

Barangay Environmental Rehabilitation and Development (BERDE): Documentation of a Demonstration Project¹

1. Managing Recreation and Green Space to Project BERDE

1.1 Issue clarification

Under phase I of the Local-EPM project, the EPM unit had two major tasks - the completion of an environmental profile (EP) and the organization of a Citywide Environmental Consultation (CC).

The EP provided baseline information on the state of the city's environmental resources and services and existing institutional arrangements for managing them. It would serve as a guide or starting point for the environmental planning and management of the city. The completion of the EP involved intensive stakeholder involvement in information collection, validation and analysis.

In the CC, public, private and community representatives came together for three days in November to discuss environmental issues and possible ways of addressing these. This consultation led to the prioritization of key environmental issues with the help of local resource persons who presented proposition papers. The following were the issues prioritized:

- ❑ Land use conversion
- ❑ Servicing unplanned settlements
- ❑ Managing recreation and green space
- ❑ Solid waste management
- ❑ Transportation and traffic review and air quality
- ❑ Managing water resources
- ❑ Institutional framework for mainstreaming EPM

The proposition paper on Managing Recreation and Green Space (Exhibit 1) was very useful in clarifying the issues and the Task Force on Green Space generally adopted the strategies proposed. The paper focused on the imbalance between man-made and natural landscapes brought by the conversion of lands into residential and commercial districts, as well as the detrimental effects of the depletion of natural resources typical in urban settings. It also suggested that while Lipa City's environmental situation is still manageable, it must adopt greening activities as early as possible to mitigate the adverse effects of industrial development and urbanization.

Green Space Task Force held meetings to refine the issue and formulate strategies. In the meetings, the group used the problem tree analysis (Exhibit 2) to identify the root problem of the issue. An organogram (Exhibit 3) was also constructed to systematize the strategies. The objective tree analysis (exhibit 4) and the SWOT analysis (strength, weakness, opportunity and threat - exhibit 5) were also used to support the task

¹ Written by Marie Antoniette V. Leomo

force's strategy formulations. To manage Lipa's green space, the Task Force brainstorming sessions agreed on the following objectives:

- ❑ The need for adequate forested area
- ❑ The importance of maintaining an adequate balance between non-living structures and greenery within the metropolis
- ❑ The development of urban farms, community forests and gardens.

and strategies:

- ❑ Reforestation and rehabilitation of Mt. Malarayat Forest Reserve
- ❑ Development of Mt. Malarayat Forest Reserve and the 115-hectare area in Dagatan and nearby barangays into a tourism and recreational area.
- ❑ Establishment of greenbelts within commercial districts
- ❑ Development of urban farms, community forests and community gardens

1.2 Selection of demo project

Task Force Green Space agreed on community-based urban greening as a demo project because the climate in Lipa was suitable for greening activities. Two proposals came up – one using Sampaguita, a flowering plant, and the other using vegetables and ornamentals (Box 1).

The Sampaguita proposal was conceived as a means of support for families who eke out a living from vending the fragrant flowers in the streets of Lipa. The flowers were brought to Lipa from San Pedro, a town in Laguna, the next province. The proposal aimed to lessen the cost of Sampaguita by making the materials available in the area.

The task force opted to implement the second proposal instead because mother plants of Sampaguita were reportedly sold only in Bulacan, making the plant material more costly because of higher travel cost.

The UNDP allotted Php900,000 as funding assistance for Lipa's demo projects. The tripartite committee made up of the UNDP, DENR-PMCU and LCP decided on which demo project to fund. The criteria for selection were as follows: whether the project was feasible; requires limited technical, financial and administrative expertise; and demands a limited area of implementation. Project BERDE was approved with a budget of Php270,000.

Box 1

**Green Space Development Task Force
Draft Project Proposal**

Project Title : Urban Barangay Green Space Development
Proponents : Barangay 06 Council
Location : Barangay 06, Lipa City
Time frame : July to December 2000
Estimated Project Cost : P40,000.00

Rationale:

The urban area is fast becoming a jungle of concrete. Green spaces should therefore be developed to offset the adverse effects of dwindling trees and greeneries. The planting of vegetables at every available space could serve this purpose and give additional income and food sufficiency.

Components:

- a. Study observation tour
- b. Information, education, communication
- c. Orientation and trainings
- d. Implementation
- e. Monitoring and evaluation

Strategies and Specific Targets:

- a. consultation / dialogue with barangay officials and sectoral representatives
- b. marketing outlet
- c. waste segregation and recycling

Expected Benefits:

- a. to minimize air pollution
- b. to give food sufficiency and additional income
- c. to improve health condition
- d. to pastly[sic] solve the waste disposal problem
- e. to green and beautify the community

Project Impacts:

- a. to create awareness on environment
- b. to foster solidarity among residents of the barangay
- c. to increase productivity

Implementors:

Barangay Council, City Agriculturist, EPM and TF, Jaycees members

Success Factors:

- a. people's participation
- b. leadership / management of projects
- c. funding
- d. appropriate intervention of EPM / task force
- e. sustainability of clean and green project

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1.3 Selection of demo project site

Barangay 6 lies at the city center with the busiest streets in Lipa. The numerous businesses that sprouted in the community led to an imbalance between non-living structures and greenery. This prompted stakeholders to describe the community as “fast becoming a jungle of concrete”.

The heat generated by the concrete landscape coupled by the lack of vegetation became unbearable especially during summer. Moreover, air pollution has become a dilemma as more diesel-run public vehicles find their way into the paved roads of this commercial district that lies at the center of the city. This increase in air pollution also heightened the incidence of respiratory diseases and other pollution-related illnesses.

Setting up the demo project in Barangay 6 was an attempt to demonstrate that urban greening was possible. The community could benefit in numerous ways if the balance between natural and man-made landscapes were restored. Plants absorb excess carbon dioxide in the air and give off much needed oxygen for people. Moreover, urban greening could become an income-generating activity and promote food availability in households. Should the project be successful, Barangay 6 located in the city center would easily attract attention and interests of neighboring communities.

Barangay 6 was chosen as pilot project site because of the high spirit of volunteerism of the residents, the willingness of stakeholders to cooperate, and the diligence and supportiveness of the barangay chairperson. Also, as many EPM staff resided in Barangay 6, the task force thought project monitoring would be made easier.

2. **Barangay 6: the demo barangay**

2.1 Brief description

Barangay 6 is one of the most urbanized barangays in Lipa City. It lies at the center of Barangays 1, 7, 8 and 11. As of the 1997 census, it had a total population of 1,190 and a total of 199 households. Socio-demographic characteristics are shown in Table 1.

Barangay 6 consists of a combination of residential and commercial areas. Though the community lies at the center of the urban district, a few trees still thrive in the area. Despite the heavy pollution brought by public transportation, the barangay is able to maintain small patches of greenery – some plants are remainders of the Local-EPM demo project, while others are personal pocket gardens.

One indicator of urbanization is the physical structures that result from the type of businesses sprouting in the community. In Barangay 6, business establishments include banks, telecommunications companies, convenience stores, auto repair shops, and bakeries. In fact, the nine banks in Barangay 6 make up one-third of the banks in Lipa City. The presence of schools further adds to the competition of business locators in the community.

Table 1. Socio-demographic characteristics of Barangay 6 residents

Indicator	Details
Population	1,190 (as of 1997 census) made up of the ff: <ul style="list-style-type: none">▪ native residents of Lipa▪ immigrants as a result of marriage or those who have set up businesses in the vicinity.▪ original residents temporarily residing in Metro Manila due to employment and are thus weekend residents in Lipa
Educational attainment	Varied: <ul style="list-style-type: none">▪ out of school youths (OSYs)▪ graduates of primary and secondary education from schools in the vicinity▪ college graduates and post-graduates from Lipa colleges or universities outside of the city
Occupation	teachers, lawyers, doctors, pilots, engineers, architects, business owners, bank managers, private and public officials, small to large scale entrepreneurs, public transportation owners and drivers, carpenters, mechanics, painters, welders, plumbers
Religion	Roman Catholics, Seventh Day Adventists, Church of Christ, Protestants, Born Again, Bible Church, Mormons, Christ is Lord
Language	Tagalog, English, elders fluent in Spanish, migrant dialects (Ilonggo, Bicol, Waray, Ilokano)

Physical structures are a mixture of modern architecture and Hispanic architecture. Modern structures were basically products of migrant influences (i.e. businesses coming into the community, individual or group immigrants from more urbanized areas, weekend residents who are Manila-based). Hispanic architecture is evident in the preserved features of houses built during the Spanish colonial period.

A prominent post-modern structure is Casa De Segunda, the home of Segunda Katigbak, the former lover of Jose Rizal, National Hero of the Philippines. The house, about a hundred years since it was built, has been preserved and is currently being used for gatherings such as social functions and conferences, seminars and workshops. The owner has decided to lend his space for BERDE activities, such as seminars and workshops, as part of his contribution to the project.

There are also idle lands in the community. Owners of these vacant spaces visit their properties once in while only to pay their taxes. These lots are left untouched as some owners have not decided on their utilization, or are waiting for their properties to appreciate. Meanwhile, this was seen as an opportunity for the Green Space Task Force to utilize these open spaces for establishing plant nurseries.

2.2 Local governance

The barangay is the basic political unit that is in-charge of the planning and implementation of government policies, programs and projects, maintenance of peace and order and the protection of the residents in the community. Officials of the barangay are elected by the residents for a four year term, while others are appointed by the sangguniang barangay or village council. Local governance is carried out by the following:

1. barangay chairman, who spearheads all barangay operations and leads the sangguniang barangay or village council;
2. seven councilors, who compose the sangguniang barangay or village council, which is the legislative body recommending ordinances to the city mayor;
3. barangay secretary, who keeps records of meetings, legal matters, civil registries and other documents;
4. barangay treasurer who manages the community's account;
5. sangguniang kabataan (SK)², or youth organization, that organizes the youth in the community for developmental projects and activities and serves as the voice of the youth in local governance;
6. barangay police or barangay tanod, who ensures the security in the community by functioning as neighborhood watchers and who often serve as traffic auxiliary brigades;
7. barangay nutrition scholar (BNS), who monitors the nutritional status of the residents (especially women, children and elderly) and links the communities with health and nutrition service providers;
8. barangay health worker (BHW), who delivers primary health services, disseminates health information, and links the community to health service providers;

² The SK is composed of a chairman and seven councilors within the age bracket of 15-21. The chairman regularly represents the whole organization in the sangguniang barangay meetings.

9. day care worker, day care aides, eco-aides, messenger, electrician, and other appointive officials as deemed necessary by the barangay chairman.

