



SOLID WASTE PLANNING AND MANAGEMENT MODEL

Capital Regional District, British Columbia

Introducción

The Federation of Canadian Municipalities (FCM) through its international program Sustainable and Inclusive Communities in Latin America (CISAL), carried out a study tour to Capital Regional District (CRD) in British Columbia, Canada, to share its solid waste planning and management model. In May of 2017, CRD shared its experience, good practices and learnings in solid waste management with representatives of eight local governments from Colombia and Peru.

Through a series of presentations and site visits, the Colombian-Peruvian delegation learnt the key elements of the District's comprehensive waste management system that covers thirteen municipalities. This included several visits to private companies and non-governmental organizations responsible for recycling materials. The delegation also visited the District's landfill, an organic composting plant, and the office responsible for collecting and transporting waste.

This document shares some of the key messages and learnings from the study tour that we hope Latin Americans can learn and adapt in their own realities.



Context: Capital Regional District

- » Capital Regional District (CRD) is one of 29 regional districts in British Columbia.
- » 13 Member Municipalities, 3 Electoral Areas, 11 First Nations (Population:378,000).
- » 45% of the CRD's income comes from selling services including solid waste management.

Why is this document important?

In a globalized world with a growing population, small and medium cities have great challenges when managing their solid waste. This document seeks to help identify the best practices and lessons learned within a process of collaborating and exchanging experiences between Canada, Colombia and Peru.



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KEY MESSAGES AND LESSONS LEARNED

The following are the key messages identified by the Colombian and Peruvian delegation from the exchange of experiences with Capital Regional District (CRD):



Solid waste management is an environmentally and economically sustainable business in CRD

In less than 20 years, CRD has reduced the amount of waste produced by one person per year from 654 kg to 297 kg. This substantial and exemplary change has been made possible by a strategic planning approach to solid waste management aimed at education and awareness-raising, facilitating the process for producers and consumers, viewing it as a business for all, and supported by provincial regulation.



Laws that allow efficient services

The formulation and design of provincial laws that support the proper management of solid waste has facilitated the process and has ensured the fulfillment of the duties of the different stakeholders involved (public and private sector, citizens, NGOs).



Teamwork

The articulation and contracting of specialized companies, non-governmental organizations and strategic actors that form a strategic link with defined roles and responsibilities when collecting, transporting and recycling the different materials, is part of the success of an effective solid waste management.



Citizen commitment

There is an evident commitment from the public sector, the private sector and the citizens to maintain cities clean and environmentally sustainable.



Associative work

By working together, the 13 municipalities take advantage of an economy of scale to reduce the costs per municipality and to invest, in the long term, in machinery and innovation. This way, they have a more efficient and sustainable system.



"By sharing solid waste management experiences, we found that we need our own strategies to deal with the challenges in our municipalities. We also need to build strategies to make Peruvian legislation more realistic on a local level, and work together to seek viable solutions between municipalities and regional governments."

Eloy Alzamora, Mayor of Independencia, Ancash.



SOLID WASTE MANAGEMENT PLANNING IN BRITISH COLUMBIA

The provincial government of British Columbia, for over thirty years, has required that its regional districts engage with a comprehensive solid waste management and recycling plan. Within the Province, the average amount of waste deposited in landfills was 520 kg per person in 2015, whereas, in that same year, CRD quantified an average of 345 kg per person¹. This shows that CRD has become an example for Canada and the Province of British Columbia.

The Province of British Columbia promotes an approach called the 5R pollution prevention hierarchy: source reduction, reuse, recycle, recover and release (or disposal). CRD solid waste management planning emphasizes and prioritizes, in the first place, reduced consumption and product reuse, as its main strategy. Then, anything which can't be reduced or reused, must be recycled or recovered. Finally, anything remaining will be sent to the landfill.

This 5Rs approach helps build a circular economy that generates employment, promotes innovation, involves different stakeholders, and helps protect communities and the environment.

