



PRO 3 Waste Management Project

Term of reference for an individual consultant for a market and feasibility study for compost produced by organic waste in the Binh Xuyen and Vinh Tuong Districts, Province of Vinh Phuc

I. Background:

1. Gret

Founded in 1976, GRET is an international development NGO, governed by French law, which acts from work on the ground all the way up influencing policy, with the aim of providing durable and innovative answers to the challenges of poverty and inequalities. Its professionals provide lasting, innovative solutions for fair development in the field and work to positively influence policy. GRET's 771 professionals work on 150 projects per year in 28 countries

GRET acts on a range of 7 complementary themes that, together, contribute to the development of developing countries: Agriculture: Value Chains and Agricultural Policies; Cities for all and decentralization; Civic issues and democracy; Drinking Water, sanitation and waste management; Health: nutrition and social protection; Natural resource management and energy; Microfinance and professional integration;

2. Waste management project

The Waste management project, funded by "French Agency for Development" Alliance of Cooperative of Vinh Phuc, Sycotom, and city of Paris aims at contributing to better living conditions in 25 rural towns located in Vinh Phuc Province through an ambitious strategy of capacity building, investment and innovative management models tackling every dimension of solid waste management, socioeconomic, organizational, institutional and environmental components. It aims also at promoting sustainable solutions, networking between cooperatives and peer-o-peer exchanges.

Gret and his local partners, SDPE (Sub-Department of Natural Resources and Environment), Cooperative's Alliance, Song Hong Center and Institute of Water and Environment, jointly developed the project and created a project management unit to define strategic orientations and implementation of activities.

- **Area of the project:** 25 selected localities in the Binh Xuyen and Vinh Tuong District (Province of Vinh Phuc).
- **Duration of the project:** From March 2016 and will end in February 2019
- **Objectives of the project:** The project has 3 specific objectives as following:
 - **Objective 1:** Reduce saturation of landfills and negative environmental impact of treatment.
 - **Objective 2:** Enhancing the cooperative capacity to provide a professional service adapted to the expectations.
 - **Objective 3:** Produce references and promote dialogue on the sustainable management of waste issues in semi-urban areas.

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3. Study's context

The average size of the locality is around 8.000 inhabitant, the daily average production of domestic waste is around 6 tons per locality (with an average production of 0.75 kg/inhabitant/day). The main part of waste is organic (around 60 %) with a high moisture level (around 55%).

In rural localities of Vinh Phuc, environmental cooperatives are in charge of waste management. There is one specific waste management operator per localities (sometime more). This process split the total volume of waste between the 118 rural localities. Most of the time, localities doesn't share their treatment facilities to other localities (several localities have oversized incinerator not proportional to their daily waste production). This process avoid competition between operators, economies of scales for waste management and induce waste management by small scale facilities.

Currently, most of the dumping sites in the province are full or nearly full because of their small size and because they receive 100 % of the organic waste. There isn't operating composting facilities in the province. Local authorities seems doesn't understand the necessity to implement relevant treatment facilities for organic waste (incinerators are ineffective for organic treatment because of the high moisture level; dumping site are quickly full due to the important volume of waste).

Despite this, in some cases, there are several projects or ideas for developing composting facilities across the province. PRO 3 project could support these initiatives, if their sustainability is assured. That is why we want to determine whether the local context is conducive to the establishment of sustainable composting facilities as a process of treatment for organic waste.

II. Scope of work

1. Mandate of the consultant

Mandate of the consultant is mainly focused on project's objective 1: increase waste valorization in order to reduce saturation of landfills and negative environmental impact of treatment.

Under supervision of the project manager and with support of the technical officer and staff of local partners (Center Song Hong and Alliance of Cooperative), realize a market study of organic waste composting (domestic, agricultural and breeding) and determine if the context is conducive to ensure sustainability of these facilities.

2. Objectives:

- Determine whether technical, financial and institutional conditions are conducive to ensure sustainability of composting of organic waste from household, agriculture and breeding;
- Identify support activities to ensure sustainability of composting facilities.

3. Specific tasks of the consultant(s):

According to the local context, waste composition, opportunities and constraints specific to the project, the consultant must:

- a) Analyze actor's knowledge and perceptions about compost produced from domestic waste:
 - Composting as a solution for organic waste treatment (for Local Authorities and environmental cooperatives):
 - Composting understood as a process of treatment for organic matter contained in domestic waste (60% of the total weight);
 - Willingness to implement and support this process;
 - Preference for waste treatment (incineration, landfill, composting ...).