The operations of the barangay LGU are financed from its Internal Revenue Allotment (IRA) from the City government and taxes generated. It has budget allocation under the HES or Human Ecology Services for environmental maintenance and supplemental budget that it can use for special projects like BERDE. This supplemental budget was tapped soon after the termination of the UNDP grant to finance the continuation of the project for some months.

3. **BERDE: the demo project**

3.1 Stakeholder identification and mobilization

The Deputy Project Manager of the Local-EPM informed the barangay captain of Barangay 6 through phone about the demo project. A day after, together with Green Space Development Task Force coordinator, he briefed the barangay LGU officials on the demo project.

The barangay had already known about the Local-EPM program in Lipa as it was previously asked to provide information for the Environmental Profile.

On September 17, 2000, the barangay captain contacted a number of influential residents in Barangay 6, inviting them to a meeting with the EPM staff on September 20, 2000 at Casa De Segunda.

The meeting served as an orientation about the application of the EPM process in the barangay's planning activities and the selection of Barangay 6 as demo project site. The EPM staff presented a short documentary that served as an eye-opener for the residents on the threats of human activities to the environment. The short video was effective in convincing the viewers to participate in the project. Despite the low attendance in this first meeting, a core group called Luntiang Barangay 6 was formed. This consisted of a chairperson, vice-chairperson, secretary and treasurer. The core group constituted the sub-issue task force (see Diagram 5, page 41 of main report).

On September 29, 2000, the elected chairperson of the core group Luntiang Barangay 6 convened a Special Officer's Meeting together with the barangay council to change the group's chair. At that time, he also chaired the Lipa Evangelical Church (LEC), the local chapter of the United Church of Christ in the Philippines (UCCP) that would serve as project holder for Project BERDE. The core group chair relinquished his position in order to formally represent the LEC. The composition of the core group thus changed (Table 2).

コメント [BBJ1]: What happened to them after reshuffling of positions? Did they retain their positions?

コメント [BBJ2]: Is this member of project management team? Who composes the SB? Same with BDC)

コメント [BBJ3]:

Table 2: Composition of the Core Group

Name	Position	Sector	Gender
Onis Peña	project manager	Private businessman	M
Archimedes Aquino	member	Barangay Development Council	M
Architect Cesar Saludo	member	LEC (church)	M
Pastor Mario Latido	project coordinator	LEC (church)	M
Ruel Santos	member	Chairman, Green Space Development Task Force	M
Ernie Reyes	assistant project manager	Local-EPM	M

Expansion of the core group

The core group was able to tap more participants through various IEC activities. Purok or cluster leaders were invited to be part of the working group and served as link between the core group and the purok residents.

Thus, the working group was further expanded (Table 3).

Table 3. Expanded working group

Member	Sectoral Representation	Gender
Hon. Archimedes Aquino	Chairman, Barangay 06	M
Arch. Cesar Saludo	UCCP representative	M
Mr. Onis Pena	Project Manager	M
Mr. Ruel Santos	Chairman, Green Space Task Force	M
Mr. Ernie Reyes	Assistant Project Manager, LEPM	M
Rev. Mario Latido	Project Coordinator	M
Heideliza Silva	Cluster leader, Simeon Luz St.	F
Alberto Pena	Cluster leader, Rizal St.	M
Gerry Vargas	Cluster leader, G.A. Solis St.	M
Ricardo Formanes	Cluster leader, Kalipulako St.	M
Ricardo Cuenca	Cluster leader, Manalo St.	M
Dionisio Lat	Cluster leader, E. Mayo St.	M
Sanggunian and SK	Cluster leader, Commercial District	

3.2 Project planning

The core group came up with three objectives for the demo project:

- ❑ General: to develop a clean and green barangay through the concerted efforts and cooperation of the people and relevant agencies
- ❑ Specific:
 1. to earn additional income from planting vegetables, ornamentals and other plants
 2. to minimize air pollution and increase soil water holding capacity
 3. to contribute to the aesthetic beauty of the barangay
 4. to demonstrate the benefits of greening the barangay

The project manager added two more objectives. He thought that Project BERDE could serve as a proof that greening activities were possible even with minimal space

in an urban barangay. Moreover, it could foster cooperation and unity in the barangay and minimize the negative effects of partisan politics.

The core group identified a series of strategies and activities by constructing a logical framework (Exhibit 7), which summarized the goals, objectives, output and activities of the core group with the indicators, means of verification, risks and suggestions for managing these.

The core group formulated a work and financial plan to guide the implementation of the project (Table 4). Tasks, persons responsible for each task, and timetables were specified in the plan. This included the projected time and cost of implementation as well as performance indicators.

Table 4. Green Space Demo Project work and financial plan

Activities	Time Table	Location	In-charge	Budget		Indicator
				Source	Amount	
1. IEC						
Placards	30 Mar 00	Brgy 6	LEC, Project Manager	UNDP	8,500	Placards posted
1 st Barangay Assembly	Dec 00	AVR, City Hall	Local-EPM	UNDP	4,200	Assembly conducted
Stakeholders' Consultation						
▪ Private/Public School Teacher	Feb-Nov 01	Brgy 6	LEC, Project Manager	UNDP	8,400	Teachers consulted
▪ Business Establishment Locators	Feb-Nov 01	Brgy 6	LEC, Project Manager	UNDP	9,967.40	Business locators consulted
Seven Consultation Meetings with BDC and Project Mgt. Council	Feb-Nov 01	Brgy 6	LEC, CWG, EPM	UNDP	24,387	seven meetings conducted
2 nd Barangay Assembly	6 Mar 01	Brgy 6	LEC, Project Manager	UNDP	3,600	Assembly conducted
2. Capacity Building						
Group Dynamics & Team Buildings	Feb 01	DAR	LEC, EPM	UNDP	9,250	Seminar conducted
Leadership Training	Feb 01	Brgy 6	LEC, EPM	UNDP	24,840	Seminar conducted
3. Procurement of Painting Materials						
Nursery Materials	Feb-Nov 01	Brgy 6	LEC, Project Manager	UNDP	43,493.90	Materials procured
Greenhouse	Feb-Nov 01	Brgy 6	LEC, Project Manager	UNDP	26,685.45	Materials procured
4. Supplies & Materials						
Garden Tools & Materials	Nov 01	Brgy 6	LEC, CWG, EPM	UNDP	81,381.25	Materials procured
Office Supplies & Visual Aids	Oct 01	Brgy 6	LEC, CWG, EPM, Project Manager	UNDP	25,000	Materials procured
Check Requisition	Dec 01	Metrobank	EPM	UNDP	295	Checkbook required
					270,000	

3.3 Project implementation

3.3.1 UCCP/LEC: the project coordinator

The EPM unit decided to designate a project coordinator to implement the two demo projects to facilitate fund transfer and management. This would prevent the funds from entering the bureaucratic process, unlike if it were under the government's treasury.

The EPM unit sought for a strong autonomous civil society organization, particularly an NGO, to contract as project handler but none was available. The only group that closely resembled the actions of an NGO was the United Church of Christ in the Philippines that operated through its local chapter, the Lipa Evangelical Church (LEC). The UCCP/LEC had been known to conduct community-based environmental projects. Coincidentally, the administrative pastor of UCCP had experience in managing environmental projects. The EPM unit offered the UCCP/LEC the post of project holder with the administrative pastor as project coordinator.

However, UCCP/LEC was reluctant to accept the offer. Both the UCCP and the LEC chair³ admitted having insufficient experience in dealing with the bureaucratic processes in the government. Upon the prodding of the SCP national consultant who was also a UCCP member, UCCP/LEC agreed. As project holder, UCCP/LEC was in-charge of fund management, project documentation, monitoring and evaluation. The Memorandum of Agreement (Exhibit 6) describes the roles of the UCCP/LEC.

3.3.2 Project components and activities

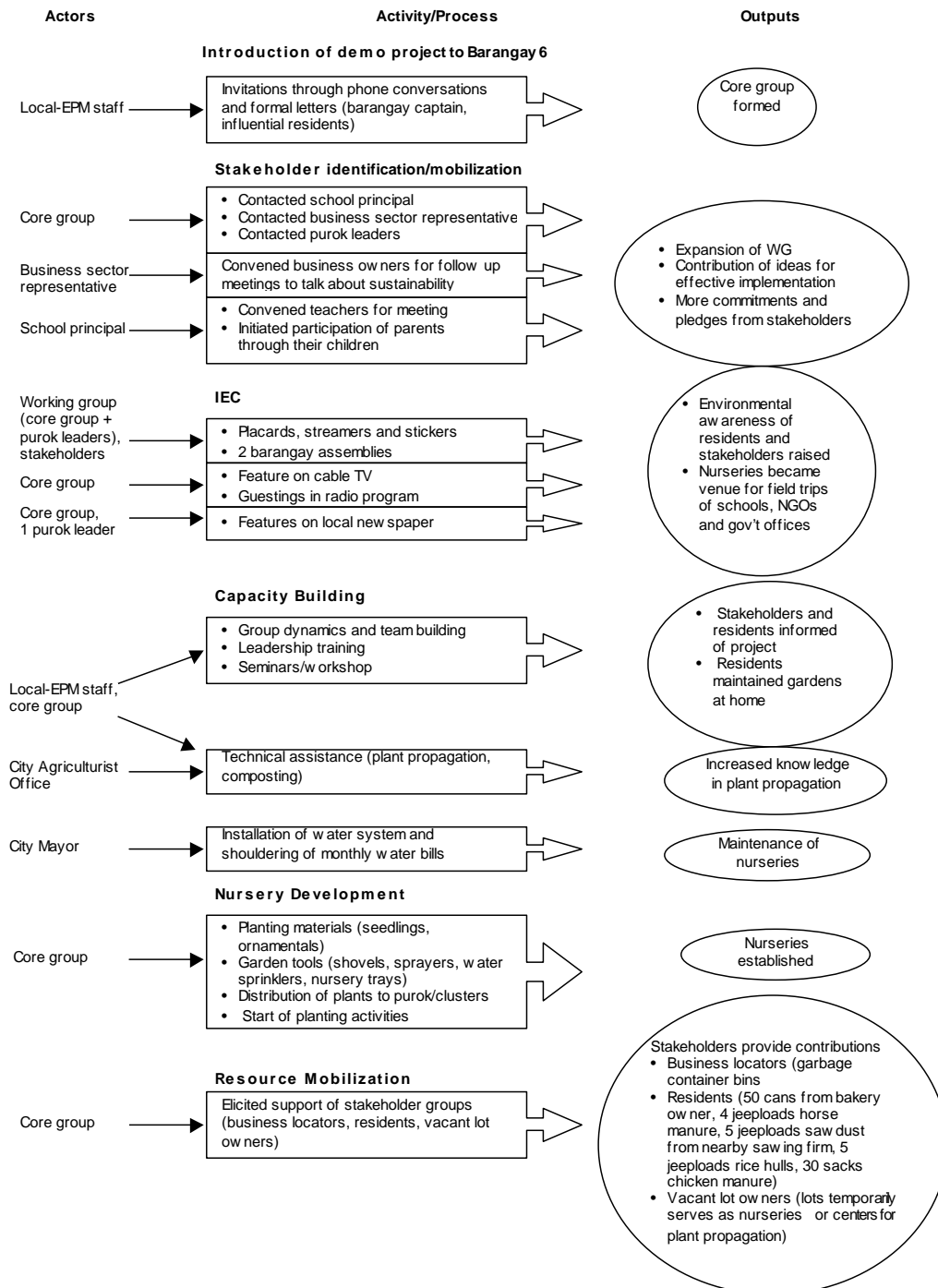
Project BERDE had three components, namely: 1) Information, education and communication (IEC); 2) capacity building; and 3) plant nursery establishment and greening (Diagram 1).

