maintenance was lodged solely with the municipal and barangay LGU. Since maintenance activities are done based on budget allocation and availability of funds, their timing and frequency are not very regular. Under these conditions, barangay roads deteriorate at a much faster rate.

4.2 BRIEF DESCRIPTION OF THE SCHEME

Basically, the the primary purpose of the scheme is the regular and proper maintenance of barangay roads, always keeping them in good condition. Maintaining good roads has three (3) major components, namely:

• Road Management – refers to measures to prevent unnecessary damage to the road, e.g. ordinances, imposition of fines, construction of humps and erosion control measures.

With LBRRM, the community is contracted to assist with upgrading and maintaining barangay roads.
• **Emergency Maintenance** – e.g. maintenance of large structures like bridges, removal of large land slips, repair done to the road after a period of wear and damage, usually equipment-based.

• **Routine Maintenance** – regular, labor-based, e.g. vegetation control, filling of potholes, rills and ruts, restoring the road surface, cleaning/repairing side ditches, etc.

The community, represented by a local organization such as the UBA/UCO, is contracted to assist with upgrading and maintaining the selected road(s). For this purpose, a permanent maintenance team or crew, responsible for a certain stretch of road, is put in place with the support of the barangay and municipal LGU concerned.

### 4.3 RATIONALE OF THE SCHEME’S INCLUSION IN THE SUD MODEL

Access to markets and services are crucial for achieving UDP’s objective of “sustainable agriculture and improved living standards and prosperity of the upland barangay community”. In the uplands of Southern Mindanao, roads to upland barangays 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.

### 4.4 OBJECTIVE OF THE SCHEME

The scheme aims to install a system in the barangay that will ensure that important 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 provincial and municipal LGU.

### 4.5 BENEFITS FROM IMPLEMENTING THE SCHEME

In the overall, the LBRRM will help ensure that the barangay will always have good roads. The benefits of always having good barangay roads are spelled out as follows:

• Better access for farm products – Farmers can market their crops more easily, at less cost, shorter time and with less damage
• Better access for people – People can travel more easily, regularly and in more comfort.
• Better access for social services – Easier for people to reach services such as clinics, as well as for services to reach them.
• Better access for consumer goods – Goods for the sari-sari stores can come in more easily and at reduced cost.

Other benefits and gains from the LBRRM are seen in the following perspectives:

• Routine road maintenance is considered less costly than road rehabilitation
• Generation of employment for community members as they receive wages road maintenance
• In terms of building relationship, the LBRRM helps the community manifest the “bayanihan” spirit and a sense strong of volunteerism
• The knowledge about road maintenance technology and how to manage it is considered as gains which can not be imputed in terms of monetary value.

4.6 QUALIFYING CRITERIA FOR IMPLEMENTATION OF THE SCHEME

a) Geographic Criteria

Barangay Roads. The areas to be maintained under the LBRRM scheme are essentially the designated barangay roads.

b) Community Criteria

Upland Barangay Association or similar People’s Organization. A primary requirement is that the Upland Barangay Association (UBA) or an equivalent people’s organization is already existing and operational in the barangay.

Bayanihan. The community should be open and have the willingness to render their voluntary services in the form of bayanihan. They should also show willingness to cooperate and commit to abide by the barangay ordinance/s that may be passed in support of the implementation of the scheme. Further, the identified maintenance crew and the UBA/PO members should be trained on the different steps of LBRRM.

c) Legal, Institutional and other Documentary Criteria

The following should be in place:

• Memorandum of Agreement (MOA). A Memorandum of Agreement (MOA) should be executed between the municipal LGU and the barangay LGU.
• Barangay Council Resolution. The execution of the MOA should also be supported by Barangay Council Resolution authorizing the Barangay Captain to represent the barangay.
• Barangay Infra Committee At the Barangay Council, a Barangay Infrastructure Committee should be formed and it is recommended that the UBA or PO be represented in the committee.
• **Action Plan.** Lastly, an Action Plan of the concerned barangay for the LBRRM should be drafted/formulated prior to implementation of the scheme.

## 4.7 THE SCHEME: STEP-BY-STEP

The practical tasks and procedures involved in LBRRM are described in the following details:

### TASK 1: VEGETATION CONTROL

**Expected Outputs**

- To maintain adequate site distance
- To prevent clogging of the drains
- To assist drying of roads

**Procedure**

- Cut vegetation from road shoulders, side slopes and ditches
- Trim the grass back to about one (1) inch from the ground.
- Avoid pulling the grass out as this loosens the soil and will cause erosion.
- Remove the cut material from ditches

**Frequency**

- Monthly

**Method of Undertaking**

- By crew members
Figure 4.1  The Local Community Doing Routine Road Maintenance
TASK 2: FILLING OF POTHOLES, RILLS AND RUTS

Expected Outputs

- To prevent the ponding and passage of water within the road
- To improve the surface smoothness

Tools

- Shovel
- Rake
- Tamper
- Pick mattock
- Wheelbarrow

Materials

- Aggregates (from road side or gravel sources)

Procedure

- Remove water and soft material from the patch area
- Clean loose materials from the edges of potholes, making the side vertical
- Place several aggregates in several layers, hand tampering each layer. Never use organic matter and logs, etc. for filling.
- Rake final layer so the top of the patch is slightly above the surrounding road surface
- Where long rills run down the steeper sections, follow steps 2-4
- Cross humps should be repacked, so that the flow of water does not break through and flow down the road.

Frequency

- Twice monthly or after heavy rain

Method of Undertaking

- By experienced crew
Figure 4.2 Road Repair through Filling of Potholes, Rills and Ruts
TASK 3: RESTORING THE ROAD SURFACE

Expected Outputs

- To maintain the shape of the road so that water is quickly removed
- To maintain the surface strength

Hand Tools

- Shovel
- Rake
- Tamper
- Pick mattock

Procedure

- Return gravel from the side to the road way surface (middle)
- Spread the material with rakes and shovels
- Compact road surface with hand tampers

Frequency

- Monthly or after inspection

Method of Undertaking

- By experienced crew
Figure 4.3 Restoring the Road Surface
TASK 4: CLEANING, REPAIRING AND RESHAPING SIDE DITCHES

Expected Outputs

- To ensure the efficient interception and removal of water from the locality of the road.

Hand Tools

- Pick mattock
- Axe
- Shovel
- Wheelbarrow
- Tamper

Procedure

- Remove rocks, logs, and other obstructions from the ditch, especially land slips
- Excavate silt or sand to make the bottom of the ditch flat or slightly rounded
- Shape the sides of the ditches as flat as possible. This will provide better water flow and minimize future erosion
- Dispose of excess materials by spreading it well, clear of the ditch, otherwise in the middle to help maintain the camber. Use a rake to spread it.
- Do not pile the material to make a ridge along the roadway. This prevents surface water from flowing to the ditch.

Frequency

- Twice monthly or after heavy rain

Method of Undertaking

- By experienced crew
Figure 4.4 Cleaning, Repairing and Re-shaping Side Ditches
**TASK 5: CLEANING CULVERTS AND OTHER STRUCTURES**

**Expected Outputs**

- To ensure the road is not damaged by providing an unobstructed flow of water across and away from the road

**Hand Tools**

- Shovels
- Buckets
- Ropes
- Cleaning rods

**Procedure**

- Remove logs, stones and other obstructions from ditches and culvert inlet
- Excavate silt and debris from the intake box and culvert by hand or with a rope, pulling a drag or bucket through
- The outlet ditch must be cleaned so the water can flow easily
- Load away all debris and surplus material and dispose away from site

**Frequency**

- Twice monthly or when necessary

**Method of Undertaking**

- By experienced crew
Figure 4.5 Cleaning Culverts

**TASK 6: EROSION CONTROL**

*Expected Outputs*

- To avoid damage to the road and its drainage system

*Hand Tools*

- Pick mattock
- Axe
- Shovel
- Wheelbarrow
- Tamper

*Procedure*

- Repair eroded areas by filling with gravelly soil and then compact it
- Correct conditions causing erosion, with actions such as:
  - Widening and flattening of ditches
  - Providing new turn-outs to reduce concentration of water
  - Placing and maintaining sods and vegetation over erodible areas
  - Lining ditch channels with rocks
  - Placing riprap at the ends of culverts and bridges
 ➢ constructing series of scour checks to reduce velocity of water on steep gradients
 ➢ repairing smaller embankment slips with stakes, rocks and planting materials

Frequency

• Monthly or when necessary

Method of Undertaking

• By experienced crew

Figure 4.6 Erosion Control through Sandbagging
TASK 7: CONSTRUCTION OF SCOUR CHECKS

Procedure

- Use on steep gradients where concentrated water is eroding the ditch and there is nowhere to place turn-outs.
- The distance between the scour checks depends on the gradient and the soil condition of the road. The steeper the slope or the softer the soil, the closer the spacing of the scour checks.
- Use stones if available, otherwise bamboo or wooden pegs, which are supported by planting grass above and below the scour check.
- The height at the edges of the scour check must be higher than the water flow height and the water flows over the middle, not around the edges, otherwise, it will erode the side of the scour check.

Figure 4.7 Scour checks help prevent ditch erosion
Labor-based Routine Road Maintenance
TASK 8: CONSTRUCTION OF HUMPS OR DIVERSION BANKS

Procedure

- These are useful means of diverting water off the road turnouts and they can be constructed with maintenance labor. The material (soil/aggregate) must be put on in layers and well tampered.
- The distance between banks will vary. In hilly areas, it can be as short as 40 m and in fact the more, the better so as to reduce the amount of water flowing off each one and therefore the erosion.
- The accompanying diagrams show relevant dimensions and it should be set at an angle to guide the water off the road.
- On hilly terrain, the shape of the downhill side is steeper than the road itself (i.e. slope of is 1 in 10, slope of the bank is 1 in 6).

Figure 4.8 Construction of Humps or Diversion Banks

![Diagram of hump or diversion bank construction](image)
Task 9: Construction of Turnouts (Mitre Drains)

Procedure

- Turnouts lead water away from the side drains for dispersal in the surrounding area
- Indicative spacing – steep – 10 m; medium – 20 m; gentle-50 m
- The spacing is indicative only and really depends on volume to be removed. The more turnouts, the better as this means less volume at each turn out and meaning, less erosion in the drains and especially in the surrounding area.