Some of the principles that guide the district in solid waste planning and execution are:

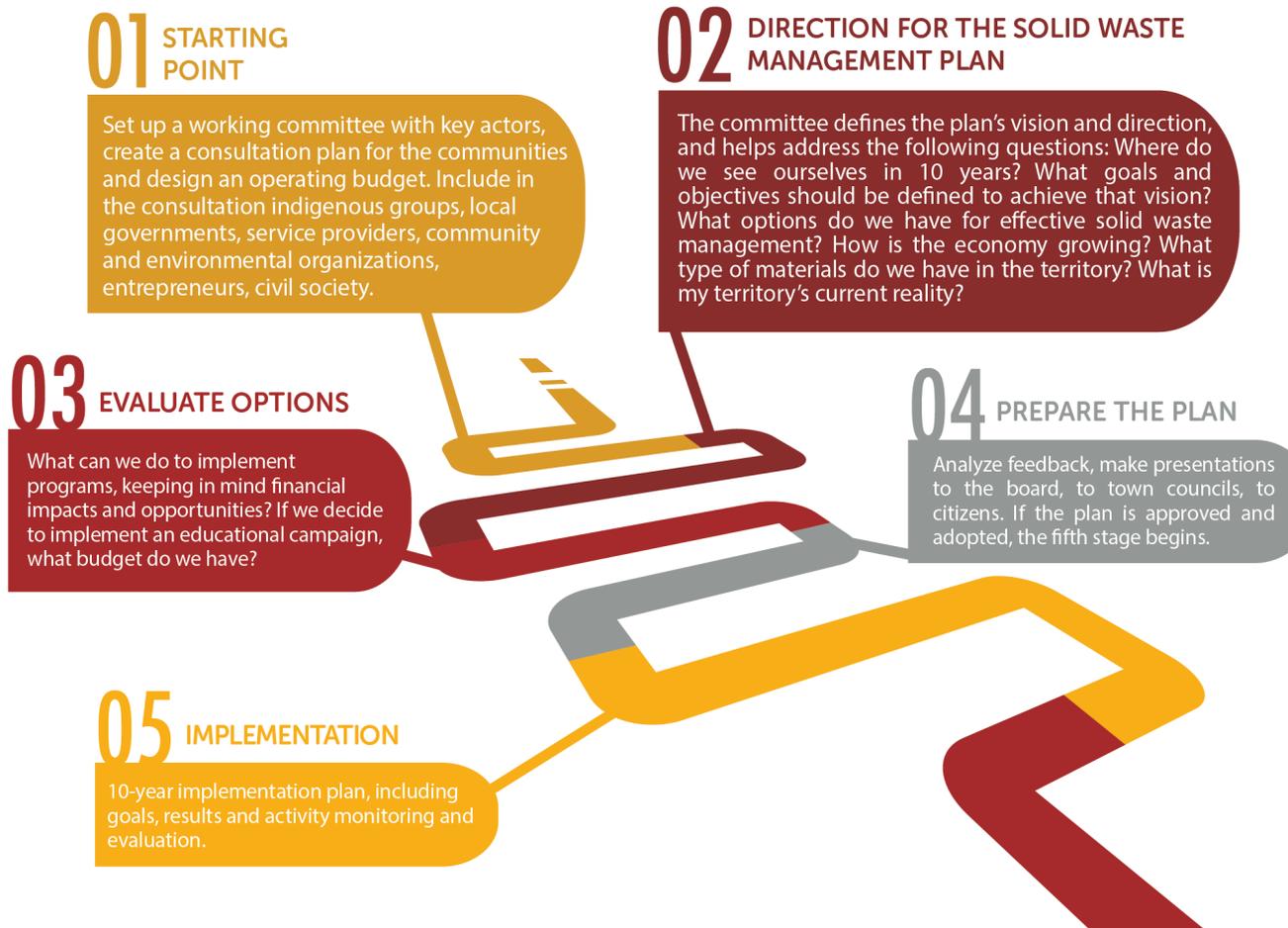
PLANNING PRINCIPLES

 <p>Provide the infrastructure required for recycling and reuse, thus supporting a circular economy.</p>	 <p>Promote the 3 Rs (Reduce, Reuse, Recycle) through education and sensitization programs and by providing recycling services.</p>	 <p>Promote a zero-solid waste approach through education programs.</p>	
 <p>Use technology to maximize efficient residuals use and management</p>	 <p>Prevent organic and recyclable waste from going into the bin.</p>	 <p>Promote consumer and producer incentives.</p>	 <p>Develop collaborations and partnerships</p>

1. <http://www.env.gov.bc.ca/soe/indicators/sustainability/municipal-solid-waste.html>

PLANNING WASTE MANAGEMENT

The planning process implemented by CRD has five steps and aims at building trust, relationships and communication between all stakeholders in the territory:



The following are the main messages from three presentations given at CRD facilities within the framework of the CISAL study trip:

1. Extended Producer Responsibility

British Columbia Ministry of the Environment.