Information, education and communication activities

Radio program. Project BERDE was featured at least twice in the radio program “Panaghoy ng Kalikasan” aired every Monday morning (Box 2). The Task Forces on IEC and Green Space Development popularized the radio program. The IEC Task Force chair and the demo project coordinator hosted the program.

³ The LEC chair was the former core group leader who stepped down from his position so he could formally represent the UCCP/LEC.

Diagram 1. Project BERDE activities



Some listeners sent phone-in questions and comments, and in some instances pledged their commitment to the project on air. This was an effective medium in informing the public about the project because it also reached those who were not able to attend the meetings or barangay assemblies.

Placards, streamers and house tags. Two large streamers were placed in the plant nursery, while 10 placards were positioned in strategic places to publicize the project.

House tags were given to residents who adopted the FAITH or Food Always in the Home Program in their homes. The FAITH Program originated in Sta. Cruz, Laguna, its goal mainly to reduce the income spent on food and promote food security in all households. The house tags were meant to arouse the curiosity of passers-by, hoping to interest them as well. It was also a visible way of monitoring the number of technology-adaptors. Ten houses with FAITH tags meant that there were ten households whose level of awareness on Project BERDE was raised.



AIM, Leomo



Brgy 6 file photo

IEC materials such as FAITH placards (left) and Project BERDE streamers (right) were used to disseminate information.

Box 2**Panaghoy ng Kalikasan****November 13, 2000 EPISODE****GREEN SPACE DEVELOPMENT****Demo Project in Barangay 06**

Guests: Architech Cesar B. Saludo-UCCP

Brgy. Captain Archimedes Aquino- Barangay 06

Mr. Ruel Santos-Chairman, TF Green Space Development

Slugs:

- Green space development piloted in Barangay 06 will be carried out through the support of Barangay functionaries in the mentioned barangay and United Church of Christ of the Philippines.
- Green space development project will not only provide aesthetic beauty but also a source of food supplements and source of livelihood among the residents of Barangay 06
- Based on barangay workshop consultation, the only critical stage of urban space development is the numerous street animals like dogs and cats.
- Project ownership is also an issue. Land owners should be encouraged to initiate green space development project not just allowing the residents to use the subject lot as cite for green space development.
- The sustainable component of Green space development project will depend on the self-monitoring activities of residents of the piloted barangay.
- Believing that education plays a very important role in the sustainability of the project, there will be series of trainings to be attended by Brgy. 6 residents. This will be highlighted by team building, leadership and values orientation workshop to ensure the effective implementation of the said project.

November 20,2000 EPISODE**GREEN SPACE DEVELOPMENT****Concept and Technical Aspect**

Guest: Dr. Corazon Abansi-Dean, De La Salle Graduate School

Slugs:

- Green space development is a specialized field of urban management, which deals with the science of planning, implementing and managing the greenery in and around the urban area.
- Greening the urban area cannot be easily done, it should be applicable to the character of the community. This character refers not only to physical but also to the character of individuals in the area.
- In the downtown of Lipa City, there is a dominance of non-living structures like buildings. So the idea of urban management should be applied wherein it encourages the balance between living and non-living structures like in Singapore, "a forest within the city".
- There are three levels of addressing greening in Lipa City namely, availability of hinterlands, example of which is the Mt. Malarayat, possibility of greening, and availability of pockets of areas around urban areas, which can be converted to urban gardens.
- Rehabilitation of Mt. Malarayat reserved park is very important because of the increasing rate of deforestation so innovative projects are suggested not just conventional ones.
- One of the criteria of UNDP for supporting environmental projects is the assurance of sustainability. So the stakeholders' participation should be cleared out from the beginning.

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Barangay assemblies, mini consultations. The first barangay assembly was organized through the assistance of the principal of the Lipa City South Central School, who initially requested the schoolteachers to invite the parents of pupils who resided in Barangay 6 for a barangay assembly.

Fifty-two parents and some teachers attended the assembly. The participants were clued in on the present environmental situation in the community, the purpose of the project, the benefits it offers and other possible impacts on the community.

Parents signified their interest to join the project. They raised operational concerns such as lack of space and availability of appropriate technology. Garbage disposal, jeepney terminals, stray dogs and other concerns were also raised.

Through this consultation, the core group succeeded in mobilizing parents and their children to help the barangay tend the nurseries by watering and cultivating the plants.

The second barangay assembly was organized differently. Instead of calling the residents together, the barangay chair, project manager and some green enthusiasts went to the different puroks and spoke with the purok or cluster leaders. The project manager explained to them that each purok would be given a set of plants free of charge. The only thing asked of them was to care for and propagate the plants as their way of helping in the beautification of their neighborhood.

Stakeholders' consultation. The core group brought together representatives of various sectors in the community, managers, owners of business establishments, youth organizations, religious groups, women's groups and barangay officials, for a stakeholders' consultation on February 27, 2001. The 24 participants pledged their commitment to the project.

Initially, the participants showed their interest to the project by contributing some ideas for implementation. The following were some of the proposals brought up:

- Renaming of streets after the ornamentals planted along its sides. A person who gets lost could easily describe his/her location based on the type of plants in the vicinity.
- Selling of vegetables. The residents would be prioritized as consumers. The excess that the residents had not consumed would be brought to the market and sold to retailers.

コメント [BBJ4]: Did this materialize? How was this done?

The program manager also made a suggestion of collecting recyclable containers from the Solid Waste Management group in Barangay Balintawak. The core group would make a deal for Barangay Balintawak to dump their recyclables such as cans and plastic containers to Barangay 6 as the residents could use these for container gardening.

The business sector gave its support to the project. Digitel Telecommunications and Greenwich Pizza promised to provide garbage containers bins for the project, which they did.

The branch manager of Security Bank and Trust Company was appointed as the representative and convenor for the business sector. She has a master's degree on environment. With her background on environmental sciences and her involvement with the business sector, the core group saw her role essential to get the business locators to empathize with the community's environmental concerns. She was in-charge of convening the business owners for follow-up meetings to talk about sustainability. However, this did not materialize before the elections because some business owners were busy campaigning, while others did not want to meddle with politics because the project was identified with the city government. Business owners promised to continue their support after the elections. Support was mainly on suggestions on sustainability and compliance with the project's thrusts.

One of the proposals suggested by the project coordinator was the rent-a-plant scheme, which would target business owners and local investors as its clients. The business representatives approved the proposal. The business sector assured the core group of their support to make the rent-a-plant scheme a barangay ordinance. A public hearing was scheduled on April 18, 2001, but was postponed until after the May 14 elections. The Sangguniang Barangay reached till the last reading of the proposal. However, no follow-up was made. Because the project was short-lived, the proposal was not implemented.

Mini consultations with teachers. An assembly for schoolteachers was held on March 15, 2001. Forty-one schoolteachers and officers from the Lipa City South Central School (LCSCS) were briefed on the project concept, objectives, impacts and challenges. The project manager stressed the importance of teachers in influencing the children in environmental protection and food production. Moreover, he tried to make arrangements with the schoolteachers to schedule their students to look after the plants in the nurseries on specified days.

Capability Building and Related Activities

Group dynamics and team building. Sixteen individuals, most of them out-of-school youths and elderly, attended the Eco-Aide Training led by the EPM staff at the Department of Agrarian Reform Office. The eco-aides were tasked to regularly look after the plant nurseries, assist residents and other participants in planting activities, bring the produce to the market dealers, report damaged IEC materials such as the placards placed all over the community, and help in waste management as part of the beautification of the surroundings. The core group decided to train out-of-school youths and elderly to become eco-aides because they had lots of spare time to tend the plant nurseries. In turn, they would generate income from the project as they would get paid for their services.

The two-day training began with an exposure trip to the Lipa City dumpsite and a briefing on the garbage situation by the City Environment and Natural Resources Office (City-ENRO) staff. This activity intensified the participants' understanding of the effect of the people's activities on the environment.

A resource person from the Department of Interior and Local Government gave a lecture on the power and responsibility of the local government in environmental protection. The participants brought up the problem of having too many laws that were not being properly executed, thereby leaving the environment unprotected. The participants stressed that in the local situation; ordinances would remain ineffective until they are properly implemented.

The project coordinator talked about the principles of environmental protection and preservation including its socio-political context. He cited excerpts from the bible to prove the role of Christians in environmental protection. The project coordinator also handled a values orientation workshop that hoped to inculcate volunteerism, positivism, fairness, transparency, sincerity, integrity and accountability among the participants to develop a strong advocacy on environmental protection.

The project manager carried out a visioning exercise wherein participants were asked to illustrate how they would envision Barangay 6 after the implementation of Project BERDE.

The two-day training ended with a pledge of commitment led by the Green Space Task Force Chair. In a symbolic rite, participants attached fresh leaves on a dried branch to signify their commitment to the project.

Technical assistance. The City Agriculture Office (CAO) conducted a hands-on demonstration of the FAITH program that was popularized by the Provincial Government of Laguna. FAITH or Food Always in the Home was a strategy to promote food security in all households. The FAITH demonstration included the use of “compots” or compost (organic fertilizer) in pots and the preparation of planting media.

A technical consultant from the CAO suggested that vegetable gardening would be possible if the soil condition was improved. The core group followed the advice and also set up a trellis and two nurseries that grew vegetables. The CAO promised to provide more technical assistance and planting materials as needed by the barangay.