Figure 4.9 Construction of turn-out
Task 10: Installation of Culvert Outlet Energy Dissipators

Procedure

• The outlet side of the culvert should be gently sloping back to the stream and grassed or rock armoured to prevent erosion.
• Using rock armouring in the streambed at the culvert outlet will help prevent undermining of the culvert and improve conditions. Rocks 200-300 mm in diameter will be suitable for most situations, preferably with a geotextile layer below to prevent fine material washing away and gradually eroding the area.
• Live material such as madre de cacao can be used as energy dissipater.

Figure 4.10 Installation of Culvert
TASK 11: REPAIR OF LAND SLIP

Procedure

- Land slip is one of the common problems encountered in maintaining barangay roads in the uplands.
- During rainy days, the soil along the cliff side of the road softens which eventually lead to huge soil erosion creating gully and cutting the road, at times making it impassable.
Figure 4.11 Road Slip Before Repair

Figure 4.12 Road Slip After Repair
**TASK 12: INSTALLATION OF FASCINES USING MADRE DE CACAO**

**Procedure**

- Trim back the sides of gully if too steep. Throw excess loose material upstream.
- Bundles of 4-5 gliricidia cuttings, alternating the basal ends of some to lie adjacent top ends of others.
- Key the bundles into the sides of the gully depth of 30-50 cm and compact around.
- Ensure good contact between cuttings and gully bed, as this is where root reinforcement will develop.
- Make sure middle of check dam is lower than sides; otherwise, overflow may undercut the sides.
- Pack the base of the dam with brushwood and angular stones. Plant grass slips or cuttings on upstream gully sides.

*Figure 4.13 Installation of Fascines*
**TASK 13: INSTALLATION OF GRASS BARRIER SILT TRAP**

Procedure

- Set up planting guide line parallel to drain or road.
- Plant double row of grasses, 15 cm between plants, 20 cm between rows.
- Establish ground cover, e.g. ground legumes, between grass and drain. Scrubs above grass, e.g. calliandra.

**TASK 14: INSTALLATION OF LIVE CHECK DAMS USING BAMBOO OR MADRE DE CACAO**

Procedure

- Line out a contour along the slope.
- Prepare bundles of 4-5 gliricidia cuttings, already ringbarked. Keep in shade until required.
- Prepare 20 cm deep trench on contour.
- To conserve moisture, do not open long lengths of trench.
- Place bundles in the trench. Ensure that separate bundles overlap.
- Cover the bundles with maximum of 10 cm of soil and firm.

Figure 4.14 Stabilisation of a Backslope using Plant Materials
**TASK 15: SURFACE EROSION CONTROL WITH VETIVER GRASS**

**Procedure**

- Prepare sufficient slips for one (1) day work.
- Keep prepared slips in the shade and away from wind.
- Prepare planting hole approximately 7-10cm depth, 5cm width. Must be large enough so roots are not folded.
- Backfill and compact around grass tiller. It must be firm in ground.
- Spacing for contour strips, 15-20 cm between plants, 0.5-1.5 meter between rows, depending on erosion risks.
- For protection of solid structures, double offset rows following the interface, 15 cm between plants, 10-15 cm between rows.
CHAPTER 5: Rural Financial Services

5.1 THE CONVENTIONAL WAY OF PROVIDING RURAL FINANCIAL SERVICES

Most upland farmers complain about the lack of access to finances or capital for increasing the fertility of the land and for other inputs.

Access to formal financial institutions, whether banks or cooperatives, is very limited in upland sitios. Financial institutions remain very hesitant about expanding their services in the uplands. Informal savings and credit associations are also rarely found in upland areas, especially amongst the tribal communities. The culture of savings as such is rarely found in the upland sitios. On the contrary, most people depend on “cash advances” from local traders to survive till the next harvest. Most upland farmers complain about the lack of access to finances or capital for increasing the fertility of the land and for other inputs. Hardly anybody has money for emergency situations or needs.

5.2 BRIEF DESCRIPTION OF THE SCHEME

When considering rural financial services development issues, it must be recognized that RURAL FINANCIAL IS A COMMERCIAL BUSINESS ACTIVITY and will only run on a sustainable basis if rigid compulsory savings, capital build-up and loan repayment discipline is maintained and enforced. Under the Rural Financial Services scheme, the municipal LGU assists people’s organizations in accessing efficient rural financial services for selected barangays by tapping viable professional financial institutions (rural banks, non-governmental organizations, and cooperatives.)

Loans can expand opportunities for farmers to engage in livelihood activities and enterprises. The funds can purchase farm inputs to boost agricultural production, leading to higher productivity and increase in income. In their own little way, farmers contribute in alleviating poverty and address their concern for food security.

Under RFS, Partner Financial Institutions are linked to GFIs to provide regular capacity building and credit funds to upland farmers.
5.3 RATIONALE OF THE SCHEME’S INCLUSION IN THE SUD MODEL

The delivery of financial services is a crucial strategy in promoting economic development in the uplands. Not unlike many poor communities, the sustained delivery of financial services is also a crucial strategy in promoting economic development in the uplands. In the SUD Model, rural banks and credit cooperatives deliver the financial service requirements of the upland farmers, households and upland off-farm entrepreneurs. Among the financial services demanded are facilities to deposit savings and for obtaining loans in areas such as micro-finance, production and marketing of upland produce. The remote areas are more difficult to serve due to lack of volume of business and scattered clientele. In such cases, the model recommends the establishment of community-based and community-owned financial services centers linked to, for example, a micro-finance institution or a rural bank or credit cooperative for institutional support and access to credit funds.

5.4 OBJECTIVES OF THE SCHEME

The Rural Financial Services Scheme aims to establish a savings-based credit delivery system that provides micro finance, agricultural production loans and savings services on reasonable terms to upland farmers, enterprises and communities.

The ultimate aim is to provide increased opportunities to engage in livelihood activities and enterprises through the availability of capital; to give access to affordable interest and appropriate loan as well as savings facilities; and to create opportunities for professional finance institutions to service upland clients.

5.5 BENEFITS FROM IMPLEMENTING THE SCHEME

The benefits derived from implementing the scheme are basically the realization of its objectives. In more specific terms, the benefits are the following:

- Access to funds for agricultural inputs
- Opportunity to engage in other livelihood activities – enterprises because of available capital
- Access to low-interest non-collateralized loan facilities, and savings facilities
- Opportunity to establish and develop village-based financial intermediaries.
- Last option for family emergencies
5.6 QUALIFYING CRITERIA FOR IMPLEMENTATION OF THE SCHEME

a) Geographic Criteria

There are no geographic restrictions for the implementation of RFS scheme.

b) Community Criteria

Attitudes of a conscientious borrower. Interest, cooperation, mutual trust and rigid adherence to procedures are essential for the success of this scheme.

c) Legal, Institutional and Other Documentary Criteria

Established financial institutions. Only existing registered professional financial institutions should participate.

5.7 THE SCHEME: STEP-BY-STEP

Key steps to encourage the development of rural financial services are the following:

**STEP 1: FINANCIAL MARKET SURVEYS IN THE UPLAND AREAS**

**Expected Outputs**

- Financial market information
- Possible project participants are initially identified

**Participants in the Step and their Respective Role/s**

**Lead Participant**

- RFS Specialist cum Researcher - personally conducts the financial market survey to be able to gather the necessary financial market information and prepares a financial analysis

**Other Participants**

The following are sources of the financial market information:
• Barangay Captains as source of information
• UBAs and UCOs (if existing), POs
• MAOs
• Other NGOs existing in the area and extending financing support

Roles/Participation of upland farmers

• Act as respondent to the survey/research done by the RFS Specialist

STEP 2: IDENTIFICATION AND CONSULTATIONS WITH POSSIBLE FINANCIAL SERVICE PROVIDERS

Expected Outputs

• List of Financial Service Providers – the municipal LGU could gather this information from the following government financial institutions:

  UDTF Secretariat, Landbank Mindanao Branches Group, Palm Drive, Bajada, Davao City.  
  Tel & Fax: 083 305 1663  Eml: udtf_lbp@yahoo.com

  People’s Credit & Finance Corporation, 395 Sen. Gil Puyat Avenue,  
  1200 Makati City  
  Tel: 02 897 8521 to 23 and 02 897 3370  Fax: 02 897 8528  Eml: info@pcfc.ph

STEP 3: CROSS VISIT TO SUCCESSFUL CREDIT COOPERATIVES

Expected Outputs

• Newly formed credit cooperative/FSC is exposed to some successful credit cooperatives in nearby localities
• Learning and insights are gained by the members of the credit cooperatives/FSC from the experiences of the cooperatives that they have visited
• Based on their learning from the cross visit, the newly formed credit cooperative/FSC is able to define/generate its own policies, systems
and procedures (PSPs) related to credit management

Participants in the Step and their Respective Role/s

Lead Participant

- RFS Specialist /Organizer- takes the lead in conducting and guiding the newly formed credit coop/FSC in their exposure activity

Other Participants

- Upland farmers taking part in the RFS scheme

Roles/Participation of Credit Cooperative or FSC

- Actively participates in the cross visit activity
- Keeps the eagerness and the yearning to learn from the exposure to a similar organization
- Commits to echo/share the learning and insights from the cross visit to fellow members who were not able to join the activity

STEP 4: START UP ACTIVITIES OF FINANCIAL INSTITUTION IN SELECTED BARANGAY

Expected Outputs

- Delivery of financial services to upland clientele

STEP 5: MONITORING

Expected Outputs

- Municipal LGU monitoring of the financial institution’s services and activities in the barangay
CHAPTER 6: 
Village Enterprise Development

6.1 THE CONVENTIONAL WAY OF SELLING AGRICULTURAL PRODUCTS

Given the sub-standard quantity and quality of their products, the upland farmers are unable to generate adequate revenues to sustain their enterprises.

