Guidelines

Developing a Business Plan for an IRRC

April 2011

UNITED NATIONS
ESCAP
Economic and Social Commission for Asia and the Pacific

WASTE CONCERN

1. Executive Summary

Including; Objectives, Management, Financing, Strategy for Success

2. Background

2.1. Solid Waste Management Situation

Short description of the solid waste management situation in the city, including costs for the local government and households. How the IRRC can reduce costs and improve service, based on data from the baseline.

2.2. Previous experience of composting or IRRCs.

If applicable, this section shall describe existing compost plants and recycle sheds. With a focus on lessons learnt from the previous plants the section shall briefly outline:

- How waste is collected and the sources of waste.
- Compost production rate.
- Financing and management arrangements.
- Income and expenditure of the existing compost plant.
- Lessons Learnt from the existing compost plants

3. Business Idea

3.1. Aims and objectives of the IRRC.

How will the IRRC contribute towards solving issues of solid waste management in the city, what costs will it save for the city, how will it improve the lives of waste pickers etc.

3.2. Services and products provided

How will it (generally) make a profit and sustain its operations? How will waste be collected and what are the sources of waste? This section should also include a brief introduction to the compost market and what the IRRC aims to sell and to who.

4. Marketing strategy

4.1. Market developments and prices

- Overall analysis of the present demand and usage of compost in the country, including soil conditions and usage of compost.
- Planned and existing compost plants in the country.
- Regulations on compost, including the standards for marketing and producing compost, registration process of compost in the country and time required to obtain the registration. Incentives from government on compost and chemical fertilizers should be clearly documented in this section.
- Analysis of future estimated sales and growth trends for compost in the country
- Price categories, including maximum price of compost sold in the market.

4.2. Demand for Compost

This section will cover the demand and supply situation for compost in city x and its surrounding area. It shall indicate existing and potential contacts and contracts for large scale buyers, as well as pricing.

4.3. Potential Competitors

This section shall cover the capacity of the other compost plants in the region, price of compost, the competitor's strengths and weaknesses as well as competition from chemical fertilizer companies.

4.4. Marketing and Distribution Strategy

Based on the analysis above, this section will cover the strategy to be used for marketing and promotion of compost. It shall also outline how the market for compost can be increased.

- What type of promotional materials will be used, who will it target, how will the promotional materials be used and what kind of promotional activities will be carried out?
- The distribution strategy should be developed based on an analysis of the costs of distribution alternatives (direct sales/wholesale/use of marketing companies etc).
- This section will also outline the types of bags to be used and the price of the product for different market segments.

5. Management Strategy

5.1. Organizational model

- Provide a description of the IRRC management model, including an organizational chart.
- Describe the legal structure of the company (partnership, corporation, company limited by guarantee etc.), including necessary licenses and/or permits.
- Legal requirements, including necessary licenses and/or permits, regulatory requirements for starting up and operating a business.
- Provide a brief description of key managers and board members of the company.

5.2. Public Private Partnership agreements

- What management model and arrangements are there between the Municipality and the IRRC? (such as concessions, BOO, BOOT, management contracts)
- Include arrangements for collection and disposal of separated waste between the IRRC and Municipality

6. Operational Strategy

This section shall describe in detail the strategy for the establishment of new IRRC's. It will discuss location of the plants (with google map coordinates), land requirements, logistics and capacity.

6.1. Waste collection and disposal

This section will describe logistics for the collection of organic waste. The section will also describe how rejects will be collected and transported to the landfill.

6.2. Capacity of compost plant

This section shall cover how the capacity of the plant has been decided, future estimates of waste to be brought to the plant and subsequent capacity needs for the future.

6.3. Organizational Structure and Staff Requirements.

This section will describe the staff requirements at the compost plant level.

6.4. Production Costs

This section shall describe the production cost of compost per ton. The production cost can be estimated based on the experience of existing compost plants.