Procurement of plants. Members of the core group visited several nurseries and farms before purchasing the plants. They went to see the fruit and forest seedlings in Talisay, Batangas, and a farm in Calauan, Laguna. Because some of the plants were highly priced, the group thought that purchasing these might defeat their purpose of being cost-effective.

They also visited ornamental nurseries in Calauan and Los Baños where they finally decided to purchase the following: 40 bamboo plants, 500 T-plants in assorted colors, 15 golden bilaos, 50 peanut ornamentals, 25 durantas, 15 red creepers, 2 rattans, 100 white coms, 70 palmeras, 4 yellow gingers, 8 tri-colors, 10 white anastacia’s and 2 arony trues.

These plants were propagated in the Project BERDE nurseries while some were distributed to the puroks for their greening activities in their areas.

Plant Nursery Development. The core group purchased garden tools such as shovels, sprayers, water sprinklers, and nursery trays from the project funds.

The residents agreed to solicit the following materials as their counterpart: 50 cans from bakery owner, 4 jeeploads horse manure, 5 jeeploads sawdust from nearby sawing firm, 5 jeeploads rice hulls, 30 sacks chicken manure. They also helped in watering and cultivating the plants.

In addition, the project management team also purchased 10 cubic meters garden soil, 8 cubic meters sand, 1 jeep load chicken manure, 1000 clay pots, 200 plastic pots.

Digitel Telecommunications and Greenwich Pizza provided garbage container bins.

Market Linkage. Women were active in marketing. The women's groups and the female members of the barangay council maintained good connections with the homemakers. When harvest season came, the women tipped the homemakers from Barangay 6 because residents were prioritized to buy the produce at lower than market prices. The excess were brought to the public market and sold to retailers. Proceeds were used to sustain the project.

3.3.3 Project monitoring and evaluation

Eco-aides were volunteers who regularly reported for BERDE activities. They received an allowance of PhP100 a day for their assistance. The project coordinator called this "love gift". They looked after the plants in the nurseries and along the sides of the roads, and reported on damaged BERDE placards that were placed all over the community as part of the IEC campaign. They also assist in waste management activities as part of the beautification aspect of project BERDE.

Aside from the job of the eco-aides, weekly ocular inspections were conducted by the participants to track physical developments in the project. Those who planted seeds in the nurseries came back after a week to check on these.

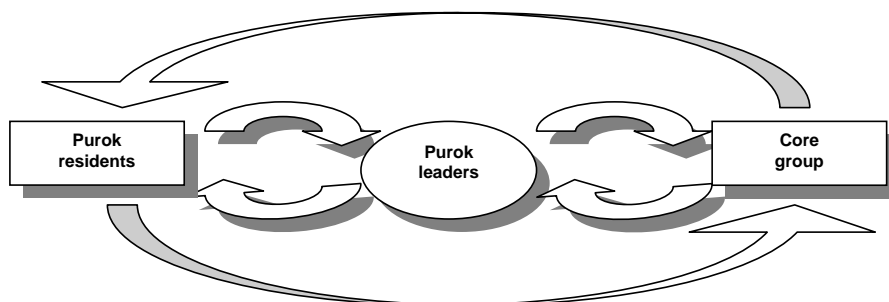
The barangay captain also kept a photo documentation of the different Project BERDE activities. Through this, he was able to capture the changes that occurred as the project proceeded.

The purok leaders also made monitoring easier. Purok leaders served as link between the project management team and the residents. They relay information from the project management team to the residents and in turn get direct feedback from the residents and report these to the management (Diagram 2).

The core group and some barangay officials also convened every Sunday afternoon at 4pm at the LEC chair's residence to update each other of the progress of the project and to serve as a monitoring and evaluation scheme.

Also, a group of students from the De La Salle University conducted a research for their thesis which focused on the assessment of the effectiveness of the EPM program, particularly Project BERDE.

Diagram 2. Feedback mechanisms



3.3.4 Issues and constraints in implementation

The entry of Project BERDE into the community was untimely because the residents were preoccupied with the elections due in six months. Some commitments made by stakeholders were withheld after the elections. The business sector postponed its regular follow-up meetings to talk about the sustainability of the project because some business owners were preoccupied with the elections, while others did not want to be seen to favor a political party because the project was identified with the city government.

Some were hesitant to take part in the greening activities until after they have seen proof that they can benefit from it.

The core group also had difficulty in convincing weekend residents, or those who are employed in Metro Manila, to join the greening activities. Door-to-door campaign was found to be ineffective because most of the time the residents were not home. Also, the owners of some vacant lots eyed for setting up the nurseries could not be contacted.

4. Project impact

4.1 Physical impact

During the project

The “jungle of concrete” underwent massive transformation at the height of the implementation of Project BERDE. The puroks were lined with greeneries. Households had ornamentals in hanging containers and pots, and grew vegetables in their yards.

A number of houses also had FAITH house tags on their gates or fences signifying their participation in the project. FAITH placards were put up all over the community.

Along the sides of the streets were ornamental plants in large green plastic pots. Vacant lots were transformed into plant nurseries where project participants planted vegetables and crops. The produce was sold at lower than market prices to the residents, and propagated seedlings and cuttings were distributed in more areas of the community.



Brgy 6 file photo

AIM, Leomo

The main nursery of Project BERDE was set up on a vacant lot at Kalipulako St. The left photo was taken in 2001 during the height of the project. Five years after, all that remained of Project BERDE in this site are the plant boxes and Solid Waste Management signage along the sidewalk (right photo). The barangay had not been able to sustain the garden due to financial constraints and other priorities.

Six years after

In 2006, most of the ornamental plants that lined the sides of the streets are left unattended. Some residents continue to prune and water the barangay’s ornamentals that stood in front of their properties. Though houses no longer have FAITH tags, some FAITH placards are still up in certain areas of the barangay. Fewer houses are

tending vegetable gardens. Sadly, the community is slowly reverting to its former dry and all-concrete state.

Six years after the implementation of Project BERDE, one purok (Simeon Luz St.) sustained the greening activities. It also helped that Simeon Luz St. was seldom passed by public transportation as this road narrows to an alley wide enough only for tricycles to pass, making it difficult even for small vehicles to maneuver in this narrow street. Therefore, it was easy to sustain greening activities in this area.



4.2 Project beneficiaries

The purok leader in Simeon Luz St., who was also the barangay secretary, was sent as the barangay's representative to the Food Fair in Lipa City on February 2006. Her exhibit showcased her container gardens of green leafy vegetables and other crops. Barangay 6 won 3rd place, next to two schools in Lipa that bagged 1st and 2nd. It was a controversial win for Barangay 6, as the other participating rural barangays stood in disbelief that an urban barangay was among the winners of the contest.

The barangay secretary managed to keep her residential area filled with lush vegetation. In March 2006, she was featured in the local newspaper, *Balikas*, for her continuous effort to support the barangay's greening activities (Box 3). Unfortunately, she was just one of the few who have truly imbibed the objectives of the project and prove that the project could be sustainable.

Box 3.

Heideliza Silva and her urban garden

From her urban garden alone, Ms Heideliza Silva, Barangay 06 secretary, earns around Php 1,500-2,000 a month from selling euphorbia, an expensive flowering plant which she sells for a modest Php 25-30 for small plants and Php 150-170 for the larger ones.

Ms Silva comments that aside from being a stress reliever and a form of relaxation, gardening may serve as an income-generating, environment-friendly activity.

Ms Silva finished Psychology at the Philippine Normal College. She used to support her studies by selling jewelry. She preferred this kind of work because she did not have a boss and she had her own working hours.

She stopped selling jewelry and went back to her hometown in Barangay 06, Lipa City when her mother passed away in 1997. Her mother was the original garden enthusiast. With all the plants she left as she passed, Ms Silva has found herself a new recreational activity.

During her stay in Lipa, she became active in the barangay's urban greening activities in 2000 when Project BERDE was implemented. As part of the barangay's campaign for environmental awareness, Ms Silva also found herself attending meetings for the Ecological Solid Waste Management Program in the city. In 2002, she became the barangay secretary.

She takes pride in her container gardens in front of her home. Despite the limited space, she has successfully grown ornamentals and vegetables in all sorts of recyclables such as cans, plastics, styrofoam or any container that she could find.

Ms Silva always remembers an old saying from her grandmother, "Igalaw ang hintuturo at nang magsawa ang nguso (Trans: Move your index finger so that your mouth never stops moving.)" which literally meant keep on planting so that you will never run out of food.

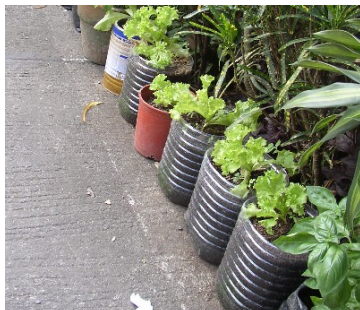
The barangay chairman considers her an asset to the community because she serves as an inspiration to the residents that maintaining even a small space at home for planting can have so much benefits for the household and for the entire community.

Ms Silva hopes that the urban greening brought by project BERDE would live on. Her efforts could serve as a demo project on its own. Ms Silva has proven that it is not impossible to manage a garden in an urban community. One could always use recyclables and all sorts of containers for planting.

The entire stretch of Simeon Luz St. remains green with lush vegetation as Ms Silva had successfully convinced her neighbors to adopt urban greening. Still, she has not yet ceased to gain more followers, as residents all over the community continue to seek her advice in managing their personal gardens.

Sources.

1. *Del Mundo, Mary Ann. "Kumikitang Libangan". Balikas. Aklat II Bilang II. 20-26 March 2006.*
2. *Personal Communication with Heideliza Silva, March 24, 2006.*



AIM, Leomo

The barangay secretary's garden shows lettuce grown in cans, plastic containers...



AIM, Leomo

... styrofoam boxes...



AIM, Leomo

...and ornamentals in recycled plastic bottles.



AIM, Leomo

Even old dish racks can serve as space savers for stacking pots.

A research study carried out by a group of De La Salle University students⁴ indicated that majority of the 52 respondents perceived aesthetic benefits, increased solidarity and social interaction, and increased morale of people as some of the results of the project.

The study also indicated that the bulk of the harvest was consumed at home and only a small part was sold to the market. This showed that the objective to increase food source at the household level was achieved, and that cash expenditures for food decreased.

Despite the IEC activities that were carried out, the DLSU students reported a low level of participation among the residents of the Barangay. Of the 1,190 individuals in the barangay (as of 1997 census), only 52 individuals were involved.