While several groups or associations have already established village enterprises in the uplands, it is a significant fact that most of these business ventures have not been sustained. Some of the more prevalent problems encountered are: a) most farmers market their produce on an individual basis, thus, the low volume of their produce cannot command a good price; b) most farmers produce crops that they have been accustomed to, regardless of whether it commands a good price or not; and, c) the products being produced do not meet the desired quality of the buyers due to poor farming practices and lack of good post harvest and handling facilities.

Given the sub-standard quantity and quality of their products, the upland farmers are unable to generate adequate revenues to sustain their enterprises.

6.2 BRIEF DESCRIPTION OF THE SCHEME

The Village Enterprise Development (VED) Scheme is a step towards adopting more market-oriented and farm system approaches. The farmers, through their associations, are taught how to manage their farms, consolidate their products and seek their own markets, guided by a farm/business plan and with clear-cut policies to work with. Further, the VED builds on the earlier accomplishments set by the other five (5) schemes – selecting crops based on their land-use survey, protecting the forest from further human destructive incursion, employing the diversified farming system that is suitable to the upland contours, maintaining barangay roads that link to the market, and accessing finances to expand production.

The VED Scheme moves the farmer closer to the market-oriented farm system approach.
6.3 RATIONALE OF THE SCHEME’S INCLUSION IN THE SUD MODEL

The above mentioned activities of road rehabilitation and maintenance, sustainable agricultural production, resource management, barangay development and land-use planning, extension service delivery and rural finance services, are instrumental in creating an environment that encourages some of the basic conditions for the eventual development of a farm business or village enterprise in an upland barangay.

Most importantly, the farmers must have the products that can be consolidated for marketing purposes. There should be sustained backward linkages with environmentally acceptable upland farming practices. Consolidation means a greater volume of products that can be sold in the market at a given time. This affords producers more leverage in bargaining for better prices and other market arrangements, as having the volume means greater control over the supply of products. Having the right product in terms of quality and farm production practices, for example vegetables that are free from chemicals, is also an advantage that can be used to negotiate higher prices in the market.

6.4 OBJECTIVES OF THE SCHEME

The scheme is established with the purpose of achieving the following:

a) Train the farmers on the fundamentals of farm management

b) Engage the guidance of competent Business Development Service providers to assist the farmers gain business confidence until the initial phase of their commercial operation

6.5 BENEFITS OF IMPLEMENTING THE SCHEME

- Improved crop production that would create volume to create market niche
- Strengthened producers group to undertake collective marketing and enterprise activities
- Established market linkages and support networks
- Improved production technology and post harvest management of upland agricultural products
• Developed business plans and accessed technical and financial support systems from other entities

6.6 QUALIFYING CRITERIA FOR IMPLEMENTATION OF THE SCHEME

a) Geographic Criteria

There are no geographic restrictions for this scheme except having access to markets, to include physical access through good farm to market roads.

b) Community Criteria

Willingness of farmers to consolidate. In going through this scheme, the farmers, through their associations, must be willing to work together.

c) Legal, Institutional and Other Documentary Criteria

Legal Personality. If the PO/UBA or the UCO decides to participate in this scheme, they have to assume legal entity by way of registering with the Securities and Exchange Commission or the Cooperative Development Authority. Other documentary requirements may be required – depending on the government agency they are accrediting/registering with.

6.7 THE SCHEME: STEP-BY-STEP

The first step is to provide selected farmers with the five (5) day Competency based Economics through the Formation of Entrepreneurs (CEFE) training in the basics of enterprise development and management. Leaders from among the producers’ groups or UBAs are identified as participants for this training. They in turn echo and implement the knowledge gained when they get back to their communities.

In the case of the BDS provider, the activities implemented include the analysis of the enterprise and the Upland Barangay Associations (UBA), preparation of business plans and operations manuals, organizational development, and coaching services and initial setting up of the enterprise. In all of the services required from the BDS providers, maximum participation of the communities from all of the sitios covered by the Programme is a must.

The BDS providers are further required to base an enterprise development expert in the community during the entire engagement period. Cross-visits to successful farmers and village enterprises elsewhere are also seen as important means to achieve the objective of this scheme.

Monitoring of the activities is based on the agreed schedules of major activities. A more detailed validation process involves setting up of basic success indicators and actual visits and interviews with the farmer entrepreneurs in the barangays.
STEP 1: CONDUCT OF ENTREFARM TRAINING

Expected Outputs

• The traditional subsistence farmers are convinced to become farmer-entrepreneur
• Upland farmer leaders gained basic knowledge on enterprise development and management

Participants in the Step and their Respective Role/s

Lead Participant

• CEFENET – conducts the Entrefarm Training for selected UBA officers/leaders

Other Participants

• UBA/UCO/PO officers/leaders

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

• Actively participates during the conduct of the training
• Gains insights and learning from the training
• Echos and implements the knowledge and skills gained when they go back to their respective communities

STEP 2: ENGAGING BUSINESS DEVELOPMENT SERVICE (BDS) PROVIDER

Expected Outputs

Engagement of a Business Development Service (BDS) Provider – who should have the experience and competence to lead the UBA/PO or producers’ group in completing the following:

• Assessment of the organization’s capability in handling a business enterprise and the viability of the proposed enterprise they will
establish.

- Preparation of a Business Plan that summarizes the different activities necessary for the venture to succeed.
- Development of an Operations Manual that contains the rules and procedures, policies and the system for monitoring and evaluation of accomplishment.
- Organizational Development (institution building) that addresses any conflict in terms of responsibilities as well as the conduct of regular meetings, etc.
- Initial operationalization of the enterprise, that is, gaining management experience, dealing with buyers, the government and other organizations

Participants in the Step and their Respective Role/s

**Lead Participant**

- BDS provider to develop framework for the assessment and coach the group

**Other Participants**

- PO/UBA – provides information and at the later stage (when the enterprises commence commercial operation), consolidates the produce of the UCO/farmers
- UCO/farmers – provides information and, subsequently, becomes the production units
- LGU – provides information, analysis and funding; monitors, facilitate admin./financial concerns

**Roles/Participation of UBA/FO/PO/UCO and Individual Farmers**

- Provides information to the BDS Provider
- Operates the village enterprise – to include consolidation of produce, negotiation with buyers, transaction of sales, collection of payment
STEP 3: CROSS VISITS

Expected Outputs

• Application of learnings from the visit into the actual operation of the enterprise

Participants in the Step and their Respective Role/s

Lead Participant

• BDS provider – facilitates the visit

Other Participants

• LGU, UBA/PO and UCO Officers/leaders and members – participate in the cross-visit

Roles/Participation of UBA/FO/PO/UCO and Individual Farmers

• Participate in the cross visit
• Echo learnings to other members of the organization/community
• Apply learnings in actual operation of the enterprise
APPENDIX A:
Executive Order No. 606:
“Pursuing Sustainable Upland Development Anchoring on Food, Wood, Non-wood Security and Economic Productivity and Providing the Mechanisms for its Implementation and for Other Purposes”
BY THE PRESIDENT OF THE PHILIPPINES

EXECUTIVE ORDER NO. 606

PURSUING SUSTAINABLE UPLAND DEVELOPMENT ANCHORING ON FOOD, WOOD AND NON-WOOD SECURITY AND ECONOMIC PRODUCTIVITY AND PROVIDING THE MECHANISMS FOR ITS IMPLEMENTATION AND FOR OTHER PURPOSES.

WHEREAS, a sustainable approach to the development of the natural environment through effective governance and improved delivery of basic services to the marginalized sector of society is called for by the government’s development agenda, the Medium-Term Philippine Development Plan (2004-2010) and the commitment to the United Nation’s Millennium Development Goals;

WHEREAS, there is a need to pursue a paradigm shift or refocusing to ensure sustainable development and livelihood in the country specifically in upland areas, through rehabilitation and adoption of programs geared towards producing high value crops and trees;

WHEREAS, the country’s land area is comprised largely of upland and forestlands, covering more than 50% of the 30 million hectares of land, with a big portion of occupied and tilled by marginalized people such as upland farmers, indigenous peoples and tribal groups, who mostly belong to the socially and economically displaced and disadvantaged sectors of society.

WHEREAS, the continuing problems of poverty and internal conflict are mostly brought about by the unequal access and control and inequitable distribution of the benefits over the country’s limited natural resources and productive areas, especially in the uplands;

WHEREAS, the Department of Environment and Natural Resources (DENR) is the primary government agency responsible for the conservation, management, protection and proper use of the country’s environment and natural resources specifically forestlands and other lands of the public domain;

WHEREAS, under the Local Government Code of 1991, the national government, specifically the DENR, shares with the Local Government Units (LGUs) the responsibility in the sustainable management and development of forest and natural resources as exemplified under Joint Memorandum Circular signed by the DENR and the Department of the Interior and Local Government (DILG) and witnessed by the different Leagues of LGUs in 2003 and as early as 1998.

WHEREAS, LGUs have been supporting and addressing the problems of their constituency in the uplands have initiated innovative and exemplary practices in sustainable upland development, such as co-management of natural resources, community-based forestland use planning, forest protection, resource management, rural road maintenance and agricultural and forestry extension services in line with the principles of Sustainable Forest Management (SFM);
WHEREAS, three (3) rural development agencies of the national government namely the Department of Agriculture (DA), the Department of Agrarian Reform (DAR), and the DENR, under the convergence policy, have Institutionalized the DA-DAR-DENR Convergence Initiative to address rural development efforts of the government. This convergence towards sustainable rural development was formalized through Joint Memorandum Circular (JMC) No. 01, series of 1990, signed by the three Secretaries of the said agencies and revitalized through JMC 2004-01. Further, JMC 2006-01 mandated the “Adoption of the Guide for implementation on DA-DAR-DENR convergence Initiatives towards Sustainable Rural Development.”

WHEREAS, the adoption of the Community Based Forest Management strategy supports SFM and convergence initiatives among legally-mandated agencies working in the uplands and the local initiatives to effectively address poverty in upland areas;

WHEREAS, there is an urgent need to strengthen the existing development framework between national government and local government agencies for the improved delivery of basic services and development programs, specifically in the upland areas.

NOW, THEREFORE, I, GLORIA MACAPAGAL-ARROYO, President of the Republic of the Philippines by the virtue of the powers vested in me by law, do hereby order the pursuit of sustainable upland development anchoring on food, wood and non-wood security and economic productivity that leads to the improvement in the quality of life of upland communities, increase economic productivity of upland areas, and ensure sustainable management of the country’s forest resources.

