



Industry: Food and beverage

Duration: 2007 - ongoing

Location: Township of Puslinch, Ontario

Case study type: Management and policy

Biodiversity monitoring



Nestlé is a multinational packaged foods company founded in 1922 and headquartered in Vevey, Switzerland, with a market capitalization of over \$93 billion Canadian. It employs approximately 3,500 people in Canada who work in the company's more than 20 facilities, including manufacturing, sales, and distribution centers. Nestlé Waters Canada is Canada's largest manufacturer and distributor of bottled water and operates 2 bottling plants across Canada. Other than bottled water, Nestlé product lines include coffee, juice, ice cream, baby food/formula, healthcare nutrition, pet care, confectionery and pharmaceuticals.

Nestlé Waters Canada's perspective on biodiversity

Nestlé Waters Canada has long been committed to leadership in environmental performance and to environmentally sustainable practices across all business areas. As a leader in the beverage industry, Nestlé Waters Canada understands it has a special responsibility to minimize its ecological footprint. The Nestlé Policy on the Environment was first established in 1991 and has ensured that preserving natural resources and minimizing waste are an integral part of the day-to-day activities in all Nestlé operations worldwide. Environmental performance indicators show continuous improvement with verification of performance data and factual information undertaken by a third-party auditing company.

In 1996, the Nestlé Environmental Management System (NEMS) was created and implemented throughout the Company. The NEMS is based on the Nestlé Environmental Policy and the International Chamber of Commerce's Business Charter for Sustainable Development. The implementation of NEMS has led to:

- a systematic approach that ensures respect for Company policy and legal requirements;
- the continuous improvement of Nestlé's environmental performance, including water resource management;
- an expansion of mutual trust with consumers, government authorities, and business partners through open communication and an on-going record of environmental improvement, especially in the water protection area.

Continuous improvement, as emphasized by NEMS, relies on clear objectives and action programs at global and local levels. Both water conservation and wastewater reduction are targeted as objectives. Actual progress in meeting objectives is monitored through periodic

measurement of environmental performance indicators covering water consumption and wastewater generation. Appropriate training reinforces employees' awareness and skills, and contributes to their environmental commitment.

The Environmental Directives outlined in the NEMS are a set of standards that:

1. Spell out Nestlé's commitment to good environmental practices;
2. Provide awareness and set minimum requirements for adherence to local regulations;
3. Help set up an efficient environmental management system (Directives Chart) by defining three progressive levels of performance;
4. Form the basis of continuous improvement as defined by NEMS;
5. Ensure compliance with the Nestlé Minimum Technical Requirements.

The Directives Chart is a benchmark comparison among factories across three progressive levels of Environmental Performance:

1. Basic Performance Level: requires establishing a system to identify and define program criteria for a factory, as found in the NEMS.
2. Progress Level: requires evaluating conditions related to the program criteria, then determining the need for and implementing any necessary work.
3. Performance Level: requires analyzing results, reporting progress and conducting training with factory personnel to ensure ongoing program compliance.



All requirements at the first level must be fully met before a factory can begin pursuing the next level, until it attains the highest Environment Performance level.

Nestlé will continue to develop its environmental management system with a focus on:

- maintaining continuous improvements in environmental performance;
- encouraging business partners to apply environmental management systems aimed at ISO 14001 certification in their own operations;
- communicating reliable environmental information to consumers in a meaningful and straightforward way.

When local legislation on water protection is non-existent or insufficient to meet its environmental commitments, Nestlé's Environmental Minimum Technical Requirements apply. These company standards are minimum requirements that must be followed for water management and protection as well as for other environmental areas.

In 2006, Nestlé marked the tenth anniversary of NEMS which has served as a solid basis for continuously improving environmental performance. The NEMS is used to track the key environmental performance indicators over time for nearly 100 bottling facilities worldwide. In addition, Nestlé aims to have 100% of its manufacturing plants certified by the end of 2010.

Nestlé's initiatives aim to improve the environmental performance of its products along their entire life cycle. These include sourcing sustainable raw materials, reducing energy consumption, minimizing air emissions and the footprint of product transportation. Nestlé has initiated a pilot with Schenker, an international logistics company, to evaluate the effect of different types of transport, distances driven and fuel type used. Through internal research and development, Nestlé has made significant advances in the environmental impact of packaging. Management of by-products and waste at the end of product life cycle is a major concern.

Nestlé Waters Canada is increasing its waste eco-efficiency by reducing the quantity of by-products produced and by focusing on recycling. Its new PET (polyethylene terephthalate) beverage containers are either 100% recyclable or are entirely made of recycled PET. When recycled, they can become carpeting, automotive parts, toys and clothing. Nestlé and its industry partners currently participate in funding Canada's municipal recycling infrastructure across the country – infrastructure that also collects glass, paper and aluminum. In 2008, Nestlé and its industry partners introduced Canada's first public spaces recycling program in Quebec, they recently introduced a similar program in Manitoba and completed a successful pilot program in Ontario, in 2009.

Nestlé will maintain long-term environmental sustainability at the heart of its business operations. This approach of applying business practices over the long-term will return greater shared value to its worldwide community.

Biodiversity Monitoring

Rationale

Over the past few years the consumption of water in Nestlé Waters North America manufacturing operations has decreased by 28% while production has grown by 76%. The Company aims to reduce the amount of water used per kilo of food and beverage produced and to ensure that waste-water discharge is clean and managed responsibly within the environment. It aims to promote and share water conservation methods with other users, such as agriculture, and the local community.