⁴ Cornejo, Maria Corina C., Jannette L. Cuna, John Dennis E. Dimayuga and Emelinda D. Hoseña. An assessment of the effectiveness of UNDP's Environmental Planning and Management Project-BERDE in Lipa City. Unpublished thesis. De La Salle Lipa Tertiary School, Lipa City.

More males were engaged in IEC activities. Females were more drawn to the gardening activities; even they participated in mixing fertilizers, a job commonly for the males because it required much physical activity.

It lasted for a year when women, children and elderly were seen working together at the nurseries. Upon seeing that, the project was thought to be a success. Some residents were even seen working in the nurseries till evening.

The Green Space Task Force chair could not help notice that the residents began to show more concern for their environment. He was fascinated when he heard some residents mention the word “degradation” and other environmental terms in their casual conversations.

4.3 Institutional impact

The barangay’s coordination with local agencies like the City Agriculturist Office (CAO) has improved. Staff from the CAO provided technical assistance from time to time, especially in monitoring the growth of the plants.

The barangay captain’s plan to allocate a percentage of the barangay’s IRA to BERDE activities did not push through due to other priorities.

There is, however, a quarterly budget allocation under the HES or Human Ecology Services for environmental maintenance in barangays.

5. Constraints in implementation

5.1 Transparency in project fund management

Some issue Task Force members complained that they had no knowledge of who held the money and how it was used hence suspicions and allegations of fund misuse abound.

Key informants said that problems arose when the LEC project director deviated from the agreed plan. Based on the agreed plan, the greening of the barangay would be done at minimal cost. The residents will be taught how to manage the nurseries and backyard gardens using recyclable containers such as plastics and cans as plant containers. But some core group members unilaterally made decisions without consulting the entire group. In one instance, the project coordinator, project manager and LEC chair allegedly traveled to Bulacan to buy several pots, when they could have used recycled containers for planting instead.

There were also allegations that the project management process was not participative. The LEC project coordinator made decisions without consulting other core group members. Allegations were also made that the process of fund disbursement was not transparent; the LEC coordinator decided on what to buy and how to use the funds.

5.2 Residents' cynicism

The barangay leadership managed to continue the project for some time after the termination of the UNDP support. But this could not be sustained due to financial constraints. Some core group members wanted to revive the project, but were afraid that their efforts would be misconstrued. If a "big move" would be initiated by one of them, people were bound to think that they had a hidden agenda or promoting vested interests. The project manager recalled that every time he made a bold step to improve the project, people thought that he planned to run for political office.

It was also difficult to remove the cynicism from the people's minds that a government project is bound to fail. Some residents at the start of the project expressed such pessimism. The lack of sustainability of the project beyond the pilot stage only confirmed their negative expectations.

5.3 Weak coordination and lack of linkages

As part of the city government's activities, the Public Information Office (PIO) was supposed to assist in the dissemination of information about the demo projects. However, this had not been successful due to the lack of coordination between UCCP/LEC and PIO.

The core group also planned to seek the assistance of more NGOs and civic organizations that showed interest in the project. However, it had not initiated formal linkages and coordination with these groups, hence no support was gained from them.

5.4 The project's financial viability

Next to being an environmental protection activity, the demo project was marketed as an income-generating activity funded by the UNDP. Its economic benefit to the community was highlighted in order to get more people to participate.

The project was able to sell the portion of the harvest that was not consumed by the residents. These were brought by the eco-aides to retailers in the public market. However, the income generated from this was insufficient to consider the project profitable. Though the harvests were plenty, their market value was very low. Moreover, market vendors haggled the price of the vegetables to cope with the stiff competition in the market. The eco-aides were pressured into selling them cheap rather than to let the harvest go to waste.

The community residents understood the UNDP support in two different ways: 1) the city government would take over the project funding after the termination of UNDP's fund support until such time that the project can financially stand by itself, and 2) UNDP would continue to support the project for as long as it was successful. To most of the beneficiaries, the UNDP support was like a dole out. They were made to think that it was an income-generating activity but the project management team failed to teach the people how to manage the funds to make the project sustainable.

After the termination of UNDP's support, the project management team members felt like they were left hanging in the middle of a bridge – they didn't know whether to move on or turn back. The involvement of the sub-issue task force ended right after the UNDP funds were exhausted in the first quarter of 2002.

Though the spirit of volunteerism was high in Barangay 6, some residents tended to rely too much on the city government and other forms of external support. This was the prevailing culture. Without support from the government, a project cannot be successful. It turned out that the heavy part in project implementation was in mobilizing the people, making them move without orders from those in position.

The barangay captain had brought up the idea to the Sangguniang Barangay of allotting a portion of the barangay's funds to continue the project. However, there were other priorities lined up for funding such as drainage and streetlights.

6. Recommendations for improvements

Some members of the working group as well as stakeholders were frustrated that the project had ceased after it was proved that greening activities were possible in an urban district where patches of land were limited.

If the project were to be revived or replicated, they suggested the following:

- ❑ Social preparation
 - i) Emphasis on community ownership manifested in terms of their willingness to contribute their time, resources,
 - ii) Implement demo projects in communities where there are strong local people's organizations. Otherwise, invest time in community organizing.
- ❑ Transparency, accountability in project management.
- ❑ Local resource mobilization. There must be resource accessing and mobilization per barangay, but the barangay leaders had no competence on this.

Exhibit 1
Proposition Paper on Managing Recreation
and Green Space Development

1. Prioritization of Issues

Issue	Contributory Factors	Priority Categorization
Destruction of forest cover due to illegal & indiscriminate cutting of trees <ul style="list-style-type: none"> Soil erosion Flooding Sedimentation of river beds Reduction of domestic water supply Air pollution 	<ul style="list-style-type: none"> Lack of awareness impending danger Negligence of DENR to monitor Inadequate CENRO personnel No other source of income Lack of SP ordinance to complement national law on regulation of tree cutting I subdivisions & other land developments Lots with title – thus, less control of government on activities 	Critical priority
Inadequate balance between non-living structures and greenery	<ul style="list-style-type: none"> Permit system – neglect on the part of government to check compliance Non-compliance to easement rules Absence of standardization/uniformity of design per area 	Critical priority
Lack of inexpensive recreational facilities associated with nature	<ul style="list-style-type: none"> Lack of government planning for recreational facilities associated with nature Non-implementation of NIPAS Act of 1992 by DENR & SB 	Critical priority

2. Prioritization of Actions

Action

- 2.1. Reforestation and rehabilitation of Mt. Malarayat Forest Reserve
- 2.2. Development of Mt. Malarayat Forest Reserve and the 115-hectare area in Dagatan and nearby barangays into a tourism and recreational area
- 2.3. Establishment of greenbelts with commercial districts
- 2.4. Developments of urban farms, community forests and community gardens

Support Requirement

- Enactment of Ordinance
- Citywide Information and Education Campaign
- Adapt water reservoir

3. Prioritization of Strategies

- 3.1. Reforestation and Rehabilitation of Mt. Malarayat Forest Reserve

Strategy	Time Frame	Legal/Institutional Requirement	Lead Agency	Support Agency
Public tree planting <ul style="list-style-type: none"> Buffer zone requirement Internalization of public tree planting as a way of life maintenance 	Rainy season Summer	MOA between the City Government and schools/other sectors (NGOs, CBOs, etc.) and land owners	CENRO / DECS	Schools, NGOs, other groups
Tree planting-gift project	Yr 2000		City Dev't Council/CENRO City Admin.	Federation of NGOs, CBOs, other groups
Adopt a Stretch Project	Yr 2000			NGOs, CBOs, other groups
Forest Nursery / District / Barangay		Model Nursery	City Agri. / Brgy.	Loren Legarda Project / FAB /

				UPLB Forestry / Provincial Agri. Office
Information Campaign	On-going		NGO	Federation of NGOs
Formation of a Special body – Mt. Malarayat Rehabilitation and Maintenance Task Force <ul style="list-style-type: none"> ▪ Designation of forest guards ▪ maintenance 	Yr 2000	Administrative Order		Tourism Office / City Legal Office / Comm. Affairs
Establishment and maintenance of an updated and efficient data base	Yr 2000		CENRO	DENR / City Agri. / Academe
Conduct of biodiversity study for both flora and fauna	Yr 2000		UNDP / CENRO / NGOs / academe	National agencies

3.2. Development of Tourism and Recreational Area

Strategies

- Consumptive Use (futuristic) → → → Private sector initiative w/
 - ✓ Hunting leases support from local
 - ✓ Shooting preserves government and
 - ✓ Fee fishing collaboration with
 - ✓ Sporting clays Tourism Office
- Non-consumptive uses (futuristic)
 - ✓ Hiking, camping, picnicking, etc.
 - ✓ Wildlife associated recreation
- Strengthen Lipa City Tourism Council
- Identify Eco-Tourism Areas First
 - ✓ Development of Halang as tourist area / as entry point to Taal View Deck
- Massive information campaign and marketing

3.3. Establishment of greenbelts

Strategies

- Maintenance of existing plant boxes
- Develop parks and plazas (pocket parks)
- Develop idle lands
- Greenscaping for commercial and industrial establishments
 - ✓ Legal requirement – greenscaping permits
- Nursery development
- Greening of Lipa Sports complex, Fernando Air Base, all school plazas and Puericulture Center
- Vegetation of vacant lots in the city

3.4. Urban farms, Community Forests and Community Gardens

Strategies

- Private participation
 - ✓ Encouragement of land owners to develop their idle hands into recreational areas
- Incentive development – Tax rebate to projects relative to development of forests
- DECS collaboration for school greening
- Botanical Garden / Herbarium in every school
 - ✓ City Botanical Garden and Mt. Malarayat
- Educational Tours
- Information campaign
 - ✓ Documentation / films
- Biodiversity study