SECTION 1. Declaration of Policy. It is the policy of the estate to pursue sustainable development of the country’s upland areas and communities by ensuring proper balance between ecological and economic concerns in a manner that the forests natural base is maintained and improved. At the same time this would promote economic activities in the uplands through agricultural and forest production and utilization of upland resources to generate sufficient income for the communities residing and making a living in the uplands.

It is further declared as state policy to ensure the equitable access to and enjoyment of the benefits of development and use of uplands by the marginalized segments of the population and preserve and conserve these benefits and developments not only for the present generation of Filipinos but also the future generation.

SEC. 2. Basic Guiding Principles and Strategies. As a matter of policy the operationalization of the country’s sustainable upland development strategy at the local levels shall be consistent with the principles of Sustainable Forest Management (SFM), adopting primarily the Community Based Forest Management (CBFM) strategy in the conduct of community mobilization, local land-use planning, delivery of basic social services, extension services, forest protection and resource management, rural infrastructure and development of local enterprises and livelihood activities. Furthermore, the implementation of sustainable upland development shall also be based on the following:

1) Co-management is the principle of institutionalizing mutual cooperation and collaborative partnership between national and local government institutions as well as local communities in the performance and implementation of legally-mandated responsibilities, roles and functions in the development and management of the uplands;

2) Convergence is the integration, complementation and maximization of institutional, technical, resource, financial and human resources of all the key stakeholders in the upland areas, especially among national and local government agencies; and
3) **Participatory Governance** Involves directly capacitating and fully involving local government units (LGUs) and communities in the whole process of formulating, planning, implementing and monitoring of all development activities and programs in the uplands.

**SEC. 3. Scope and Coverage.** The sustainable development of the uplands shall encompass and cover lands that are classified as forestlands, including allowable zones within protected areas. The key activities and areas of concern in support of the development of the uplands are outlined below but not limited thereto:

1) Identify and review convergence and impact of key programs and interventions provided by national and local agencies, including donor-assisted projects and programs to upland communities and areas.

2) Review and assess the effectiveness and efficiencies of capacities and operations of key national and local agencies in the implementation and performance of their mandates in the uplands;

3) Review and assess the consistency and applicability of existing national implementing policies, guidelines and program in addressing the needs and conditions of upland areas and communities;

4) Identify, formulate, develop and recommend specific programs of actions and interventions to support the sustainable development of upland areas and communities; and

5) Identify key policy reforms and recommendations to strengthen delivery and effectiveness of programs and initiatives in the uplands.

**SEC. 4. Agency Involvement.** The DENR shall be the lead agency for the implementation of the sustainable upland development order, assisted by the DA and the DAR.

**SEC. 5. Institutional Arrangement.** The Sustainable Upland Development Steering Committee is hereby created to oversee the implementation of this Order, chaired by the DENR, and the following as members: DA, DAR, DILG, and the Presidential Adviser on Agrarian Reform. The heads of various national LGU Leagues, such as the League of Provinces, League of Cities, League of Municipalities, and the Liga ng mga Barangays, are also encouraged to join the meetings of the committee. At the regional/provincial/city/municipality level, parallel committees created under the convergence initiatives with the provincial/municipal chief executives as chair, shall be adopted.

**SEC. 6 Duties and Responsibilities of Key Agencies Involved:**

1) **DENR**
   a) To call upon all national and local agencies or technical, policy information and resource assistance and support;
   b) Initiate and conduct national and regional discussions and consultations relating to policies, objectives and programs of actions for sustainable upland development;
   c) Review and translate specific recommendations into operational guidelines of national concern, programs and initiatives, key areas and themes in coordination with national and local agencies for sustainable upland development;
   d) Initiate and enhance partnership and coordinating activities with private sector groups, donor agencies and other relevant external bodies;
e) Provide assistance to the program beneficiaries in the packaging and marketing of products derived from the project areas including resource mobilization;
f) Submit regular reports and updates to the Office of the President and other relevant agencies.

2) DA
a) Assist the DENR in the identification of suitable crop combinations and cropping systems;
b) Assist the DENR in the transfer of appropriate and tested technologies to program beneficiaries;
c) Provide assistance to the program beneficiaries in the packaging and marketing of products derived from the project areas including resource mobilization.

3) DAR
a) Provide assistance in the conduct of capability building and enhancement programs for the beneficiaries.
b) Provide assistance to the program beneficiaries in the packaging and marketing of products derived from the project areas including resource mobilization.

4) DILG
a) Ensure coordination at the local level as well as execution/implementation of projects;
b) Provide assistance to the program beneficiaries in the packaging and marketing of products derived from the project areas including resource mobilization.

SEC. 7 LGU Participation. The LGUs are encouraged to assist (1) in convening the provincial/municipal committees created under the Convergence Initiative for the identification of specific roles and functions, (2) in recommending specific programs/projects and interventions, (3) in formulating specific administrative and operational guidelines related upland development in coordination with members of related committees, (4) in identifying sources of funds to ensure the delivery of needed services and implementation of specific programs/projects and (5) in providing assistance to the program beneficiaries in packaging and marketing of products derived from the project areas including resource mobilization.

SEC. 8. Technical Assistance. The DENR shall tap the support services of the different technical working groups under the DA-DAR-DENR Convergence towards Rural Development and the DENR-DILG-LGU partnership as well as other individuals and institutional experts and specialists from both national and local technical agencies.

SEC. 9. Funding. Funds needed to carry out the provisions of this Executive Order shall be taken from available funds of the DENR, DA and DAR. Other sources of funds such as grants, donations, and other forms of technical and resource assistance from donor agencies, projects, and other public or private entities may be tapped and facilitated by the DENR, DAR, DA, DILG and all the Leagues (Provincial/Municipal/City/Barangay) to support the objectives and activities identified under the Executive Order subject to regular auditing guidelines and procedures.

SEC. 10. Separability. Any portion or provision of this Executive Order that may be declared unconstitutional shall not have the effect of nullifying other provisions hereof, as long as such remaining provisions can still subsist and be given effect in their entirety.

SEC. 11. Repeal. All rules and regulations, other issuances or parts thereof, which are inconsistent with this Executive Order, are hereby repealed or modified accordingly.
SEC 12. **Effectivity.** This Executive Order shall take effect fifteen (15) days after its publication in a national newspaper of general circulation.

**DONE** in the City of Manila, this 27th day of February in the year of our Lord, Two Thousand and Seven.

By the President:

[Signature]

EDUARDO R. ERMITA
Executive Secretary
APPENDIX B: Site Management Agreement
UPLAND DEVELOPMENT PROGRAM
Barangay Forest Protection and Management Scheme
Brgy. New La Union, Maitum, Sarangani Province

KASABUTAN ALANG SA PAG PANALIPOD UG PAG DUMALA SA KALASANGAN

Kini Nga Kasabutan Gimugna Tali Sa:

Local nga pangamhanan sa Brgy. New La Union, Maitum, Sarangani Province nga gi representahan ni Kapitan Telly Kaibal isip unang partido, sa mga okupante nga maoy kasamatangan nga nag angkon sa maong luna isip ika duhang partido; Tungod kay kini nga mga kasabutan ma mugna pinaagi sa duha ka mga partido nga maoy mo establisar, moamping, manalipod ug mo maintenar sa mahabilin nga kalasangan sa Barangay New La Union, Maitum, Saranggani Province.

Mga Kaakuhan sa Matag Partido

Sa Barangay:

1. Mag mugna ug mga ordinansa nga maoy nag hatag ug silot ngadto sa mga malapason sa balaod sa pag amping sa kalasangan
2. Motukod sa BFPMC nga maoy plano ug mo pa tuman sa Barangay Forest Protection and Management Scheme (BFPMS);
3. Mopasaka ug mga resolution basin sa BFPMS Committee;
4. Mo gahin ug pundo sa Barangay matag tuig alang sa kalambuan ug sa pag padayon sa mga programa sa mga pag panalipod ug sa paglambo sa kalasangan;
5. Mag pahigayon kanunay ug edukasyon sa mga tawo mahitungod sa programa sa pag amping sa kalasangan.

Sa Okupante:

1. Dili ma mutol sa kahoy ug mag kuha sa unsa mang produkto sa sulod sa protected area;
2. Dili mag sunog ug mag kaingin sulod sa protected areas;
3. Mag butang ug fire line sa boundary sa protected area aron malikayan ang unsa mang sunog;
4. Maghatag ug taho ngadto sa mga tigbantay sa kalasangan ug sa BFPMS ang unsa nga information kalambigit sa pag panalipod ug pag dumala sa kalasangan;

5. Pag pananom ug mga kahoy sa gi angkon nga luna sulod sa protected area;

6. Pag pangita ug pag pahigayon ug unsa man nga mga alternatibong panginabuhian aron malikayan ang unsa man nga pag-guba sa protected area.

Katumanan:

Kini nga kasabutan mo epekto hum an nga ma permahan sa tanan partido ug mag pabilin nga epektibo sa sulod sa 25 ka tuig gawas kun ang mga partido magkauyon sa pag usab sa maong kasabutan;

Aron sa pag pamatuod niini kini among paga permahan a ubos niining ika 22 sa Nobyemver 2006.