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- Compost produced from waste valorization as an organic amendment and fertilizer (for customers) :
 - Knowledge of compost as an organic amendment;
 - Preference between organic amendment and fertilizer versus chemical equivalent;
 - Willingness to purchase and use compost produced from organic waste (including domestic waste).

- b) Achievement of a state-of-the-art of small-scale and low budget composting method:
 - Composting (fast method, windrow, silo...);
 - Vermi-composting;
 - Co-composting (domestic waste mixed with agricultural and breeding waste...).

Consultant should present process and products resulting from these valorization processes, standards and regulations surrounding these practices and determine the most appropriate for this specific context.

c) Analyze the local and regional demand for products resulting from these valorization processes. This analysis of demand will have to be quantitative (quantity, price per unit) and qualitative (specification of the products, preference between organic and chemical products). Define the demand's specificities (specification, packaging ...) according to its different constituent segments: (horticulturist, market gardeners, households, farmers ...). This analysis should identify accurately the demand groups to be targeted and its specificities and expectations.

d) Analyze the local and regional supply of products resulting from these valorization processes: This supply analysis should be quantitative and qualitative. The analysis of the offer should identify the marketing channels, market leaders (organic and chemical), sales prices, volumes produced and sold locally and outside the region. Competition between organic products and chemicals (differences in price per hectare, yield, etc.).

- e) In conclusion, consultant will have to define if the context is favorable to the development and the sustainability of organic waste composting. His opinion should be motivated by the data from the study.

If the context is favorable, the consultant should recommend a composting process that meets the market's expectations and affordable according to the capacities of environmental cooperatives. Consultant should define supporting measures to be implemented for environmental cooperative training and awareness of local authorities and potential customers.

4. Methodology (Following methods are recommended but not limited):

- Kick of meeting with the project holder in Vinh Phuc;
- Overview of the existing composting facilities and/or opportunities (Composting facilities in Thanh Lang and Tan Phong, valorization of breeding waste in Vinh Thinh, biological farm opportunities in Gia Khanh...);
- Interview with farmer's associations, department of agriculture, environmental cooperatives...
- Interview with organic and chemical fertilizer and amendment supplier, wholesaler (Viet Delat Industrial Co Ltd, Thien Thanh International Export and Import Company Limited...;
- ...

5. Supporting team

Consultant may involve supporting team to carry on this study. The cost of the mobilization of supporting team will be funded by the project.

Composition of the supporting team:

- 1 Technical officer of the PRO 3 project (half time);
- 2 staffs from Song Hong Center (half time);
- 2 staffs from Alliance of Cooperative.

6. Means available

The PRO 3 project is based on 2 different offices:

- 1 in Hanoi (headquarter of Gret in Vietnam);
- 1 in Vinh Yen (Project office in Vinh Phuc).

During his/her mission, the consultant(s) could use the project office in Vinh Yen.

7. Documents for consultant:

Consultant can use different documents produces by the PRO 3 project or by the previous project made by Gret in Vietnam:

- PRO 3 project document;
- Data produced by the project during a baseline survey in 118 rural localities of Vinh Phuc in September 2016. For each localities, the survey were involved by local people committees, environmental cooperative and manager of dumping site.
- Diagnosis of waste management in 50 localities of Vinh Phuc made in 2014;
- Domestic waste characterization report in 4 localities of Vinh Phuc made in 2016;
- Diagnosis of environmental cooperative of Vinh Phuc made in 2016.

III. Deliverables

- Report on market opportunities;
- Feasibility of implementation of composting facility as organic waste treatment process.

IV. Schedule and duration of the mission:

Consultant's mission begins in March 2017 for maximum 20 working days.

V. Requirements for consultant

- Vietnamese national
- A Master Degree in Agriculture Environment, Economics and Development studies
- Proven experience in recycling and valorization of organic waste
- Experience and/or skills in business plan making and commercial and industrial approach
- Good communication and presentation skills.
- Good verbal and written English
- Excellent computer skills (Word, Excel, PowerPoint, ...)
- Experience in working with NGOs, CSOs and Cooperatives is an advantage.

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VI. Information needed for tenders:

- Planning of the mission
- Methodology.
- Detailed budget

Tenders should be in English and the price in VND.

Deadline for submission of tenders: **24 February 2017**

VII. Contact

Interested candidates please send CV together with required documents to following email gretvn@gret.org.vn; and nguyen_huu_ninh@gret.org.vn