Managing Recreation and Green Space Development

Discussion Group

Resource Person : Dr. Cora Abansi

Chairperson : Mr. Ed Mendoza

Discussant : Ms Fe Peña

Members : Mr. Jose Lambio
Mr. Wilmer Chua
Mr. Daddie Hernandez

Secretary : Ms Zobelina Tibayan
: Ms Ma. Elma Obviar

Exhibit 2
Green Space Development
Problem Tree Analysis

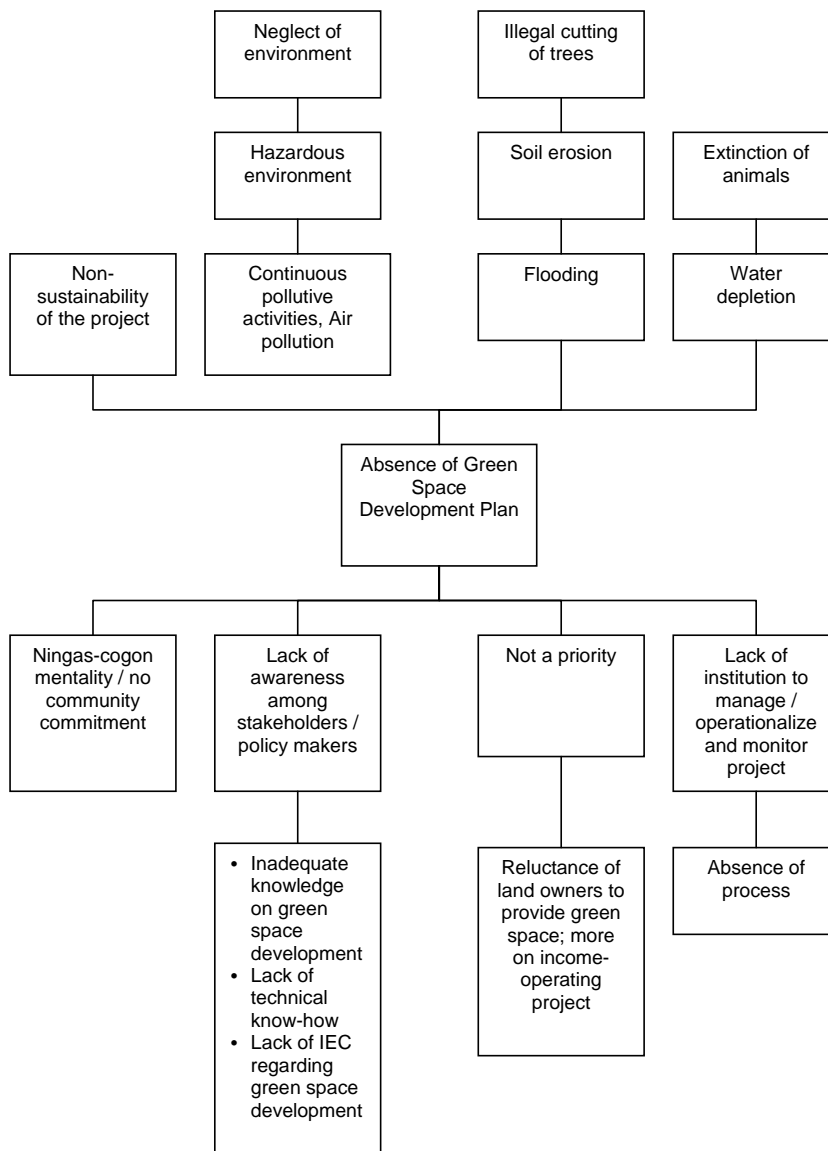


Exhibit 3
Green Space Organoram

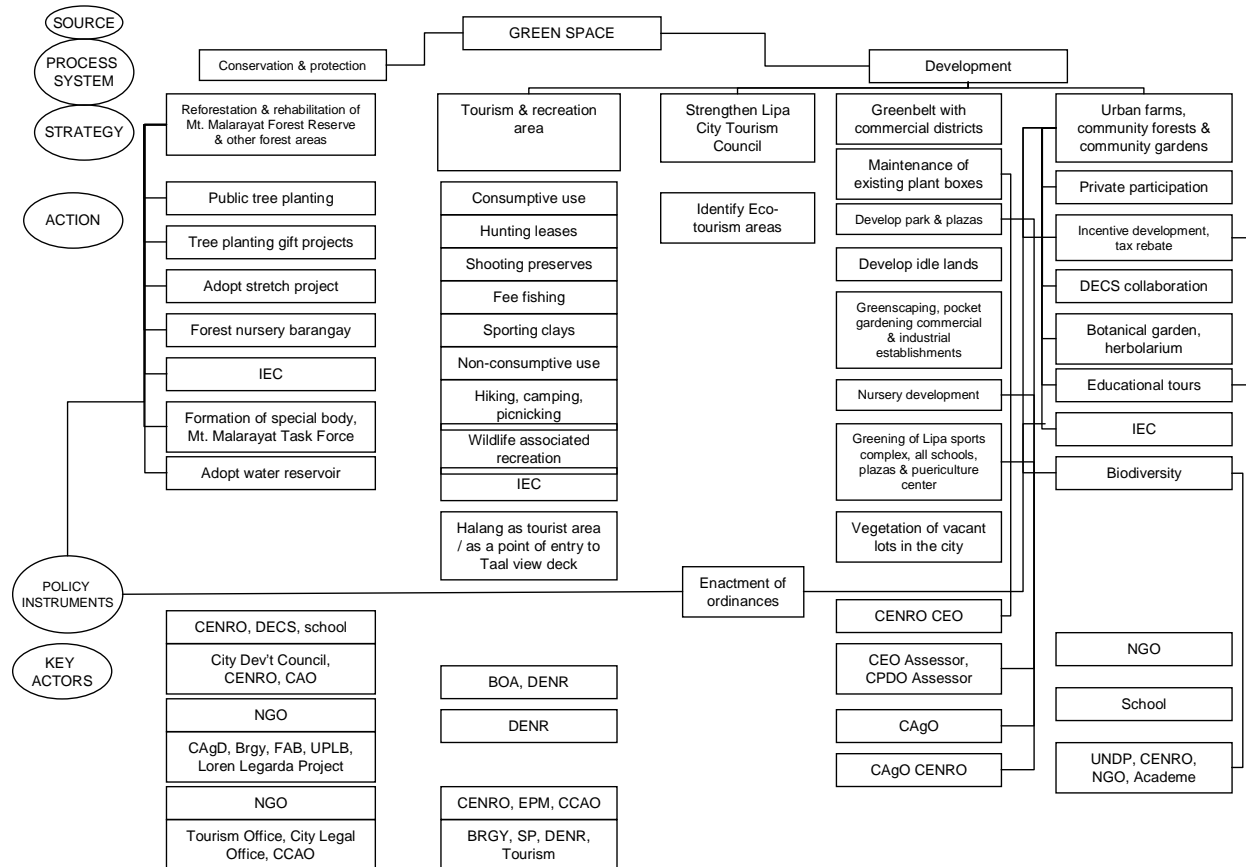


Exhibit 4
Green Space Development
Objective Tree Analysis

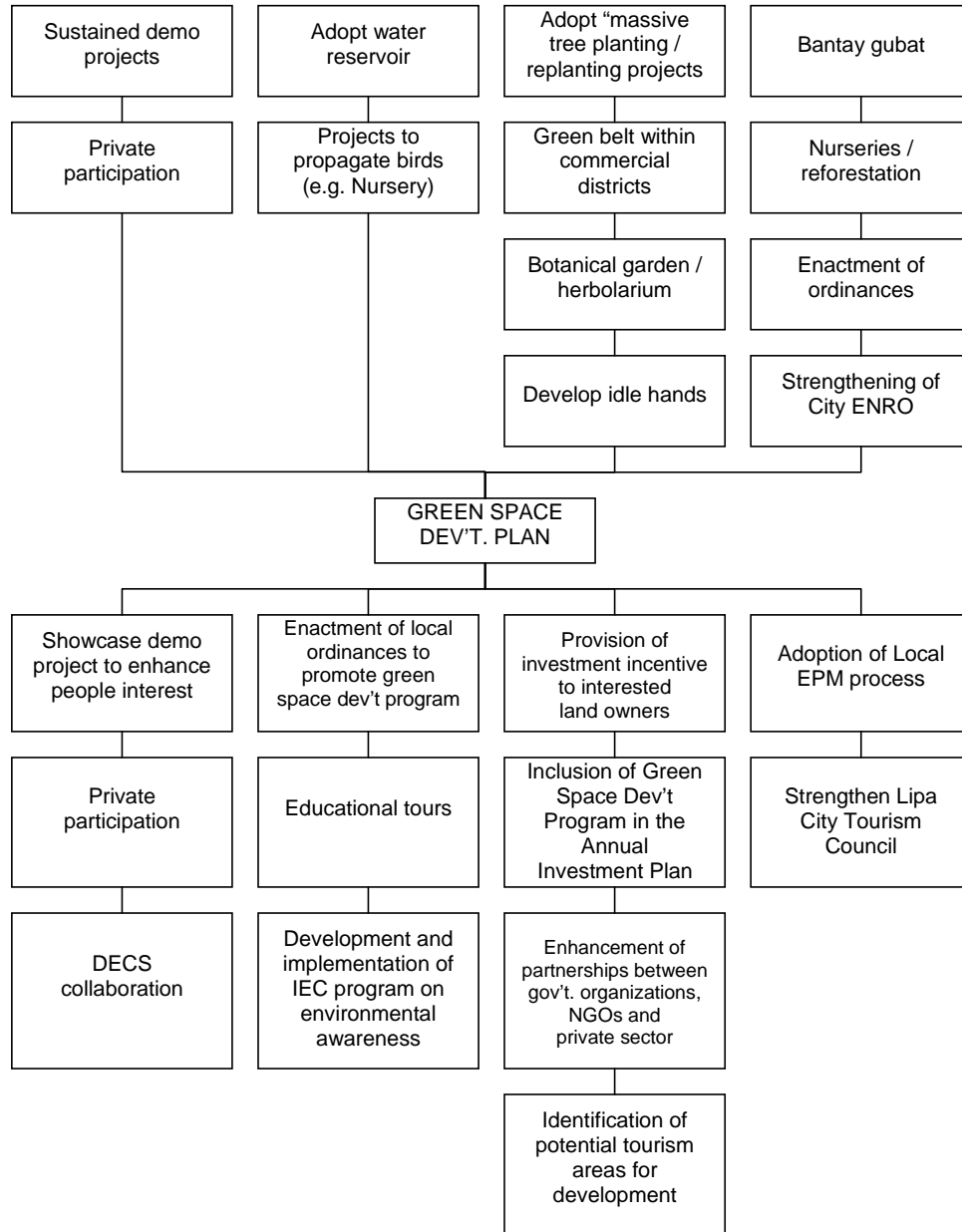


Exhibit 5
Green Space Development
 SWOT Analysis

<p>TFs Recreation & Green Space / Land Use Conversion</p> <p><i>Internal Factors</i></p> <p><i>External Factors</i></p>	<p><u>strengths</u></p> <ol style="list-style-type: none"> 1. Project Oriented 2. Full LGU support 3. Cooperation 4. Available resources 5. Legislative measures 6. Technical Know-how 	<p><u>weaknesses</u></p> <ol style="list-style-type: none"> 1. Decreasing level of commitment 2. Poor implementation of local ordinances 3. Lack of funds 4. No system yet 5. Lack of environmental awareness 6. Pending CLUP approval
<p><u>opportunities</u></p> <ol style="list-style-type: none"> 1. Available site for development 2. Networking / Linkaging 3. Tourist attraction 4. Additional revenue 5. Private sector enthusiasm 6. Available external resources 	<p><u>s-o strategies</u></p> <p>A. >Legislative Measures (resolution/ordinances) to give private sector enthusiasm</p> <p>> Strengthen the participation and involvement of NGOs and POs and private sector in the administration of Llanes Park</p> <p>> Create a task force through legislative act which majority of its members are from the private sector in the maintenance and sustainability of Llanes Park.</p> <p>> Strengthen public/private NGOs to attract tourism.</p> <p>B .> Enter into a MOA</p> <p>> Enactment of an ordinance adopting the Llanes Ecological Park.</p> <p>> Signing of MOA between the City Government and the owner of Llanes Ecological Park.</p> <p>> Tap private inst./NGOs for technical support</p>	<p><u>w-o strategies</u></p> <p>A. Institutionalization of the Lipa City Tourism Council</p> <p>B. Active participation in government planning and budgeting (in local bodies)</p> <p>C. Adopt more creative means to solicit active participation</p> <p>D. Reinforce positive attitude through media exposure/recognition</p> <p>E. Massive information campaign</p> <p>F. Provide incentives</p>