Nestlé Waters Canada collects data both on and off-site to monitor surface and ground water. It also conducts a biological monitoring program looking at biodiversity, including fish, vascular plants, amphibians, reptiles, birds and mammals in the areas of its operations.

Description

In 2007, Nestlé Waters Canada initiated a biological monitoring program for its water bottling plant and property in the Township of Puslinch, Ontario. The purpose of this monitoring program is to:

1. characterise existing aquatic, wetland and terrestrial resources;
2. document long-term changes to the structure and composition of the site's biological resources.

The biological monitoring program complements physical resource monitoring programs currently in effect and exceeds the Ontario Ministry of Environment (MOE) biological monitoring requirements. This program will provide information on:

- ecological land classification;
- fish and fish habitat;
- amphibians and reptiles;
- birds;
- mammals;
- vascular plants.

The biological monitoring program is based on a comprehensive baseline inventory of the site's aquatic, terrestrial and wetland resources. The baseline inventory was prepared using available background information and data obtained through field investigations. In addition to the baseline biological inventory, a series of monitoring stations were established to facilitate long-term comparative analyses.

The initial steps of the monitoring program in 2008 were to:

- develop and implement standardized monitoring protocols for assessing changes to aquatic, terrestrial, and wetland resources at the site over time;

- collect and document key data relating to aquatic, terrestrial, and wetland resources to fill in the gaps of currently available data;
- prepare mapping and data tables summarizing baseline biological conditions;
- identify future monitoring requirements.

Fauna

The wildlife monitoring program documented the presence of 60 animal species on Nestlé property, including 40 species of birds, 12 species of fish, 6 species of amphibians and reptiles and 2 species of mammals.

Wildlife monitoring programs consist of night amphibian call surveys, using the Bird Studies Canada Marsh Monitoring Program protocols for surveying marsh birds, amphibians and their habitats. Breeding bird surveys were completed based on protocols established for the Ontario Breeding Bird Atlas for point counts, the Forest Bird Monitoring Program and techniques developed for monitoring songbird populations in the Great Lakes Region.

Fish and fish habitat surveys were conducted on the onsite reach of Aberfoyle Creek. The habitat survey was a mapping exercise that consisted of walking the creek and noting the presence/absence of instream vegetation, logs and woody debris, substrate, bank conditions, potential sites for spawning redds (nests) and physical attributes of the stream such as width, depth, pools and riffle. Fish species were documented on the onsite reach of the Aberfoyle Creek using an electrofisher.

All monitoring and survey methods used for the collection of data are based on established and recognized sampling protocols. Since 2008 was the first monitoring year, all information collected will be used to establish a baseline for comparative analyses in future years.



Flora

Terrestrial vegetation communities were delineated through interpretation of 2006 colour digital aerial photography with the information digitized in a GIS system to produce base maps. These vegetative communities were classified according to the Ecological Land Classification System for Southern Ontario. Data on a variety of biophysical parameters were also recorded. Ground surveys documented the various plant species present on the individual sites and a running checklist of all vascular plant species observed was maintained. The status of the individual plant species was confirmed using the most current status lists available. Permanent vegetation plots for long term monitoring were also established.

Wetland mapping delineated wetland type and dominant plant species/community on existing wetlands. Permanent sampling plot locations were established and selected to correspond with areas of groundwater discharge. These sites were selected as it was felt that monitoring vegetation in these types of environments could be used to reveal changes in vegetation associated with flow rates and normal seasonal fluctuations of water levels.

A total of 191 species of vascular plants were found on the Nestlé property.

Future surveys

The information collected from the 2008 initial year surveys and monitoring programs will be used, along with future data, to plan and modify programs in ways that include:

- survey timing, types and amount of information collected;
- change protocols as required;
- ways data are stored and analyzed.

The information gathered over the years will enable Nestlé to identify environmental changes due to its operations. This information will also provide Nestlé the opportunity to adapt its planning and operational strategies to modify operational practices that appear to be having negative environmental impacts.

Outcomes

Benefits

Economic

Recognition of the continuous improvement of environmental performance by Nestlé has resulted in the following:

- awarded “Best in Class” status in the Dow Jones Sustainability Index, with the highest possible score for environmental policy, performance and reporting;

- Innovest increased its rating on “Nestlé’s environment, social and governance (ESG) performance” to AAA, its highest possible score;
- named one of the top 100 sustainable companies in the world by Innovest Strategic Value Advisors and Corporate Knights Inc.;
- received the SAM (Sustainable Asset Management) Gold Class ranking.

Biodiversity

Imbedding a biodiversity monitoring program into its corporate strategies will help Nestlé identify changes in biodiversity on their properties and allow Nestlé to modify operational practices if needed.

Lessons learned

Reliable background data is critical in providing an historical context in biodiversity monitoring. If background data is not available, a “point in time” must be established on which to evaluate future data. It is also difficult in some instances get a consensus on the science relating to specific biological issues. Any information gathered and analyzed must be done in a fashion that will allow for informed quick decisions on risk assessment for both biodiversity and the operation.

Impact on company

As one of the world’s largest food and beverage corporations, Nestlé commands wide brand name recognition and significant influence with consumers, businesses, and governments. This puts Nestlé in the position to influence not only its suppliers’ environmental performance, but also to promote environmentally responsible practices to other businesses and consumers. The implementation of environmental standards has also resulted in improved industrial competitiveness.

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