



COMPREHENSIVE PROJECT PROFILE

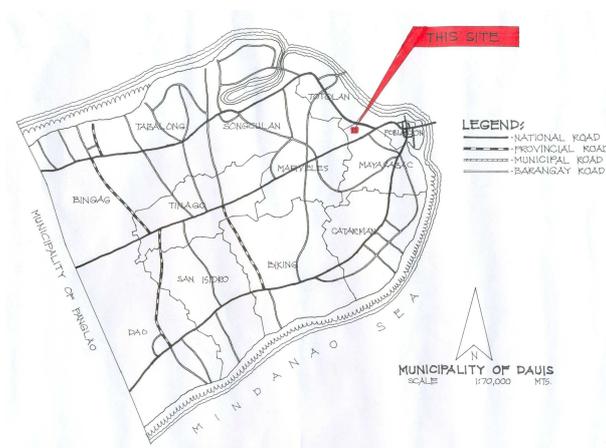
1) PROJECT TITLE: **Material Recovery Facility as an Enterprise: A Model in BIAD-I**

- 1.1 Project Location : Dausi, Bohol
1.2 Project Proponent : LGU-Dausi, Bohol

2) BACKGROUND AND RATIONALE

The Municipality of Dausi is found in the southwestern part of the Province of Bohol. In particular, it is located on the eastern part of Panglao Island and is bounded by Bohol Strait on the north; south by the Municipality of Panglao and east by Tagbilaran City. It is a fourth (4th) class municipality and is known for its historical significance as among the oldest municipalities in Bohol since 1883. The Municipality of Dausi has a total land area of 4,457.5176 hectares, which comprises ten (10) coastal barangays and two (2) inland barangays.

Figure 1. Locational Map of Dausi



These days, Dausi is the most densely populated municipality in the province with about 748 persons per square kilometer. It has become the residential haven in the province of Bohol, for both local and foreign nationals, with the working class from Tagbilaran City and neighboring municipalities as its major dwelling contributors. There is also an increase in transient population with incursion from the Badjao Cultural Minorities. It

has been projected that in the next five to ten years there is an expected increase of population of 3.36%.

Increase in population and tourism related establishments would also mean an increase in human and commercial activities. As a result there is also an expected increase in the generation of municipal wastes. As of today, Daus populace has been generating solid waste of about 10 tons/day for the entire collection area of the LGU, more or less from all barangays. It is expected that in year 2014, or after 10 years, Daus will be generating about 12.6 tons/day, alarming enough to make the necessary steps and strategies to manage these waste before it will be too late when this time comes in our locality in the future.

The tourism potential of Daus would be enhanced if ecological balance and aesthetic value of the locality is maintained specifically with sound and improved ecological management of municipal solid waste with complete engineering component, specifically the operation of **material recovery facility in every barangay and one compactor**. This facility is indeed a necessity as provided in R.A 9003 to become the transfer stations of the residual and recyclable waste. At present, the barangays of Poblacion, Catarman and Dao had started implementing solid waste management from segregation to collection. As soon as the sanitary landfill will be established, the other 9 barangays will then start collection and disposal. The use of a material recovery facility before the final disposal of residual waste as well as the processing area for the recyclable waste is indispensable to reduce the volume of waste. For now, the Municipality of Daus has seven (7) existing MRF but proper management need to be enhanced to operate it as an enterprise.

The project is primarily pointing out to address the environmental problem on proper solid waste management and sanitation. Considering that the municipality is now starting to implement some of the provisions of R.A. 9003 known as the Ecological Solid Waste Management Act of 2000, the volume of residual materials which are temporarily stored at the material recovery facilities in the barangays will be properly managed. Processing the residual waste into other uses like mixing in hollow block making and other handicrafts will eventually become an emerging enterprise in every barangay.

When proper operation and management is achieved through technical assistance from line agencies and actual observation in successful MRFs in other LGU's, the project could be replicated by the rest of the LGU's in BIAD 1.

3) PROJECT OBJECTIVES

The proposed project is in line with the millennium development goals of the national, provincial, and municipal governments that give priorities on environmental preservation and sanitation. The core objective of the environmental solid waste management (SWM) program of the Municipality of Daus is to provide its people a better quality of life through cleaner and healthier environment. This was illustrated with the LGU's vision of an environmental friendly and beautiful municipality through a well-organized and systematic SWM programs with complete logistics.

For a well-implemented solid waste management program, the engineering component shall be available especially the proper equipment and machineries to be used. The collection and disposal functional element in the program is only satisfied when proper facilities like the MRF's, the compactor and dump trucks shall be available.