	<p>C. > Avail external resources (UNDP and others for capability building). > Tap funding institutions</p> <p>D. > Massive info dissemination > Provide investment incentives</p>	
<p><u>threats</u></p> <ol style="list-style-type: none"> 1. Vandalism 2. Pollution from LIMA 3. Natural calamity 4. Political intervention 5. Withdrawal of foreign funding 6. Lack of community participation 7. Enterprising nature of lot owners/Lipeños 8. Sustainability-support of UNDP 	<p><u>7. s-t strategies</u></p> <p>A. > Build capability to be able to cope when foreign funding is gone > Make use of technical know-how to influence enterprising Lipeños to turn to green space development > Make use of the spirit of cooperation to counteract political intervention</p> <p>B.> Enactment of Environmental Code of Lipa > Institutionalization of Local EPM > Implementation of anti-pollution law > Enact and implement legislative measures vs. vandalism, etc. > Seek sponsorship from members of Legislative body > Make use of Legislative measures to counteract vandalism, pollution from LIMA and natural calamity > Legislative measures of sustainability of the project</p> <p>C.> Establishment of “Environmental Protection Desk”</p> <p>D.> Formulate concrete project proposal</p> <p>E.> Massive Info Campaign</p>	<p><u>w-t strategies</u></p> <p>A. Encourage local officials to attend workshops/orientation</p> <p>B. Provide technical assistance to entrepreneurs regarding eco projects like nurseries, et. Al</p> <p>C. Resource addressing for IEC materials and CLUP building seminar</p> <p>D. Proper recognition</p> <p>E. Provide incentives</p> <p>F. Support “earth-day” – (April) & Pista ng Kalikasan</p> <ul style="list-style-type: none"> • Adopt non-conventional information campaign (concerts, contests, plays, etc.) • Adopt non-conventional information campaign (concerts, contests, plays, etc.) • Increase the level of commitment by making the people aware of the project’s lack of fund • Encourage the enterprising of Lipeños to turn to green space development to counteract lack of fund • Encourage participation through education to increase level of commitment • Conduct IEC training • Establish a newsletter • Prepare project proposals for funding application to financing institution • Through information campaign, increase the level of commitment to fight political intervention

Exhibit 6
Memorandum of Agreement

KNOW ALL MEN BY THESE PRESENT:

THIS MEMORANDUM OF AGREEMENT ENTERED INTO, BY, AND BETWEEN:

The Department of Environment and Natural Resources (DENR), through the UNDP-assisted project PHI/96/013 Strengthening the Local Environment Planning and Management, with principal address at Visayas Avenue, Diliman, Quezon City, herein represented by Mario S. Roño in his capacity as Project Coordinator, hereinafter referred to as DENR/UNDP Local EPM Project.

and

The local government of the City of Lipa, a recognized local government unit, granted a status of a chartered city under the REPUBLIC CT NO. 7160, with offices at Lipa City, and the Local Environmental Planning and Management Unit of the City, herein represented by its mayor and CHIEF EXECUTIVE VILMA SANTOS-RECTO, hereinafter referred to as the CITY.

and

The Lipa Evangelical Church (United Church of Christ in the Philippines), a non-stock, non-profit organization duly organized and existing under the laws of the Philippines with office address at 28 B. Morada Avenue, Lipa City and represented herein by its chairman Architect Cesar B. Saludo.

and

The Local Government Unit, specifically Barangay 06, non-stock, non-profit organization duly organized and existing under the laws of the Philippines with office address at Rizal Street, Lipa City and represented herein by its Chairman Mr. Archimedes Aquino herein after referred to as Barangay 06.

WITNESSETH:

WHEREAS, the **DENR/UNDP Local EPM Project** has granted the CITY to undertake the program entitled:

BERDE (Barangay Environment Rehabilitation and Development) an Urban Barangay Green Space Development:

WHEREAS, this project intends to undertake the project designed to develop the community.

WHEREAS, the objectives of the project are as follows:

General Objectives:

To develop a clean and green barangay through the collaboration, cooperation and concerted efforts of the people and multi-sectoral agencies.

Specific Objectives:

- a. To earn additional income from planting vegetables, ornamentals and other plants
- b. To maintain soil water holding capacity and contribute to the aesthetic beauty of the village
- c. To mobilize people towards collaboration, solidarity and social action
- d. To demonstrate the benefits of greening the barangay

Whereas, the expected outputs of the Project shall among others include:

- a. additional food source and potential income
- b. minimized air pollution and improved soil condition
- c. aesthetic benefits from cleaning and greening

- d. improved morale of people by spending more productive time and living in a well-kept and beautiful village
- e. increased social interaction and solidarity among residents

NOW THEREFORE, in consideration of the premises, the parties have mutually agreed to undertake the PROGRAM subject to the terms and conditions defined herewith:

TERMS AND CONDITIONS

1.0 THE PROJECT

- 1.1 The PROGRAM shall be called BERDE (Barangay Environment Rehabilitation and Development) Urban Barangay Green Space Development comprised of component-project as described and more particularly described in attachment 'A', hereinafter called the PROGRAM.
- 1.2 That the PROGRAM as described in the Attachment 'A' shall not be modified nor any deviation from the program design be made without prior consent of the **DENR/UNDP Local EPM Project** and other participating agencies and/or organizations.
- 1.3 That any extension of project implementation shall be requested in writing and duly approved by the **DENR/UNDP Local EPM Project**.

2.0 PROJECT FUNDS

- 2.1 Subject to the provision of this Agreement, the **DENR/UNDP Local EPM Project** has approved for the implementation of this PROGRAM the total amount of two hundred seventy thousand pesos (Php270,000.00) in accordance with the following budget (see Attachment 'A').
- 2.2 That upon signature of the Memorandum of Agreement and completion of the review of the financial system, the City through its Local EPM Unit shall receive from the PMCU of the DENR/UNDP Local EPM project the total project cost as stated in 2.1 above. The United Church of Christ in the Philippines shall in return receive the budget provisions in tranches according to the respective work and financial plans (see Annex 'A').
- 2.3 That the City shall maintain a separate bank account exclusively for this project. That all payments shall be made to the following bank account:

Bank Name	:	Metropolitan Trust Bank Company
Bank Address	:	Esteban Mayo Branch, Lipa City
Bank Account No.	:	CA#7-384-50083-4
- 2.4 That the release of payment shall be one tranche only on the total amount of Two Hundred Seventy Thousand Pesos (Php270,000).
- 2.5 That the following shall be the principal and secondary bank account signatories: Eng'r. Sonia M. Marasigan and Architect Cesar B. Saludo for all disbursements in favor of the project and in accordance with the provisions of LEPM Manual of Procedures.
- 2.6 That United Church of Christ in the Philippines and Local Gov't. Unit of Barangay 06, Lipa City shall not do any work, provide equipment, materials, and supplies or perform any other services which may result in any excess of the above-mentioned amount without the prior written agreement of DENR/UNDP Local EPM Project.
- 2.7 That any request for realignment of funds shall be done in writing, before any actual amendment may be made.
- 2.8 That any request for the use of unexpended amounts shall be made in writing to **DENR/UNDP Local EPM Project**.

- 2.9 That any unexpended amount shall be returned to **DENR/UNDP Local EPM Project** upon completion / termination of the respective projects.
- 2.10 That in case of double funding, the DENR/UNDP Local EPM Project shall immediately be stopped and upon consultation with the city shall suspend relationship with the project/recipient. What can be recovered, including equipment purchased out of the project funds, shall likewise be recovered.
- 2.11 That the City may withhold payments if the United Church of Christ in the Philippines fails to comply with any of all the terms and conditions defined in this instrument.
- 2.12 That a community revolving fund shall be established from the potential proceeds of projects of the recipients and which shall be supervised by the City Local EPM Unit.

3.0 PROGRAM AND PROJECT DOCUMENTATION

- 3.1 The **United Church of Christ in the Philippines** shall keep a separate financial record of respective component-projects to determine the accuracy and legitimacy or expenditure of the **project/program (whatever is appropriate)** funds.
- 3.2 The **United Church of Christ in the Philippines** shall make records available for the financial and operational audit.

4.0 MONITORING AND EVALUATION

- 4.1 That the United Church of Christ in the Philippines shall submit to the City Local EPM Unit narrative/progress reports on a monthly basis.
- 4.2 That the financial report shall reflect actual expenditures for the component-projects including the counterpart/contribution of the partner organizations.
- 4.3 That the United Church of Christ in the Philippines shall allow any authorized representative of **City Local EPM Unit and the DENR/UNDP Local EPM Project** reasonable access to the project partners, sites, records of the project to ascertain the progress of results of the project.
- 4.4 That every quarter and/or anytime deemed appropriate by the **City Local EPM Unit and the DENR/UNDP Local EPM Project** may undertake at its expense a monitoring and evaluation of the project.

5.0 ANNOUNCEMENT AND EVALUATIONS

- 5.1 Where appropriate, the United Church of Christ in the Philippines shall acknowledge the grant in any references made by it with respect to component-projects.

