

## **Summary Lunch Lecture Herman Huisman – ‘Lessons and Leadership in Waste Management from the Netherlands’**

**Title:** ‘Lessons and Leadership in Waste Management from the Netherlands’

**Date:** 16 March 2015 in Ottawa, ON

**Speaker:** Herman Huisman, Senior Advisor/Expert and Coordinator International Projects, RWS’ Environment Department

**About the Speaker:** An environmental biologist by training, Mr. Huisman began his career at the Scientific Council for Government Policy, and was later assigned to build up the Commission on Environmental Impact Assessment

Mr. Huisman provided a general overview of the Dutch practices in waste recycling as a demonstration of potential improvements in Canadian municipalities.

In the past, landfills were the most common method of organized waste disposal. Since 1990, the Netherlands began developing alternative techniques of waste disposal as a response to the unsustainability of landfills financially and environmentally. Landfills remain the cheapest form of waste management, so incentives to discourage landfills are essential to shift behaviour. In the Netherlands this was been achieved through taxation: by adding a landfill tax to shift the cost incentives the Netherlands has achieved to a higher percentage diversion and reuse of materials, with waste-to-energy and incineration programs to deal with residuals.

Waste-to-energy and incineration programs are part of a larger incentive system for separating all waste. Dutch households generally have five different waste bins: glass, paper/cardboard, plastic, green and residual waste. In low density and rural areas waste is collected curbside once per week, whereas in high density areas waste is collected using underground waste containers located on every street corner. The waste collection is tracked and monitored. Municipalities are responsible for waste collection and finance these collection systems through a municipal waste tax imposed on all citizens. Bulky waste is collected at special collection points, also run by municipalities. The waste sector is a competitive market in the Netherlands, which enhances the efficiency and technical development. Electronic waste, batteries, and car tires are also collected by the municipalities, but these activities are financed by producers through a tax on its consumers or importers at point of sale/import. Collection of bulky and residual waste makes up 34% of the total waste management cost for municipalities. The treatment of residual waste (unsorted garbage) is the most expensive waste stream to operate as compared to other types of waste.

According to Herman Huisman, the steps to create a similar recycling system to support increased diversion and waste management are the follow:

1. A stable collection system needs to be built and maintained.
2. The public needs to be informed about the system in place and aware of the opportunities to recycle in their neighborhood.
3. The government needs to invest in ‘ecodesign’ and regulate illegal trade and exports of waste.
4. Annual reporting on waste management performances should stimulate the current developments in recycling waste on a public and private level.

For the Netherlands, this process of waste management has led to a recycling rate of 80% in all waste, whereby residual waste has a recycling rate of 52%.

Waste to Energy (W2E) plants are scattered through the Netherlands. While the first generation of incinerators caused some problems, the current incinerators are highly effective and safe. Due to recycling programs, these W2E plants are now importing waste from abroad to keep the fires burning, which also generates revenue. The total capacity of the all W2E plants in the Netherlands is 7.7 Mton, producing 4000 GWh and 14 PJ produced heat, producing 18% of the renewable energy in the Netherlands.

The Dutch recycling rate has stabilized in the past years at 80% (all waste streams, and 52% household waste). A quick win is still the bulky waste where there is room for improvement. In this area there will be more focus on the circular economy.

Objectives for a waste to resource program:

- ***Reduce losses*** from 10 to 5 million tonnes in 10 years
- ***Improve separation of household waste*** from 50% today to 75% in 2020
- ***Creating economic incentives***
- ***Working with leaders***
- ***Remove counter productive (legal) restraints and impediments***

The four key components for a circular economy are:

- Conservation of natural capital and sustainable sourcing of raw materials
- More sustainable products on the market, Eco-design, sustainable procurement
- Sustainable consumption, New business models
- Re-use, remanufacturing, recycling.