The project is expected to be replicated to interested LGU's in BIAD 1.

Specifically, the project is aimed at the following objectives:

1. To request from the Department of Budget and Management, Manila for the procurement of one unit compactor to be used in collection of garbage in the municipality of Daus.
2. To acquire technologies in the operation of a Material Recovery Facility and secure proper equipment and machineries to maintain the cleanliness and sanitation of the whole municipality with well trained garbage collectors.
3. To serve as a show- window in the operation of MRF in BIAD 1 for replication.

4) PROJECT COMPONENTS

This project requires a preparation of this project proposal for approval of the funding agency. Important activities had to be defined as the major components for the realization of the project.

To attain the objectives, the project activities are break down into the following components:

1. Capability Building

Provision of technical-knowledge in proper management and operation of a Material Recovery Facility (MRF)

There will be three-day training on proper management of the operators of the 7 existing MRFs in seven barangays. Complete logistics and paraphernalia shall also be afforded to the participants. A massive reorientation and information education dissemination among the eighty nine (89) puroks in the barangay shall also be conducted to ensure segregation at household level.

For them to be more interested to undertake the project, they should also be exposed to a cross visit to other towns in the province which had advanced performance on proper solid waste management.

2. Equipment Support

To enhance the project on proper solid waste management, provision of other equipment and machineries is necessary to carry out the program such as shredder, biocompactor, hollowblock maker, crusher. Aside from the dump trucks and compactor, the garbage collectors need boots, mask, raincoats, gloves, shovel, and containers in collection. Multicabs will also be provided in the barangays to transport their residual wastes to their respective transfer stations.

3. Collection Schedule

A defined collection schedule has to be followed in a week. Every barangay should have a collection schedule thoroughly known by the residents. Collection schedule for biodegradable should be separated from that of the residuals and recyclable to encourage focus on the different kinds of waste. Only in Poblacion that biodegradable have to be collected considering that spaces in every household is limited. But for the other barangays, only residuals and recyclables are collected. The collecting route shall be established so as soon not to mislead the people.

4. Monitoring and Evaluation

This component will give an update on whether the project is doing fine all throughout the operation period. Aside from the two offices to take the lead in supervising the project namely: the Office of the Municipal Solid Waste Management Office with the Municipal Engineer as the Head, a Municipal Project Monitoring Committee shall be created to compose of the Barangay Captain, Barangay Kagawad , Chairman on Environment in every barangay, the Municipal Planning and Development Coordinator, Municipal Social Welfare and Development Officer (MSWDO), Municipal Agricultural Officer (MAO), SB Chairman on Environment, Health and Agriculture. They shall all be involved in the implementation and supervision of the project and a monthly meeting to this effect shall be conducted with the Municipal Engineer as the Chairman, to be assisted by the Municipal Planning and Development Coordinator.

V. INPUT REQUIREMENTS

1. Training Materials

In the conduct of the three-day training, management practices and processing techniques shall be delivered to target participants whom shall include the garbage collectors, MRF managers, processors and other officers of the P.O. and Women's organizations. Provision of solid waste paraphernalia shall be used in the practicum such materials will include gloves, mask, boots, raincoats, hats, shovel, weighing scale, pails, plastic bags, etc.

2. Procurement of one unit compactor

After the training, procurement of above equipment shall be conducted so proper collection and disposal can be started in all barangays.

3. Budgetary requirement and capitalization

a) For the Environmental Solid Waste Management Training

1. Training needs (LGU counterpart)

Meals and snacks (50 pax inc. speakers) at 250/day x 3	= P37,500
Training materials (annex B)	= <u>P 40,000</u>
	P 77,500

b) Procurement of one unit compactor	
1 unit compactor	P2,000,000.00
c) Procurement of 3 units shredders	380,000.00
d) Procurement of 3 units crusher	380,000.00
e) Other paraphernalia	100,000.00

Total Project Cost	P2,937,500.00
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V1. IMPLEMENTATION SCHEDULE

Activities	Year 1	Year 2	Year 3 onward
1. Preparation and approval of project proposal	December 2010 - March 2011		
2. Conduct of Training	April 2011		
3. Procurement of Compactor and shredder	April - May 2011		
4. Collection of garbage	June 2011	Onward	Onward
5. Monitoring and evaluation			Once in every quarter

V11. EXPECTED OUTPUT

1. Satisfactory Engineering Component for Solid Waste Management Program

Essential as it should be, the engineering component on solid waste management program particularly the material recovery facilities, compactor and dump truck should be in place before an efficient and effective implementation on solid waste management can be achieved. Sanitary

transport of garbage shall be maintained for a continuous disposal at the cluster sanitary landfill.