6.0 EFFECTIVITY

- 6.1 THE PROGRAM has been duly approved by the LEPM in its meeting on October 24, 2000 for a period of two months from November 2000 to December 2000.
- 6.2 This agreement shall take effect on October 27, 2000.

IN WITNESS THEREOF, the parties hereby sign this agreement this 29th day of November 2000 at Quezon City.

The LOCAL GOVERNMENT OF
LIPA CITY

BY:

HON. VILMA SANTOS-RECTO

City Mayor

ARCH. CESAR B. SALUDO

Chair, UCCP

The DENR PROJECT MANAGEMENT
COORDINATING UNIT (PMCU)

BY:

MARIO S. RONO

Undersecretary for International
Commitment and Local Government
Affairs

SIGNED IN THE PRESENCE OF:

REYNALDO L. VARDIZABAL

LEPM Coordinator

ARCHIMEDES M. AQUINO

Chair, Barangay 06

ACKNOWLEDGEMENT

(REPUBLIC OF THE PHILIPPINES)

(QUEZON CITY) s.s.

BEFORE ME, a Notary public for and in QUEZON CITY Philippines,
this 2nd day of MAY, 2000 personally appeared the following
persons with their corresponding community Tax Certificate Nos:

NAME	RES. CERT. NO.	DATE/PLACE ISSUED
HON. VILMA SANTOS-RECTO	09307888	01-05-2000 Lipa City
HON. MARIO S. RONO	11701041	04-11-2000 Calbayog City
ARCH. CESAR B. SALUDO	13976525	09-19-2000 Lipa City

Known to me and me known to the same persons who executed the foregoing
instrument and acknowledge that the same is free act and deed.

Doc No. 18B
Page No. 182
Book No. X1
Series of om

NOTARY PUBLIC
Until
ATTY. DELFIN R. AGCAOILI, JR.
PTR No. NOTARY PUBLIC
UNTIL DEC 31, 2000
Issued by RTR NO. 10951601-10-2000 O.C.
IBP NO. 4990741-18-2000 O.C.
At
TIN

Exhibit 7
Green Space Development Logical Framework

Logical Framework Part I

Goal	Indicator	Means of Verification	Risks/Constraints	Risks Management
To effectively develop and manage green space in Lipa City	<ul style="list-style-type: none"> Significant percentage of green areas People's willingness to participate 	<ul style="list-style-type: none"> Field visit/inspection Survey/interview 	<ul style="list-style-type: none"> Poor awareness among residents Indifference and low participation Low government commitment Conflicting interests Funding problem Inconsistent with other projects 	<ul style="list-style-type: none"> IEC IEC IEC IEC Resource accessing IEC

Logical framework Part II

Objective	Indicator	Means of Verification	Risks/Constraints	Risks Management
To develop a barangay demo project showcasing green space management	<ul style="list-style-type: none"> 85% of total households and establishment participated 80% of idle/vacant lots planted 50% of family budget for vegetables reduced 10% of harvests sold 10% reduction in malnourished children 5% of air pollution reduced 	<ul style="list-style-type: none"> Survey Survey and field visits Survey/interview Interview Health survey DENR air pollution indicator 	<ul style="list-style-type: none"> Low people's participation and mobilization Delayed and inadequate funding Delayed and inappropriate intervention of EPM/TF Weak project leadership and management Unsustained interests and enthusiasm 	<ul style="list-style-type: none"> IEC Resource accessing Training Training IEC

Logical Framework Part III

Output	Indicator	Means of verification	Risks/Constraints	Risks Management
Information, education and communication	<ul style="list-style-type: none"> News and information materials developed, published, released and aired Flyers distributed Billboards posted Orientation/dialogues conducted 	<ul style="list-style-type: none"> Monitoring and evaluation 	<ul style="list-style-type: none"> Inavailability of funds 	<ul style="list-style-type: none"> Systematic planning and coordination
Training	<ul style="list-style-type: none"> Trainings conducted Participants trained 	<ul style="list-style-type: none"> Monitoring and evaluation 	<ul style="list-style-type: none"> Time constraints, inavailability of trainors and speakers 	<ul style="list-style-type: none"> Systematic planning and coordination
Resource accessing	<ul style="list-style-type: none"> Adequacy and timeliness of funds 	<ul style="list-style-type: none"> Monitoring and evaluation 	<ul style="list-style-type: none"> Non-compliance to funding requirement and procedures 	<ul style="list-style-type: none"> Aggressive follow-up, coordination and supervision
Marketing support	<ul style="list-style-type: none"> Presence and number of buyers 	<ul style="list-style-type: none"> Market linkage, monitoring and evaluation 	<ul style="list-style-type: none"> Slow and inappropriate marketing support 	<ul style="list-style-type: none"> Identifying potential markets, tie-up
Commitment of EPM/TF	<ul style="list-style-type: none"> Number and frequency of visit of EPM staff 	<ul style="list-style-type: none"> Monitoring and evaluation 	<ul style="list-style-type: none"> Slow and superficial assistance 	<ul style="list-style-type: none"> Review of commitment, strict supervision and coordination

Logical Framework Part IV

Activities	Indicator	Means of Verification	Risks/Constraints	Risks Management
1) Preparation of news releases	• Number of news releases prepared	• Monitoring and evaluation	• Lack of adequate talents	• Coordinate with other units/groups
2) Conduct the ff: a) Orientation/dialogue with barangay residents b) Study tour in Sta. Cruz, Laguna	• Number of people attending	• Monitoring and evaluation	• Lack of information, enthusiasm and interest	• IEC
c) Values orientation workshop	• Number of participants to the tour	• Monitoring and evaluation	• Lack of information, enthusiasm and interest	• IEC
d) Leadership training	• Number of participants	• Monitoring and evaluation	• Lack of information, enthusiasm and interest	• IEC
	• Number of participants	• Monitoring and evaluation	• Lack of information, enthusiasm and interest	• IEC
3) Preparation/submission of project proposal	• Complete proposal submitted on time	• Monitoring and evaluation	• Lack of information, enthusiasm and interest	• IEC
4) Conduct of pledging sessions of barangay residents, business establishments and NGOs	• Number of participants/attendees	• Monitoring and evaluation	• Lack of information, enthusiasm and interest	• IEC
5) Conduct of group dynamics and team building seminar				
6) Establish marketing tie-up and conduct market promotion activities	• Number of participants/attendees	• Monitoring and evaluation	• Weak connection due to information failure	
	• Number of market/buyers identified and approached			• Aggressive marketing link

Exhibit 8
Project BERDE activity milestones

Date	Activity
Pre-implementation	
2000	Selection of Barangay 06 as demo project site; Contract signing of City Mayor and UCCP/LEP representative with Barangay 06 captain as witness
2000	Field trip to Sta. Cruz, Laguna with barangay officials, EPM and City Agriculture Office staff to observe plant nurseries
2000	Eco-seminar on Environment, DENR, Maraouy and AVR, City Hall EPM Demo Project Assembly
2000	General Assembly of Stakeholders, Environmental, EPM, AVR City Hall
September 17/20, 2000	Orientation, election of core group officers
September 29, 2000	Special Officers' Meeting (to change core group head)
October 27, 2000	Date of effectivity cited in MOA
November 13, 2000	Guested in radio program, "Panaghoy ng Kalikasan". Introduction of Green Space Development Demo Project in Barangay 06.
November 20, 2000	Guested in radio program, "Panaghoy ng Kalikasan". Discussed Concept and Technical Aspect of Green Space Development.
November 29, 2000	MOA Signing
December 14, 2000	Demo Launching
January 15-16, 2001	Eco-aides training
February 5, 2001	Guested in radio program "Panaghoy ng Kalikasan". Discussed developments of Project BERDE.
February 27, 2001	Stakeholders' Consultation
February 28, 2001	Core group spoke with business sector representative
March 1, 2001	Core group spoke with school principal
March 2, 2001	Teachers Meeting
March 4, 2001 onwards (Sundays, 4pm)	Meeting with Barangay Officials
March 7, 2001	1 st Barangay Assembly
March 8, 2001	Technical Assistance (CAO)
March 12, 2001	Panaghoy ng Kalikasan to air recent developments of IEC drive
March 15, 2001	Group Dynamics and Team Building/ PMCC meeting
Implementation	
March 27-29, 2001	Start of planting activities; technical assistance from CAO
March 2001	2 nd Barangay General Assembly
March 30, 2001	City Mayor visits main nursery and inaugurates Project BERDE
April 8, 2001	Proposal on rent-a-plant scheme
April 9, 2001	Consulted rent-a-plant scheme with business sector representative

April 18, 2001	Scheduled Public hearing of proposal with Sangguniang Barangay (rescheduled after the May 14 elections)
June 29, 2001	Project BERDE Mid-Term Report prepared by project coordinator
November 14, 2001	Seminar workshop on Formulation of ENRPM Process Documentation System
November 15, 2001	Reconvention of Planning Committee
November 16, 2001	Financial Report from January – November 2001
November 17, 2001	Meeting with Barangay Development Council to discuss about institutionalization of the system
November 20, 2001	BERDE Conference Planner meeting
November 23-24, 2001	Skills Training Workshop
November 26, 2001	Core working group meeting of EPM unit with demo barangays
November 26-27, 2001	Phase II Synthesis and Validation of Information and Documentation Workshop
November 28, 2001	“Adopt a Purok” beautification project suggested by the business sector
November 28-29, 2001	Testing and Validation of ENRPM
December 4, 2001	Drawing out Lessons and Experiences – Part I
December 5-7, 2001	Drawing out Lessons and Experiences – Part II
December 31, 2001	End of Project BERDE
Post-implementation	
January 2002	DLSU students conduct thesis to evaluate BERDE activities
February 2002	Project BERDE visited by PMCU director and Local-EPM staff at the closing/termination of the demo project on Dec 31, 2001 and was featured as a success story in 99.9 GVFM (Panaghoy ng Kalikasan)
March 2002	Field trips of different schools and private/public agencies to the main garden at J.P Rizal St.
April 2002	Project BERDE featured in local newspaper, Herald, Batangas. Entitled “Bukid sa Bayan” (trans. Farm at the heart of the City)
April 2002	Painting of flower pots, markers, waiting sheds and barangay hall
April 2002	Continued support from the City Agriculture Office through distribution of seeds
April 2002	Barangay 6 was beneficiary of JAYCEE's program Magtanim sa Barangay: Binhi para sa Mabuting Sanhi.
April 2002	Visits by DILG officials, Dept. Heads of Lipa City Gov't.
April 2002	House gardening as SK Project
May 6, 2002	Mayor gave Certificates of Appreciation to active participants