Sa Barangay

HON. TELLY KAIBAL
Punong Barangay

Okupante:

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PINIRMAHAN SA ATUBANGAN NILA NI:

JERRY C. BASCUÑA
MENRO

FAUSTO SOLDAVILLO
UBA Chairman
APPENDIX C: Barangay Resolutions Adopting Barangay Forest Protection Area
REPUBLIC OF THE PHILIPPINES  
Province of Sarangani  
Municipality of Alabel  
BARANGAY PARAISO

OFFICE OF THE SANGGUNIANG BARANGAY

EXCERPTS FROM THE MINUTES TAKEN DURING THE SPECIAL SESSION OF SANGGUNIANG BARANGAY OF PARAISO, ALABEL, SARANGANI PROVINCE HELD AT BARANGAY HALL ON JANUARY 16, 2006 AT EXACTLY 10:00 IN THE MORNING

Present:  
Hon. Maribel T. Baan  Barangay Kagawad, Acting Presiding Officer  
Hon. Lally D. Lacay  Barangay Captain  
Hon. Norberto E. Palawan  Barangay Kagawad  
Hon. Benjie P. Diagan  Barangay Kagawad  
Hon. Aldin S. Tusun  Barangay Kagawad  
Hon. Bellana B. Tanod  Barangay Kagawad  
Hon. Nordie P. Diagan  Barangay Kagawad  
Hon. Delberto D. Lacay  SK Chairman  

Absent:  
Hon. Sunga B. Calay  Barangay Kagawad

RESOLUTION NO. 2007 – 01

“A RESOLUTION ADOPTING THE BARANGAY FOREST PROTECTION AREA MAP COVERING THE PORTIONS OF SITIO SUFA LAMOT, RABYLUM, KIAMAK, PARAISO PROPER, DATAL KULAY, AND ULO MULEH WITH AN AREA OF ONE THOUSAND NINETY TWO POINT FIVE HUNDREDTHS FOURTEEN (1,094.0514) HECTARES (MORE OR LESS) IN BARANGAY PARAISO, ALABEL, SARANGANI PROVINCE”.

WHEREAS, the Barangay recognizes the devolved functions from the DENR to LGUs specific forest management functions particularly on the management and control of communal forests and natural resources;

WHEREAS, Barangay Paraiso is one of the signatories of the Memorandum of Agreement (MOA) entered and signed into between (MLGU) Alabel, PLGU Sarangani, UDP and BLGU of Alegria and Bagacay on the co-management of Calminda Watershed on March 29, 2004;
WHEREAS, one of the major final output identified is the delineation and declaration of Barangay Forest Protection areas to be legitimized through a Barangay Ordinance which will propel into the making of Site Management Agreement (SMAs);

WHEREAS, prior to the conduct of GPS – perimeter survey, there were series of proper coordination/orientation meeting made with the Barangay Officials and other national agencies concerned regarding Barangay Forest Protection and Management;

WHEREAS, follow-through consultation and intensive IECs at community level (by cluster puroks and sitios) was also conducted by the IEC Task Force composed of MLGU, PLGU – Sarangani, DENR, NCIP, BLGU – Paraiso and other agencies in order to substantiate the purpose of declaring barangay forest protection area;

WHEREAS, the Barangay Forest Protection Area Map was being done through a perimeter survey conducted by the selected community leaders, sitio leaders, forest occupants, LGU of Alabel, DENR, UDP, PCEEM Davao and with coordination and cooperation from the office of MENRO – MPDO that headed the activity.

WHEREAS, declaring the said forest protection area and adopting the said map with its technical description is very imperative;

WHEREAS, after thorough deliberation and on motion of Barangay Kagawad Norberto E. Palawan, duly seconded by Barangay Kagawad Nordie P. Diagan, it was

RESOLVED, as it hereby resolved by the members of Sangguniang Barangay assembled in session to adopt the Barangay Forest Protection Area Map covering the portions of Sitio Sufa Lamot, Rabylum, Kiamak, Paraiso Proper, Datal Kulay, and Ulo Muleh with an area of One Thousand Ninety Two Point Five Hundredths Forteen (1,092.0514) hectares (more or less) in Barangay Paraiso, Alabel, Sarangani Province.

RESOLVED FINALLY, that copies of this resolution to be furnished to all offices concerned for their information and guidance.

PASSED AND ADOPTED during the special session of the Sangguniang Barangay of Paraíso, Alabel, Sarangani Province held at Barangay Hall on January 16, 2007.

I hereby certify to the correctness of the forgoing resolution.

CERTIFIED CORRECT: SARAH S. PANDIAN
Barangay Secretary

ATTESTED AND APPROVED: HON. MARIBEL T. BAAN
Acting, Presiding Officer Committee on Budget Appropriation and Finance
APPENDIX D: Sample Barangay Ordinances Declaring a Forest Protected Area
Republic of the Philippines  
Province of Sarangani  
Municipality of Maitum  
Barangay New La Union  

Opisina sa Sanguniang Barangay

BARANGAY ORDINANCE NO. 2006-02

Gipakanaog isip ordinansa sa Sanguniang Barangay sa New La Union, Maitum, Probinsya sa Sarangani nga nagkatigum:

SEKSYON 1: TITULO SA ORDINANSA

USA KA ORDINANSA NGA NAGDEKLARA SA 952.82 KA EKTARYANG KALASANGAN ISIP “PROTECTED AREA” SA BARANGAY NEW LA UNION, MAITUM, SARANGANI PROVINCE.

SEKSYON 2: DEKLARASYON SA POLISIYA

TUNGOD KAY, pinasikad sa polisiya alang sa kinaiyahan sa Pilipinas, responsibilidad sa Kagamhanan, inabangan sa mga adunay pagtagad nga mga pribadong organisasyon ug institusyon, sa paggamit sa tanang mahimong mga pamaagi, subay sa uban pang mahinungdanong konsiderasyon sa polisiya, sa pagtagad sa kaayuhan sa kadaghanan, sa pag-seguro alang sa katawhan sa usa ka dili piligro, disente, himsog, produkto ug nindot nga kinaiyahan;

TUNGOD KAY, usa ka gimbuhaton ug responsibilidad sa maag usa sa pagtabang sa papananalipud ug pagpalambo sa kinaiyahan sa Pilipinas sa pangkinatibuk-an ug sa Barangay sa particular;

TUNGOD KAY, ang gi-adaptar nga Forest Land Use Plan (FLUP) sa Maitum naggahin sa tanang lugar sa kalasangan nga adunay bakildon nga sobra sa 50%, gihabugon nga sobra sa 1,000 ka metros, ibabaw sa dagat, ang mga bakilid ubos sa “Protection Forest” ang gitawag nga “Protected Area”;

TUNGOD KAY, ang Barangay New La Union naga konsiderar sa 40% nga bakildon nga kalasangan og 700 metros nga gihabugon, ibabaw sa dagat, ubos sa Protected Area;
TUNGOD KAY, ang Barangay Development Plan (BDP) sa Barangay nagsubay usab a gambalay sa Forest Land Use Plan (FLUP) sa munisipyo, sa pagdumala sa mga kalasangan;

SEKSYON 3: GILANGKUBAN

Kini nga molangkub sa 952.82 ka ektarya nga kalasangan sulod a teritoryo sa New La Union, sumala sa survey nga gihimo alang sa ilang nagatunhay nga paggamit sa kayutaan (existing land use).

SEKSYON 4: GINADILI NGA MGA GIMBUHATON

Sa “Protected Area”, ginadili ang mosunod nga mga gimbuhaton:

1. Pagpamuto og mga kahoy, natural man o gitanum;
2. Pagmina;
3. Pagpangaso ug pagkolekta sa unsa mang kalasanon mga hayo ug tanom;
4. pagkultibar og mga dili permanenteng mga tanom;
5. pagpuyo ug pag-okupar og luna; ug
6. kaingin

SEKSYON 5: EXEMTPION

Ang tanang proyekto o kalihokan nga makabenipesyo ngadto sa katawhan, pinasikad sa mga rekomendasyon sa Barangay Forest Protection and Management Committee (BFPMC) ug sa pag uyon sa Sangguniang Barangay mahimong pagatugutan o ‘exempted’.

SEKSYON 6: SILOT

Si kinsa man nga tawo, institusyon o organisasyon nga molapas a unsa mang probisyon dinhi sa ordinansa mahimong multahan og:

Unang Silot:

- Multa na dili momenos a P500.00 o duha (2) ka adlaw nga pagtrabaho sumala sa isangon sa BFPMC, Punong Barangay og husgado.

Ikaduhang Silot:
Multa nga dili momenos sa P750.00 o tulo (3) ka adlaw nga pagtrabaho sumala sa isangon sa BFPMC, Punong Barangay og hugging.

Ikatulong Silot:

Multa nga dili momenos sa P1,000.00 o upat (4) ka adlaw nga pagtrabaho sumala sa isangon sa BFPMC, Punong Barangay og hugging.

Sa kasong ang nakasala mao ang usa ka organisasyon o korporasyon, ang presidente o ang manager niini, kung unsa man ang aplikable, o kinsa man nga ‘officer-in-charge’ mahimong mapahamtangan sa silot ubos niining maong ordinansa.

SEKSYON 7: APPLICABILITY CLAUSE

Tanang mga kasabutan, Memorandum of Agreement (MOA), ug resolusyon nga kalambigit sa pagdumala sa ‘protected area’ lakip niining maong ordinansa.

SEKSYON 8: SEPARABILITY CLAUSE

Kung aduna may probisyon niini nga ordinansa o ang pagtanum sa maong probisyon ngadto sa usa ka tawo o kahimtang gideklarar nga wala nagsubay sa Batakang Balaod sa Pilipinas, ang nahibilin nga probisyon o pagpatanuman sa maong probisyon ngadto sa ubang katawhan o kahimtang dili ma-apektuhan sa maong deklarasyon.

SEKSYON 9: REPEALING CLAUSE

Tanang ordinansa, polisiya, kamandoan, rules and regulatons, nga sukwahi sa unsa man nga probisyon niining ordinansa mahimong mabaliwala o mausab.

SEKSYON 10: EPEKTIBIDAD

Kini nga ordinansa mahimong epektibo human kini mamantala o mabutang sa mga bantang nga mga lugar sa barangay.

