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**TO:** Solid Waste Management Select Committee      **MEETING:** May 9, 2019

**FROM:** Larry Gardner  
Manager, Solid Waste Services      **FILE:** 5365-03

**Subject:** Regional District of Nanaimo Application for Continued Participation in Vietnam Solid Waste Management Project Sponsored by the Federation of Canadian Municipalities

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## **RECOMMENDATIONS**

1. That the Board endorse continued participation in the Federation of Canadian Municipalities' Vietnam Municipal Solid Waste Management Project from June 2019 to March 2021; and,
2. That the Board approve of Larry Gardner, Solid Waste Manager, to participate as part of the Canadian Technical Advisor team.

## **SUMMARY**

The Federation of Canadian Municipalities (FCM) initiated the *Improved Municipal Solid Waste Practices to Reduce Short-Lived Climate Pollutants in Vietnam Project*, a three-year, \$1,000,000 project funded by Environment and Climate Change Canada. The purpose of the Project is to assist Vietnamese cities in building capacity to better manage their municipal solid waste.

For Step 1 of the Project, Larry Gardner, Manager of Solid Waste Services at the Regional District of Nanaimo (RDN), was selected as one of three Canadian Technical Advisors for the Project. With approval from the RDN Board, Larry Gardner spent three weeks in March 2019 assisting two Vietnamese cities in assessing their municipal solid waste management practices, identifying opportunities for improvement, and developing a workplan. Detailed in Attachment 1, the project included meetings with national ministries, including the Ministry of Natural Resources and Environment, to advance Extended Producer Responsibility, make improvements to plastics management, and develop the circular economy.

FCM has just released a *Call for Expressions of Interest* (Attachment 2) recruiting two Canadian municipalities to participate in continuation of the project between June 2019 and March 2021. The specific contributions being requested of the municipalities are to:

- a) Provide technical staff qualified in municipal solid waste management as volunteers to participate in up to two missions of approximately two weeks in Vietnam to advance the projects developed in Step 1; and,
- b) Host a study program in the spring of 2020 for a delegation from Vietnam.

## **BACKGROUND**

The *Improved Municipal Solid Waste Practices to Reduce Short-Lived Climate Pollutants in Vietnam Project* is implemented by FCM and the Association of Cities in Vietnam (ACVN). The Project is financed by a \$1,000,000 (Canadian dollars) contribution by Environment and Climate Change Canada (Global Affairs Canada) as a partial fulfillment of the Government of Canada's commitment to assist countries to reduce green house gas emissions in accordance with the Paris Agreement. The Project term is between April 1, 2018 and March 31, 2021.

The project supports two medium-size cities in Vietnam – Bắc Giang in northern Vietnam, and Hội An in central Vietnam. By collaborating with Canadian local government staff, the Project's goal is to implement innovative pilot initiatives that contribute to the reduction of short-lived climate pollutants by improving practices in municipal solid waste management.

The project is being completed in two steps summarized below, and explained in additional detail in the following sections of the report:

- *Step 1:* Conduct discussions with national level agencies to advance waste management initiatives, provincial level government to reach agreement on the objectives of the activities of the project, and establish work plans with two Vietnam cities.
- *Step 2:* Provide technical staff qualified in municipal solid waste management as volunteers to participate in up to two missions of approximately two weeks in Vietnam to advance the projects developed in Step 1; and, host a study program in the spring of 2020 for a delegation from Vietnam.

### **Step 1: Project Involvement to Date**

Representing the RDN and the FCM, Larry Gardner participated as one of three Canadian Technical Advisors to the project. The other two advisors were:

- *Doug Hickman, Mission Team Leader* – Principal of PHA Consulting Associates located in Cannin, Nova Scotia. Doug has 35 years of experience in the solid waste sector, and has over 25 years of experience doing international work in more than 45 countries.
- *Ben Van Nostrand* – Team Leader, Environment Health Services, with the Columbia Shuswap Regional District. Ben has over 20 years of experience in waste management planning, managing solid waste facilities, as well as specialize knowledge in emergency response. Columbia Shuswap Regional District is proceeding with an application to continue with the project.

From March 5 to 24, 2019, the Canadian Technical Advisors offered expertise through the following list of tasks. Attachment 1 provides a table giving further details of the mission agenda, activities, results and follow up actions.

### ***National Level***

The Canadian Technical Advisors team met with the following national level agencies:

- *Ministry of Natural Resources and Environment:* Discussed Extended Producer Responsibility, improvements to plastics management, and development of the circular economy.
- *Ministry of Science and Technology:* Learned about their role in setting and monitoring waste sector standards, and evaluated and recommended waste sector technology.

- *Ministry of Agriculture and Rural Development:* Learned about their role in regulating compost and organic fertilizers.

### **Provincial Level**

The Canadian Technical Advisors team met with representatives of the Province of Quảng Nam, and the Province of Bắc Giang, to discuss the project and seek agreement of the project's objectives and activities. Provincial governments receive technological proposals related to waste which propose public-private partnerships, and there is confusion around how to determine which technologies are more appropriate and the cost-revenue structures. The project is assisting in this area through the development of a technology manual.