2. Attained Proper Environmental Management and Sanitation

Republic Act 9003 known as the “Ecological Waste Management Act of 2000” had ordered the municipalities to implement the provisions of the law. The Municipality of Daus is not so behind in such implementation considering that material recovery facilities in seven (7) barangays are now in place and the remaining five (5) barangays are on the process of establishing the same. Barangay Poblacion, Catarman and Dao had started collection of garbage and the residuals are brought to their MRF residual containment area. Procurement of compactor will keep the volume of garbage be compacted in a closed container, thus, we could expect a sanitary transport of waste. The operation of the material recovery facility would enhance enterprise development as well as reducing volume of waste aside from putting to an end of the solid waste management problem.

V111. PROJECT BENEFICIARIES

The direct beneficiaries of this program will be the 6,041 households of Daus with a total population of 36,525 in 12 barangays.

X. IMPLEMENTATION ARRANGEMENT

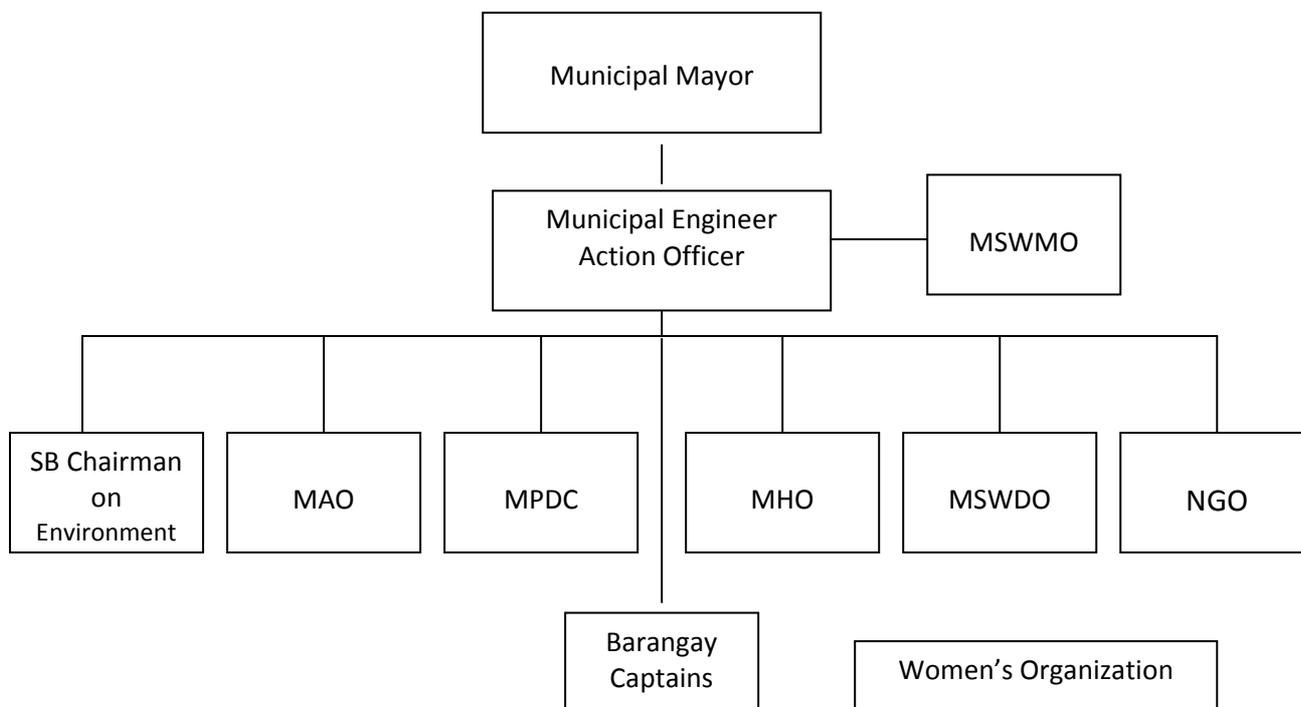
The lead implementing Office of this project will be the Office of the Municipal Engineer in coordination with the Municipal Solid Waste Management Office. The Municipal Project Monitoring Committee shall conduct a periodic monitoring and evaluation on the progress of the project and shall conduct random visits among households.