GIUYONAN NI:

MELECIO M. UBONGIN, SR.
SOLDAVILLO
Barangay Kagawad

FAUSTO S.
Barangay Kagawad

DON L. DODIN
Barangay Kagawad

DARMIE T. SEBASTIAN
Barangay Kagawad

DOUGLAS S. MOVILLA
Barangay Kagawad

BENJAMIN W. ILAO
Barangay Kagawad

ZALDY J. BANSAWAN
Barangay Kagawad

ROLAND A. MICOZA
Barangay Kagawad

Gipamatud-an:

ESTRELLA M. MARCOS
Barangay Secretary

Gipamatud-an ug Giaprobahan:

TELLY D. KAIBAL
Barangay Captain
APPENDIX E: Memorandum of Agreement on Barangay Forest Protection and Management Scheme
MEMORANDUM OF AGREEMENT

CO-MANAGEMENT AGREEMENT OF DECLARED FOREST PROTECTED AREAS OF BRGY. DAKUDAO, SAN ISIDRO, DAVAO DEL NORTE

KASABUTAN SA PAGTINABANGAY SA PGPANALIPUD UG PAGDUMALA SA NAHIBILING KALASANGAN

Kini gipanagsabotan ug gikauyonan sa mga mosunod:

Barangay Local Government Unit sa Dakudao, ug Barangay Forest Protection and Management Committee nga gipanguluhan ni Punog Barangay Hon. DELFIN D. APORBO, JR. nga ang opisina nahimutag sa Barangay Dakudao, San Isidro nga ginatawag dinih nga BLGU;

Munisipyo sa San Isidro, Davao del Norte nga girepresentahan ni Hon. Mayor TOMAS R. ABELITA, JR., nga ang opisina nahimutang sa Munisipyo sa San Isidro, Davao del Norte, ng ginatawag dinih nga MLGU;

Department of Environment and Natural Resources (DENR), nga girepresentahan ni Community Environment and Natural Resources Officer (OIC-CENRO) FOR. MARTINIANO G. ROTOL nga ang opisina nahimutang sa National Highway, Tagum City, Davao del Norte, nga ginatawag dinih nga DENR;

Opisina sa Municipal Agriculture (MAO) nga girepresentahan ni MR. LAUREANO PINTOR, nga ang opisina nahimutang sa Munisipyo sa San Isidro, Davao del Norte;

Department of Education, nga girepresentahan sa Teacher In-Charge nga si FIDELA GILVERO sa Dacudao Elementary School nga nahimutang sa Barangay Dakudao, San Isidro, Davao del Norte nga gitawag nga DepEd;

National Commission for Indigenous People (NCIP) nga girepresentahan ni ATTY. JOSE “JAKE” DUMAGAN ang opisina nahimutang sa Provincial Capitol, Mankilam, Tagum City, Davao del Norte nga gitawag nga NCIP;

Ug

Dakudao Upland Barangay Association (DUBA) nga girepresentahan ni JEREMIE PROBADORA nga ang address nahimutang sa Brgy. Dacudao, isip Community Based Organization (CBO).
PAGPAMATUOD:

1. Tungod ka yang Barangay LGU sa Dakudao uban sa nagkahiusang katawhan adunay panglantaw sa pagdumala niining gideklara nga luna pinaagi sa pagtinabangay;

2. Tungod ka yang DENR misangon na sa pagdumala sa kalasangan ngadto sa local nga panggamhanan (MLGU/BLGU) nga gitumato-an diha sa DENR, DILG ug LGU Joint Memorandum Circular 98 – 01. Kini nga Circular nagsilbi nga tamdanan diha sa panaglambigit taliwala sa nasudnong panggamhanan ug local nga panggamhanan alang sa epektibo nga pagdumala sa kalasangan;

3. Tungod kay nahapi diha sa maong pagsangon ang pag-ila, pagsukod, ug pag-establisar sa “Communal Forest" pinaagi sa nahiayag nga pamaagi ug pagtinabangay nga nahipatik diha sa DENR Regulation (DENR, DILG, LGU, JMC – 2003 – 01);

4. Tungod kay pinasikad diha sa importanteng katungod sa pagpanalipid sa kalasangan ug pagpahiuli sa nagkaumaw nga kayutaan sulod sa teritoryo sa Barangay, ang Barangay LGU kinahanglan nga mamahimong maabtikon sa paghimo sa iyang katungod sa pagtinabangay bisan kung wala gyud gipaklaro nga sa Circular nga ang pagdumala sa kalasangan nga mg gimbuhaton ug responsibilidad gisangon ngadto sa Barangay nga panggamhanan;

5. Tungod kay sa kusganong interes sa Barangay Council ug sa mga nahatungdang kommunidad sa Brgy. Dakudao sa pagpanalipod s kalasangan batok sa nagpadayong pagkagi, ug pag-mintinar sa maanindot nga kunaiyahan, giila ang luna nga angayan nga panalipdan pinaagi sa pagtinabangay;

6. Tungod ka yang konseho sa barangay inubanan sa kommunidad naga-ila, nagresolba ug nagdeklara niining 36.72 ka ektaryang gipanalipdang kalasangan nga gisakupan nga mosunod: Ecotourism Natural Park, Barangay Forest Tree Park, ug daplin sa kasapaaan sulod sa Barangay Dakudao, San Isidro, Davao del Norte;


8. Tungod kay pinaagi niining kasabutan sa pagtinabangay nahimugso ang Barangay Forest Protection and Management Committee nga ang kinatabukan gimbuhaton mao ang pagpanguna s pag-implementar ug pag-establisar sa pagpanalipod ug pagdumala niining giila nga “Protected Area”, ug ang mga apil sa maong pundok mao ang Punong Barangay, isip Chairman, Committee Chairman sa Environment and Natural Resources sa BLGU isip Vice-Chairman, DUBA, MLGU, BLGU, MAO, MENRO, Dep Ed, POs, IPs, NCIP ug CENRO-DENR, PENRO-LGU isip miembro sa Committee;
9. Tungod kay ang Tribal Council Elders nga pundok sa mga Datu sa komunidad nga adunay katungod alang sa pagpakaban sa kaayohan ug pribilihiyo sa tanang lumad nga sakop sa maong luna;

10. Tungod ka yang MLGU mao usab ang local nga panggamhanan nga mo suporta ug moayuda sa panginahanglan sa BLGU kabahin niining Barangay Forest Protection and Management Scheme o (BFPMS);

11. Tungod ka yang DENR mao ang nagaunang ahens iya sa Gobyerno nga adunay katungod sa malahutayung pagdumala sa nasudnong palibot ug mga bahandi sa kinaiyahan;

12. Tungod ka yang BFPMS Committee nakahimo na sa mga gimbuhaton nga adunay nga adunay kalabutan sa pagtinabangay sa pagdumala sa kalasangan, sama sa pagpailia sa BFPMS nga programa. Pagkunsulta sa mga okupante inubanan sa DENR ug uban pang panglantaw ug pagpanayan sa mga utlanan sa gideklarang protektadong luna;

13. Tungod ka yang tanang partido nga adunay kalabutan nagkauyon sa pagtinabangay alang sa pagdumala ug pagpanalipud arong nga makab-ot ang hinausang tumong sa pagpadayon sa pag-atiman niining nahibilining kalasangan;

14. Tungod ka yang matag partido adunay gihuptan nga mga responsibilidad, nga mao ang mosunod:

**DENR (CENRO):**

a. Paghatag ug mga hinabang teknikal ngadto sa BFPM Committee sama sa pagsukod sa giilang “Protected Area” ug paghatag ug seminar;

b. Moayuda sa BLGU sa implementasyon sa Forest Protection and Management Scheme;

c. Paghatag ug mga nahiangay nga semilya sa kahoy o prutas;

d. Mopahitabo ug mga pagbansay-bansay sa mga giilang miembro sa monitoring team isip DENRO (Deputized Environment Natural Resources Officer) nga nakasulat diha sa existing policies, rules and regulations.

**MLGU:**

a. Paggahin ug suportang teknikal ug pinansyal sa pagpatuman sa BFPMS;

b. Pagdasig sa katawhan pinaagi sa makanunayong pakiglambigit diha sa mga kalihukan sa pagpanalipud ug pagdumala sa kalasangan;

c. Pagsusi ug pag-apruba sa ordinansa sa barangay kabahin sa deklarasyon sa protected area;
d. Paghatag ug incentibo ngadto sa mga napamatud-ang kursunada kaayo nga modawat sa maong proyekto;

e. Paggahin ug igong pondo sa mga nahiayag ug mga anindot nga alternatibong katinguhaan sama sa livestock dispersal ug uban pang proyekto.

BLGU:

a. Mopalungha ug mga ordinansa nga may kalabutan sa gideklarang luna isip “Protection Zone” ug alang sa pagpanalipod ug pagpahiuli niining nahisgutang luna;

b. Mohatag ug kopya sa mga ordinansa ngadto sa DENR ug MLGU alang sa pagsaka ug pag-adaptar niini;

c. Magpanday ug balaocon nga may kalabutan sa pagpanalipud, mobuhat sa nahiayag nga gimbuhaton nga gisangon sa DENR, ug moandam ug kasaligan nga mga tawo nga maoy motabang panahon sa perimeter survey;

d. Mogahin ug igong pondo alang sa pagpanalipud niiningnahisgutang kalasangan ug andam nga moapil sa tanang buluhaton nga gipasiugda sama sa pagpananum, ug pagpanagtigum;

e. Mopahiluna sa mga kinahanganlong panahon samga konsultasyonug forum, ug muila/motudlo sa pagahimoong DENRO diha sa komunidad;

f. Mohatud dayon sa taho ug mga impormasyon ngadto sa mga nahitungdang ahensiya sa bisan uns ang mga paglapas sa balao sa kalasangan;

g. Moayuda sa pagsusi ug pag-monitor sa katikaran sa nahisgutang proyekto inubanan sa DENR ug mugahin ug pondo alang sa onoraryum sa natudlong mga miembro sa magbalantay sa kalasangan;

h. Maoy mag-una diha sa pagtukod ug barangay nursery ug moayuda sa mga gimbuhaton panahon sa perimeter survey.

BFPM Committee:

a. Mopanday ug mga plano alang sa pagpanalipod ug pagdumala sa kalasangan inubanan sa uban nga mga katambayayong;

b. Moayuda sa BLGU sa pag-ila ug paghulagway sa protektado nga luna;

c. Magambalay og pinahaom nga plano alang sa gipanalipdang luna ug makiglambigit kanunay sa CENRO ug MENRO;

d. Magmaabtikun ug mag-aktibo sa pag-apil kung adunay ipahitabo nga mga pagbansay-bansay;
e. Moayuda sa pagtukod ug Barangay Nursery ug sa pagpatubo ug mga angayan nga semilya sa kahoy ug prutas.