6.5. Quality Control

This section shall describe the quality control measures to be used to maintain the product quality. For CDM projects this section shall also outline the quality control measures to be under taken to ensure that the compost plant complies with CDM protocols to enable it to claim carbon credits.

7. Financial plan

This chapter includes cost analysis for starting up the IRRC, one year operational costs and incomes, risk analysis and projections for future financial results.

7.1. Depreciation and taxation

Please state depreciation, taxation and project discount rate

- The inflation in the country for the year July 2008 – June 2010 should be measured by consumer price index. Please mention the inflation rate for the coming years and the exchange rate against the US dollar, in a tabular form.
- In this business plan a straight-line depreciation of 15 years can be assumed (so 6.66% per year). Depreciation/fixed assets indicates the depreciation of the equipment and civil works. Consider your local tax legislation in which building can be depreciated for XX% per year and machinery equipment can be depreciated for XX % the real depreciation.
- Describe the tax structure for the composting project and mention the amount of tax to be paid by the project. Please also mention if there is any incentive on composting and sales of compost.
- Project Discount Rate. The Asian Development Bank's practice is to use a discount rate of 10% to 12% to calculate the net present value of a project in the Asian region. For this project in Sri Lanka and Vietnam you can assume a discount rate of 12%.

7.2. Investment costs

- Estimate of start-up costs, including investment cost such as land, buildings, construction and equipment.

7.3. Economic Feasibility of the IRRC

- Previous cash flow statements (if applicable)
- Summary of expected financial results[1]:
    - Projected balance sheet.
    - Profits and loss.
    - Projected, discounted cash flow statement;
- Calculate the NPV, IRR and pay back period of the project using investments, operating costs and revenues. Following internal project economic parameters to be met are: NPV: positive; IRR: exceeds discount factor; Payback between 3 - 4 years.

Income includes sales of compost, CERs (if applicable) and any collection fees. Operational costs should be divided into four main categories, and each category will have fixed and variable costs:

- Production expenses such as electricity, fuel, water and the purchase of structure material
- Labour and management, including overheads and administrative costs, if any
- Waste Collection
- Maintenance costs
- Insurances and taxes

[1] The full calculations for financial results of the composting project should be presented in the annex using Excel spread sheets for at least one year.

- Other expenses such as office equipment costs, equipment for employees and traveling, marketing costs

7.4. Certified Emission Reductions (CERs)

The composting project shall be registered under the Clean Development Mechanism of the UNFCCC. The specific methodology to be used for registering the project at the UNFCCC (AM0025 – "Avoided emissions from organic waste through alternative waste treatment processes").

The OTC price of CERs was about € 13 in March 2011. For the business case a price of € 111.5 per CER can be used. For rough estimate you may assume 0.4 tons of CERs per ton of organic waste recycled in the compost plants for the project period.

7.5. Equity and Loan Disbursements:

This section should mention the amount of equity to be disbursed by the owners as well as amount of loan to be taken including against the CERs. One example of equity is land and its price can be considered as equity.

7.6. Sensitivity Analysis

Please do a sensitivity analysis of the project assuming different price scenario for compost, waste collection fee and CERs. An example of sensitivity analysis is shown below:

Sensitivity Analysis	NPV project	IRR project	Payback project
Original scenario	€ 2,013,278	15%	7
Decrease investment costs -5%	€ 2,554,614	16%	6
Increase investment costs +5%	€ 1,471,940	14%	7
Increase investment costs +10%	€ 930,603	13%	7
Decrease OPEX - 5%	€ 2,511,939	16%	7
Increase OPEX +5%	€ 1,514,617	14%	7
Increase OPEX +10%	€ 1,015,955	13%	7
Market price compost -5%	€ 1,175,048	13%	7
Market price compost +5%	€ 2,851,507	16%	6
CERs price -5%	€1,766,236	14%	7
CERs price +5%	€ 2,260,320	15 %	5

8. Time plan and Strategy for Implementation

This section should describe project plans with time line to complete different activities of the project, including details about construction and operation of new plants along with dates.