The following Offices are committed to handle the responsibilities as stated below for the implementation of the program:

Office	Responsibilities
Office of the Mayor	Oversee the implementation of the program. Conducts consultative meetings as the need arise and gets reports from Offices concerned.
Office of the Municipal Engineer	Direct supervision in the implementation of the project. Monitoring and evaluation to be conducted monthly. Facilitate in the reporting to funding agency.
Office of the Municipal Solid Waste	Handles the daily collection of garbage

Management Officer	with staff. Keeps record of the daily wastes generated and oversee the maintenance of the transport facilities.
Office of the Municipal Planning and Dev. Coordinator	Lead in the formulation of plans for solid waste management, monitor and evaluate progress and assist in the preparation of reports and conduct of meetings.
Office of the Municipal Social Welfare and Development	Lead in community organizing and social participation of the barangay.
Office of the Municipal Health Officer	Participate in the information dissemination campaign on environmental sanitation.
Office of the Municipal Agriculture Officer	Advocates on composting. Monitoring and evaluation.
SB Chairmen on Health, Environment and Agriculture	Advocates the ISWM ordinance.
Federated President, Women's Association	Participate in the information education campaign on ISWM.
Barangay Captains	Assist in the implementation of the project. Moral support and monitoring.

- **Organization Structure**



- **Institutional Mechanisms**

The Integrated Solid Waste Management Ordinance No. 06, series Of 2006 was already approved and it is now ready for implementation. Until the cluster sanitary landfill will be established, so then the ordinance in the municipality will be enforced together with the provision of sufficient engineering requirements. For now, barangays of Poblacion, Catarman and Dao started collection considering that the MRF and a multicab for collection of garbage is available. However, proper operation of the MRF's is not yet attained. The rest of the barangays shall be waiting for budget and fund sourcing for them to get multicabs.

- **Participating Government and Non-Government Agencies**

The Municipality could also tap the technical services from Non-Government Agencies and Line Agencies like the Bohol Marine Triangle and the Bohol Environment Management Office, City of Tagbilaran and LIFE Foundation.

- **Purok Leaders and Garbage Collectors**

Some 50 purok leaders and 4 garbage collectors will actively participate in the trainings and seminars on solid waste management program. They will report to MSWMO the progress and problems that will hinder the projects` objective. They are the recipient of the equipment and gears that will be provided by the projects and will ensure that these will be properly maintained.

- **Project Monitoring and Evaluation**

The project will be monitored and evaluated monthly to ensure that the expected outputs will be delivered and the objectives will be attained. The Municipal Project Monitoring Committee will do this task. They shall all be involved in the implementation and supervision of the project and a monthly meeting to this effect shall be conducted with the members of the Municipal Technical Working Group-ISWM.

The Municipal Project Monitoring Committee is composed the Municipal Engineer, Municipal Solid Waste Management Officer, Municipal Planning and Development Coordinator, Municipal Social Welfare and Development Officer (MSWMO), Municipal Agricultural Officer, Municipal Health Officer, the Barangay Captains and the Federated Women's Associations, SB Chairman on Environment, Health and Agriculture.

X1. PROJECT SUSTAINABILITY AND VIABILITY

Solid Waste Management Program

The project has been identified as a priority program to combat the increasing volumes of waste materials due to increasing population, establishments and activities in the municipality.

To sustain the operation cost of the solid waste management program, the municipality and the Barangays as provided in the ordinance shall collect the monthly garbage fees among households. The income derived from this operation is estimated P3, 000 per month at an average per barangay. Sixty per cent (60 %) of this will go to the Municipality at which it will be treated as trust fund to maintain the program including the maintenance of the transport facilities. The remaining forty per cent (40%) will serve to maintain the operation in the barangays. In addition, the MRF can generate products that can be sold to junk buyers. These consist of bottles, plastic wrappers, papers and scrap iron. Estimated monthly income from these waste products is P2000.00 per month per barangay. The operation cost of the MRF will be taken from this income.

The realization of the cluster sanitary landfill and the projects provision of necessary trainings, equipment and tools, the prompt payment of garbage fees from households are the very factors that contribute to an efficient and effective collection and segregation campaign in the locality.

X11. ESTIMATED BUDGETARY REQUIREMENTS

Estimated Project Cost

The total estimated project cost is **P2,937,500.00** that will include the purchase of one unit compactor, equipment, tools, gears, materials, and training cost.

Counterpart Funding Schedule

Item	Other Funding Institutions	Local Government Units			Total
		Province	Municipality	Barangay	
Purchase of one unit compactor	P2,000,000.00				P2,000,000
Purchase of 3 units shredders		260,000	120,000		380,000
Purchase of 3 units crushers		120,000	260,000		380,000

Training materials and equipment			P40,000	P37,500	77,500
Other paraphernalia				100,000	100,000

MUNICIPALITY OF DAUIS

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