**Dep Ed:**

a. Magdasig sa mg bata aron mamahimong aktibo ug pagpaapil kanila sa pagpananum ug kahoy;

b. Mogahin ug pondo gikan sa mga programa isip suporta sa proyekto;

c. Mo-apil kanunay sa mga panagtigum ug mga forum.

**Tribal Council:**

a. Adunay katungod nga mahibalo sa mga karaang proyekto sulod sa komunidad;

b. Adunay katungod nga maghatag og opinion, og mga desisyon mahitungod sa buluhaton diha sa proyektong dapit;

c. Adunay kasayuran sa bisan unsang programa o proyekto sulod sa maong dapit;

d. Adunay katungod nga mailhan ug usa sa mga magbuhat og mga desisyon sa mga proyekto nga gihatag sa nagpakabanang ahensiya sa ilang komunidad;

e. Adunay katungod nga moapil og modawat sa bisan unsang proyekto mahitungod sa pagprotektar sa mga kalasangan;

f. Adunay katungod sa pag-sulog sa protektadong dapit, pero walay katungod nga mahimo sukwahi sa balaud;

g. Motabang sa pagpugong sa bisan-unsang mga illegal nga aktibidadis nga gibuhat sulod sa protektadong dapit.

**NCIP:**

a. Kasigurahan sa pag-apil sa komunidad s mga proseso sa paghimo og desisyon aron makab-ot and free and prior informed consent (PFI); 

b. Protektahan ang nag-unang katungod sa ICC-IP sa pag-implementar sa Barangay Forest Protection and Management Scheme;

**Mga Okupante:**

a. Moapil sa pagtikod, pagpanalipud, pagdumala ug pagsubay nga mga kalahukan;

b. Moapil sa pagpahitabo sa pagsukod sa luna kauban sa DENR ug MLGU;

c. Mag-mentinar ug magpanalipod sa giilang “Protected Area”.

Tungod kay adunay panginahanglan sa pagdeklara niining 36.72 ka ektarya nga mga kalasangan isip “protected area” ingon man paghatag ug katungod sa local nga panggamhanan sa barangay sa pagpatuman sa mga tahas alang sa malungtarong pagpanalipud ug pagdumala sa kalasangan.

Busa karon, sumala sa mga nalatid sa nauna, ug sa mga kasabutan nga nahipatik dinhi, ug aron sa pagpamatuod sa maong tinguha sa panaghiusa, ang mga partido nagkasabot sa pagsunod sa mga Implementing Guidelines (Annex ___) ug Site Management Agreement (Appendix ___) isip maoy basehanan sa pagdumala sa mga kalasangan.

**Mga Kausaban:**

Unsa mang mga sugyot alang sa kausaban og dugang sa mga kasabutan nga nasukip dinhi kinahanglan mahimo lamang sa kasabutan sa mga partido nga nahapiip dinhi.

**Ekeptibdad:**

Kini nga kasabutan mahimong epektibo human dayon nga kini mapermahon sa mga Partido.


**FOR. MARTINIANO G. ROTOL**  
Officer-In-Charge  
CENRO-DENR Tagum City

**FIDEL A. GILVERIO**  
Teacher In-Charge  
Dept. of Education  
Dacudao Elem. School

**HON. DELFIN D. APORBO, JR.**  
Punong Barangay/BFPMC Chairman  
Chairman  
CENRO-DENR Tagum City

**MR. JEREMIE PROBADO**  
DUBA
BEFORE ME, a Notary Public for and in the Municipality of San Isidro, Province of Davao del Norte, Philippines, this 30th day of June, 2006, personally appeared the following with their following Community Tax Certificate Numbers:

<table>
<thead>
<tr>
<th>Name</th>
<th>CTC Nos.</th>
<th>Date and Place of Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delfin Aporbo</td>
<td>03449322</td>
<td>02/18/06 – San Isidro, Dvo del Norte</td>
</tr>
<tr>
<td>Tomas R. Abelita, Jr.</td>
<td>19275008</td>
<td>01/06/06 - San Isidro, Dvo del Norte</td>
</tr>
<tr>
<td>Martiniano G. Rotol</td>
<td>15342540</td>
<td>05/05/06 - Davao City</td>
</tr>
</tbody>
</table>
Known to me and to me known to be the same persons who executed the foregoing instrument and acknowledge to me the same is their free act and voluntary deed.

This instrument refers to a MEMORANDUM OF AGREEMENT consisting of five (5) pages, including this page wherein the acknowledgement page thereof.

WITNESS MY HAND AND SEAL, on the date and place stated above.

Notary Public

Doc. No. 489 ;
Page No. 82 ;
Book No. xxx1x ;
Series of 2006 .
MEMORANDUM OF AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

This agreement made and entered into between and among:

The Department of Environment and Natural Resources, represented by the Community Environment and Natural Resources Officer, ROMEO R. TORRES, with office address at Mati, Davao Oriental, herein represented to as the DENR;

The Municipal Local Government Unit of Tubaon represented by Punong Barangay HON. ROMEO M. ROBERTO, with address at Barangay Tubaon, Tarragona, Davao Oriental, herein referred to as the Barangay LGU;

The Barangay Forest Protection and Management Committee (BFPMC) represented by CHAIRMAN HON. DANTE G. SANDUGAN, with address at Barangay Tubaon as the Community – Based Organization (CBO).

The Faith Tabernacle Church represented by PASTOR DELINO LINTUAN with address at Brgy. Tubaon; The United Pentecostal Church represented by PASTOR JOSE FELIX with address at Brgy. Tubaon; The Roman Catholic Church (GKK – Tubaon) represented by MR. AGOSTO MALINGQUIS with address at Brgy. Tubaon, herein referred to as the Religious Sector.

And

The Philippine Army represented by SGT. JONJIE DELOS SANTOS with address at Barangay Tubaon, Tarragona, Davao Oriental, herein referred as the Law Enforcing Group for Peace and Order.

Withnesseth

Whereas, Barangay Tubaon has approximately on thousand one hundred two (1,102) hectares of forestland declared as Barangay Forest Protected Zone which need to be protected because of its critical ecological functions that would affect the other sub-ecosystem in the entire barangay;

Whereas, as a result of the Barangay Land Use Planning and the formulation of the Barangay Development Plan, the Barangay LGU of Tubaon and its constituents are determined to manage these declared areas through co-management scheme;

Whereas, the DENR has devolved its forest management functions to the municipal and provincial LGU as provided in the DENR – DILG join Memorandum
Circular 98–01 and 2003-01. These circulars served as guide in forging closer alliance between the national government and the LGU towards an effective forest management at the community level;

Whereas, among those devolved functions are the identification, delineation and establishment of communal forests through appropriate co-management scheme as defined by DENR regulation (DENR-DILG JMC 2003-01)

Whereas, in cognizant with its important role in protecting the forest and rehabilitating degraded forestlands within their territorial coverage, the Barangay LGU should take an active part in this co-management scheme even if the said circular has not stipulated the forest management functions and responsibilities devolved to the barangays;

Whereas, through this co-management scheme, the Barangay Forest Protection and Management Committee was formed whose main function is to act as the lead actor/implementor in the establishment, protection and management of these identified protected areas and whose composition involves the Chairman – Dante G. Sandugan; Vice – Chairman – Alberto M. Manibad; Secretary – Alejandro T. Paloma; Treasurer – Lorenzo M. Lomocso; Members: Expedito M. Dampiganon; Purok Presidents: Ernesto Adjadan (Katabuan), Mario Dacquio (Tagot), Simon Pagutlan Jr. (Sakulip); IP Representative – Danilo Lintuan.

Whereas, the committee had already conducted specific activities related to the co-management scheme such as: Orientation on Forest Protection and Management, consultation with forest occupants/claimants together with DENR and other stakeholders.

Whereas, the parties have the following roles and responsibilities, to wit:

DENR (CENRO)

1. Shall provide technical assistance to the BFPM committee such as the conduct of perimeter survey of the identified protected area and in the conduct of seminars;
2. Shall assist BLGU in the implementation of Forest Protection and Management Scheme;
3. Shall provide planting materials of forest trees and shall assist in the propagation of forest trees in the barangay nurse;
4. Shall train and deputize identified members of the monitoring team as DENRO (Deputized Environment and Natural Resources Officer) as provide under DAO No. 41

MLGU

1. Shall allocate resources (funding support, technical support and other logistics) needed in the protection and management of the area;
2. Shall provide planting materials, specifically fruit trees, and shall assist in the establishment and asexual propagation of fruit trees in the barangay nursery;
3. Shall provide incentives, in the form of planting materials through those who are willing and who commit themselves to the project;
4. Shall allocate counterparts such as livestock dispersal and other projects which could provide them with other sources of income;
5. Shall provide counterpart funds in the provision of honorarium to deputized members of the Monitoring and Evaluation Team.

Barangay LGU:

1. Shall formulate local ordinances to declare identified forest site as protection zone and other ordinances geared to the protection, rehabilitation and management of these forest areas;
2. Shall provide copies of these ordinances to the DENR and MLGU for concurrence and adoption;
3. Shall enforce laws on forest protection, perform such other functions devolved by the DENR and shall provide manpower to assist in the conduct of perimeter survey;
4. Shall allocate budget for the protection of these forest areas and shall have an active involvement in every activities designed for the purpose such as tree planting, meeting and for a;
5. Shall facilitate during consultations, forum and shall identify proposed DENRO from the community which shall protect and monitor the delineated Forest Protection Area;
6. Shall report immediately to the concerned agency of any violation within the area and coordinated with the government agency concerned;
7. Shall assist in the monitoring and evaluation of the protect together with the DENR and shall provide counterpart funds in the provision of honorarium to deputized members of the team;
8. Shall take the lead role in the establishment of barangay nursery and provide the labor counterpart and manpower allocation in the conduct of the perimeter survey.
BFPM COMMITTEE:

1. Shall formulate and Barangay Forest Protection and Management Plan with the participation of different stakeholders;
2. Shall assist BLGU in the identification and delineation of protected area;
3. Shall implement site-specific plans in coordination with CENRO and MENRO
4. Shall perform environment functions related to forest protection and management;
5. Shall conduct regular meetings and monitoring of the project;
6. Shall actively participate during trainings and seminars and assist in the establishment of barangay nursery and in the propagation of planting materials.