- » Provincial legislation was created to require producers to have the responsibility to recycle and adequately manage the waste generated by their products.
- » This legislation provides incentives to companies to produce and sell more durable, recyclable and reusable products, that contain less toxic materials and never become waste. (Paint, gasoline, batteries, mobile phones, tires).
- » To achieve systemic change, consumer and producer awareness needs to be raised and greater benefits need to be provided for recycling.



2. RECYCLE BC - The not-for-profit organization in charge of recycling for BC producers



- » Companies came together to manage the recycling of their products in a sustainable way as, by law, companies were forced to produce with environmental awareness.
- » They give incentives to local governments, the public and private sectors and NGOs to support the collection of products. Producers then pay Recycle BC for the approximate amount of their recycled products.
- » This is a circular model through which producers commit to the recycling process.

3. Hartland Landfill Visit

» This is a landfill managed by CRD, that has the main mission of providing waste management services while reducing environmental impacts to a minimum. The operation is managed in an economically sustainable fashion. Income mainly comes from users, who pay a fee according to the weight of the waste materials. There are also fines for those that drop forbidden materials in the landfill (e.g. toxic materials), which generate approximately \$50,000 a year.

» They have also built a system to convert the gas produced by the waste (methane) into electrical energy. This energy powers the facilities and is also sold to a hydroelectric company. In this manner, they convert waste into raw materials.

» The advantage of having one landfill that serves several municipalities is that costs can be shared and economies of scale used in order to have a landfill designed using cutting edge technology.

» There has been a generational and cultural change that evinces the responsibility and commitment of public and private entities, consumers and producers.



4. Education and Sensitization Campaigns - CDR



» Regulation, private sector responsibility and citizen behavior has transformed solid waste management and led to more conscious consumption.

» The mindset of the population has changed from "I don't care, it's too hard," to "I understand this, I can do this."

» **Educational campaigns:** At the start of the nineties, in order to educate the population, the CRD used a combination of advertising and mailers (printed), a telephone line (information and dissemination), educational programs and schools and city tours. Educational campaigns today have changed substantially: web and internet, mobile and social networks (55% of the effort expended), on-site tours and presentations (15%), telephone line (10%) and print advertising (10%).

» The CRD has an App with 32,000 registered residents, where they can find directories of where, how and what to recycle, and interactive games for children. Social networks are used to answer questions or resolve issues regarding solid waste management.

- » *“Inspiring messages that commit the correct tools so people can do the right thing”* Britt Marie Phaneuf, CRD employee.
- » **Experiential education** is key to empowering more young people, as children become multipliers of what they learn. *“Teach children from the heart, to engage their hearts.”* Elaine Stuar, CRD employee.
- » **Lessons learned:** use consistent messages, provide several methods of communication; adapt to markets and technological changes.

LATIN AMERICA DELEGATES IDEAS



Yrma Minaya

» *“The CRD district, in a participatory and consultative manner, built a long term solid waste management plan that was fundamental for achieving what they have achieved. The district found a great opportunity within a need, and turned solid waste and rubbish management into a profitable and sustainable business. The CRD is also clear that sanctions do not sensitize and, on the contrary, has promoted stimuli for recycling and reuse as tools for building citizenship and maintaining a clean environment. Within this process, multi-stakeholder partnerships are key. It is important to promote articulations between the public and private sectors and civil society.”* **Luisa Zapata, environmental professional from the Municipality of Santa Fe de Antioquia, Antioquia.**

» *“The CRD district has a business vision related to its solid waste management. Waste management is an opportunity for creating jobs and articulating private companies and the population around caring for the environment. To do this, we require legislation that will support solid waste management and environmental education programs aimed at children, young people, and the population at large.”* **Yrma Minaya Salinas, Deputy Environmental Manager for the District Municipality of Independencia, Ancash.**

» *“An initial step for our municipalities is to improve the articulation and coordination amongst different stakeholders in the territory and involved in this process. This would allow us to embark upon a process for educating and sensitizing private companies, civil society, the public sector and others.”* **Próspero Mendivil, Commonwealth Manager at Chumbivilcas, Cusco.**

“Citizens are constantly included as key stakeholders within this process and there is clarity regarding the importance of co-management between the State, private companies and the population.” **Luisa Zapata, environmental professional from Santa Fe de Antioquia, Antioquia.**

The Inclusive and Sustainable Communities in Latin America (CISAL) program, implemented by the Federation of Canadian Municipalities (FCM), is a cooperation initiative that seeks to contribute to the strengthening of local governments, so that they can offer greater social benefits and economic opportunities to communities in extractive contexts in Colombia and Peru. The program is funded by the Canadian government.

<http://www.fcmcisal.org> - <http://www.fcm.ca/>

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