#### **City of Hội An (Province of Quảng Nam)**

The Canadian Technical Advisors team met with AVCN representatives and conducted site visits to develop the following work plans:

- *Landfill Rehabilitation and Gas Control:* Stakeholders stated a preference for the landfill be turned into a city forest. Accordingly, plans are made to dredge a river, and using the dredged material to rehabilitate the landfill with a biocover to establish a forest. Designs should be completed by October 2019, with construction starting in 2020. A landfill survey will be completed to determine gas generation.
- *Enhanced Composting:* Development of a pilot project to educate and assist residents to source separate, with door to door collection of carts to allow for better control over the quality of material collected. The pilot project will be slowly expanded over time to allow for adaptations and adjustments.
- *Municipal Solid Waste Strategy:* Development of a strategy for the management of waste in Hội An. The strategy will link to the intention of the Province of Quảng Nam to establish a regional waste disposal facility to serve the Province.

#### **City of Bắc Giang (Province of Bắc Giang)**

The Canadian Technical Advisors team met with AVCN representatives and conducted site visits to develop the following work plans:

- *Gas Control and Landfill Rehabilitation:* Establish final grades and a phase development plan, and establish concept level designs for a passive collection system using a biofilter and a biofilter cap.
- *Composting Demonstration:* Integrate source separation of the existing waste collection system in the Dong Son commune, and establish a demonstration compost facility.
- *Municipal Solid Waste Strategy:* Review the existing Provincial strategy from the perspective of green house gases in the waste sector. Develop a waste strategy for the city on the basis that the existing waste disposal site will continue to function.

### **Step 2: Project Continuation**

FCM is currently recruiting two Canadian municipalities, to join a Canadian Technical Advisors team, as part of the Vietnam Municipal Solid Waste Management Project (VnSWM). The *Call for Expressions of Interest* is appended as Attachment 2. The Canadian Technical Advisors team will assist Vietnamese counterparts over a period of 18 months to implement innovative pilot initiatives.

As a participate in Step 1, the RDN is already tentatively included in the application process and is subject to a Board decision for continuation with the project.

The objectives of Step 2 are described in more detail below.

### ***Technical Exchange Missions to Vietnam***

The cities of Bắc Giang and Hội An will be undertaking a series of activities in Vietnam with VnSWM support. The Canadian Technical Advisor will work with local Vietnamese experts and city staff to plan and deliver technical assistance.

Canadian Technical Advisors are expected to participate in up to two missions between May 2019 and March 2021. Each mission to Vietnam will consist of approximately two weeks in-country, and entail preparation and follow-up reporting. Missions will include tasks such as the following:

- Provide technical assistance to Vietnamese counterparts to carry out landfill rehabilitation and gas control, organic waste separation and composting and/or municipal solid waste management strategic planning;
- Conduct workshops/seminars on topics of relevance to Bắc Giang and Hội An; and
- Participate in a final mission (Feb/March 2021), including the final knowledge sharing event and assist with project evaluation.

### ***Host a Study Program for a Vietnamese Delegation***

VnSWM has planned a visit to Canada for municipal solid waste management practitioners from Bắc Giang, Hội An and ACVN in spring 2020. The objective of this study visit is for Vietnamese delegates (approximately six), along with one FCM staff, to visit the Canadian host municipality for one to three days. Vietnamese delegates will learn Canadian best practices in municipal solid waste management strategic planning, landfill rehabilitation and gas control, waste separation and composting. The responsibilities in hosting the study program include:

- Develop a study program and itinerary based on the objectives provided by FCM;
- Coordinate site visits with opportunity to discuss programs and issues with elected officials, technical staff, contractors and other stakeholders;
- Assist FCM with logistic arrangements;
- Assist FCM to recruit a local English-Vietnamese interpreter if available; and
- Have staff welcome, brief and accompany the delegation during the study program.

## **ALTERNATIVES**

1. Endorse continued participation in the Federation of Canadian Municipalities' Vietnam Municipal Solid Waste Management Project from June 2019 to March 2021; and,
2. Approve of Larry Gardner, Solid Waste Manager, to participate as part of the Canadian Technical Advisor team; or
3. Do not endorse continued participation in the Federation of Canadian Municipalities' Vietnam Municipal Solid Waste Management Project.

## **FINANCIAL IMPLICATIONS**

FCM covers participant travel, accommodation, meals and other project-related expenses through funding from Environment and Climate Change Canada. Time is donated by the individual volunteer expert and the respective organization, and is estimated at approximately 26 working days for project completion between June 2019 to March 2021. Sundry costs of \$1500 are projected associated with RDN hosting activities with the Vietnam delegation.

## **STRATEGIC PLAN IMPLICATIONS**

Focus On The Environment- We Will Have A Strong Focus On Protecting And Enhancing Our Environment In All Decisions

Focus On Relationships- We Look For Opportunities To Partner With Other Branches Of Government/Community Groups To Advance Our Region



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April 25, 2019

Reviewed by:

- R. Alexander, General Manager, Regional and Community Utilities
- P. Carlyle, Chief Administrative Officer

Attachments

1. Draft Step 1 Activities and Work Plan
2. FCM Call for Expressions of Interest for the Vietnam Municipal Solid Waste Management Project