RELIGIOUS SECTORS:

1. Shall take lead role in the conduct of information drives among members
2. Shall participate in regular meetings and monitoring of the project
3. Shall actively participate during trainings and seminars.
4. Shall assist in the evaluation and monitoring of the project.

PHILIPPINE ARMY:

1. Shall take lead role in maintaining peace and order and reinforcement of laws
2. Shall assist in the evaluation and the monitoring of the project
3. Shall participate in the protection and management of the protected area.

Forest Occupants:

1. Shall participate in the establishment, protection, management and monitoring activities;
2. Shall participate in the conduct of the perimeter survey of the DENR/MLGU;
3. Shall maintain, protect and manage the identified areas.

Whereas, there is a need to officially proclaim these forest areas as protection zone as well as legitimately authorize the Barangay LGU and Community-Based Organization to undertake some devolved function of the DENR in protecting and managing these forest land through a more effective “on-site” and community-based forest management scheme.
NOW THEREFORE, for and in consideration of the above premises and the mutual covenants, terms and conditions hereinafter set forth, the parties agree to consider the Implementing Guidelines (Appendix B) and the Site Management Agreement (Appendix C) to be the basis in regulating the use of the identified forest lands.

Amendments

Any proposed amendments and modification of these general agreements the said implementing guidelines and site-specific management plan shall be made only upon mutual agreement between the various parties involved.

This Memorandum of Agreement (MOA) shall take effect immediately upon the approval of the parties.

IN WITNESS WHEREOF, the parties hereto affix their signatures on this _______ day of ______________ 2006 at Barangay Tubaon, Tarragona, Davao Oriental

ROMEO R. TORRES  
OIC- CENRO

HON. DANTE G. SANDUGAN  
CHAIRMAN-BFPMC

PASTOR DELINO LINTUAN  
FAITH TABERNACLE CHURCH

PASTOR JOSE FELIX  
UNITED PENTECOSTAL CHURCH

MR. AGOSTO MALINGQUIS  
MINISTER – GKK TUBAON

SGT. JONJIE DELOS SANTOS  
PHILIPPINE ARMY

HON. ROMEO M. ROBERTO  
PUNONG BARANGAY

HON. SAMUEL L. UY  
MUNICIPAL MAYOR
DIRECTORY
FOR THE OVER-ALL IMPLEMENTATION OF THE SUSTAINABLE UPLAND DEVELOPMENT MODEL:

LEAGUE OF MUNICIPALITIES OF THE PHILIPPINES (LMP)
265 Ermin Garcia St., Cubao, Quezon City
Telefax (+632) 913-57-37 to 38; 440-7280; 440-7306
SMS: (+632)9178800337
E-mail: leagueofmunicipalities@yahoo.com ; lmpsecretariat@lmp.org.ph
Website: www.lmp.org.ph

FOR LAND USE BASED BARANGAY DEVELOPMENT PLANNING

1. VOLUNTEER WORKERS OF BONDOC PENINSULA (VWAB)
   Nabatasan St., BArangay 8, Poblacion 4311, Catanauan, Quezon Province

2. MINDANAO TRAINING AND RESOURCE CENTER (MTRC)
   Circumferential Road, BAjada, Davao City

3. MINDANAO RURAL ASSISTANCE PROGRAMME (MINRAP)
   Lower Bliss, Sainz, Mati, Davao Oriental

4. KAHUBLAGAN SANG PANIMALAY FOUNDATION
   Door 2, Diamond Apartments # 80 Km 4, MacArthur Highway, Davao City

5. INSTITUTE OF PRIMARY HEALTH CARE, INC.
   MTRC Building , Bajada, Davao City

6. ASSOCIATES FOR COMMUNITY AND ENVIRONMENT DEVELOPMENT
   (ACEDEV) Nabatasan St., Barangay 8 Poblacion, 4311 Catanuan Quezon Province

7. BALAY DABAW SUR, INC. (BDSI)
   Digos City, Davao del Sur

8. PAGLILINGKOD BATAS PANGKAPATIRAN FOUNDATION, INC. (PBPF)
   493 Mt. Apo Extension Gen. Luna St., Davao City

9 KINAIYAHAN FOUNDATION, INC.
   Artiaga St., Davao City

10. PROPOSENTS’ TECHNICAL ASSISTANCE AND MANAGEMENT CONSULTANCY SERVICES, INC. (PROTEAM)
   Juna Subdivision, Matina Davao City
   Email address: proteam.mindanao@yahoo.com

11. MANAGING ALTERNATIVES GROUP, INC. (MAGI)
    No. 44 First Avenue Juna Subdivision, Matina, Davao City
12. HORIZON INTEGRATED AND MANAGEMENT ALLIED SERVICES (HIMAS)  
   Tupi, South Cotabato

13. KALIWAT THEATRE COLLECTIVE  
   115 Pluto St., GSIS Heights Subd., Matina, Davao City

FOR UPLAND AGRICULTURAL EXTENSION

INTERNATIONAL CENTER FOR RESEARCH IN AGRO-FORESTRY (ICRAF)/WORLD 
AGRO-FORESTRY CENTER  
2F, College of Forestry and Natural Resources  
Admin. Building., UP Los Banos  
PO Box 35024, College 4031, Laguna, Philippines

Tel. 63 49 536 2925/536-7645  
Fax 63 49 536 4521  
Email: r.lasco@cgiar.org or g.acaylar@cgiar.org  
Website: http://www.worldagroforestrycenter.org/sea/ph

FOR BARANGAY FOREST PROTECTION AND MANAGEMENT

1. DAVAO PROVINCES RURAL DEVELOPMENT INSTITUTE (DPRDI)  
   1359 Sobrecarey Street, Tagum City  
   Telefax (+6384) 400-4020  
   Email: dprdi@philcom.ph

2. PEOPLE’S COLLABORATING FOR ENVIRONMENTAL AND ECONOMIC 
   MANAGEMENT (PCEEM) FOUNDATION, INC.  
   Room 204 Lee Business Corner, Juan Luna Street, Davao City  
   Telephone (+6382) 227-8774; Telefax (+6382) 227-8775  
   Email: pceemdvo@mozcom.com  
   Website: www.pceemdvo.org.ph

3. PHILIPPINE ASSOCIATION FOR INTERCULTURAL DEVELOPMENT (PAFID)  
   213 Mercedes Benz Avenue, Davao Executive Homes, Matina, Davao City  
   Telefax (+6382) 296-0407  
   Email: pafiddvo@info.com.ph

4. PRO-TEAM SERVICES, INC.  
   Room 301, 3rd floor Apartelle de Davao, No. 6 Juna Avenue, Matina Davao City  
   Telefax (+6382) 298-2566  
   Email: proteam@skyinet.net

5. TECHNICAL ASSISTANCE CENTER FOR THE DEVELOPMENT OF RURAL AND 
   URBAN POOR (TACDRUP)  
   413 Aguho corner Champaca Streets, Juna Subdivision, Matina, Davao City

6. YAMOG RENEWABLE ENERGY DEVELOPMENT GROUP, INC.  
   Room 302, GB Cam Building, Monteverde corner Alvarez Streets, Davao City  
   Telefax (+6382) 227-4031  
   yamoginc@mozcom.com
7. SILDAP – SOUTHEASTERN MINDANAO, INC.  
463 Pk. Camia, Miraufentes District, Maguipo North, Tagum City  
Telephone (+6384) 400-3561  
Email: sildapse@philcom.ph

8. PAGLILINGKOD BATAS PANGKAPATIRAN FOUNDATION (PBPF, INC.)  
493 General Luna Extension, Mt. Apo Street, Davao City  
Telefax (+6382) 226-2059; 227-2603  
Email: pbpf@dvo.info.com.ph

9. PHILIPPINE PARTNERSHIP FOR THE DEVELOPMENT OF HUMAN RESOURCES IN RURAL AREAS (PhilDHRRRA) – MINDANAO  
18-A-1, TanLeh Apartments, C. Pacana – Burgos Streets, Cagayan de Oro City  
Telephone (+638822) 722-820  
Mindanao@phildhrrra.org; phildhrrra_min@yahoo.com

10. PHILIPPINE EAGLE FOUNDATION'  
VAL Learning Village, Ruby Street, Marfori Heights, Davao City  
Telephone (+6382) 224-3021; Telefax (+6382) 224-3022  
Email: phileogl@pldtdsl.net; info@philippineeagle.org  
Website: www.philippineeagle.org

11. MOVEMENT FOR A CLEAN ENVIRONMENT AND GREEN MOUNTAIN FOREST, INC. (MAMI, INC.)  
No. 05 Medalla Milagrosa, Buhangin, Davao City

12. WATERCARE MINDANAO, INC.  
Barangay Liwanay, Banga, South Cotabato

13. KASILAK DEVELOPMENT FOUNDATION, INC.  
2nd floor, Building 5, Dole-Stanfilco Compound, Doña Socorro Belisario Heights Subdivision, Lanang, Davao City  
Telephone (+6382) 234-0341 local 4294 or 4011; Fax (+6382) 234-0241 local 4188

FOR RURAL FINANCIAL SERVICES

LEAGUE OF MUNICIPALITIES OF THE PHILIPPINES (LMP)  
265 Ermin Garcia St., Cubao, Quezon City  
Telefax (+632) 913-57-37 to 38; 440-7280; 440-7306  
SMS: (+632)9178800337  
E-mail: leagueofmunicipalities@yahoo.com; lmpsecretariat@lmp.org.ph  
Website: www.lmp.org.ph

FOR VILLAGE ENTERPRISE DEVELOPMENT

1. AD JESUM DEVELOPMENT FOUNDATION, INC.  
Sr. Bernadette Dollete, SJ  
Exec. Director  
Mati, Davao Oriental  
Tel. No. 087 811 2292
2. KALISOD MO TABANGAN KO-MICROFINANCE ENTERPRISE
   Mr. Ignacio U. Alvinzo
   Lianga, Surigao del Sur

3. AFFIRE (AUDIT FEDERATION INTERMEDIARIES IN REGION VIII)
   Mr. Vivencio Sumaylo
   L2 Bldg. A, Public Market, Ormoc City
   Tel. No. 053 560 6071 and 561 2153