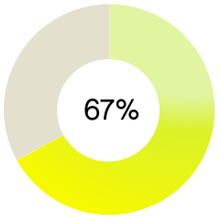
OVERALL FINDINGS 2014

A FRAGILE BALANCE

2003 to 2014

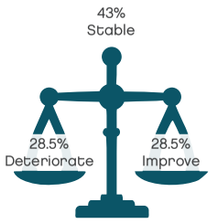


Of the common indicators that appeared in the 2003, 2008 and 2014 overviews, 67% have remained in the:

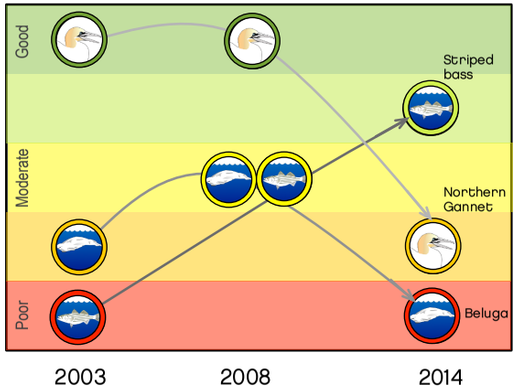
- moderate and
- moderate-good

categories.

From 2008 to 2014, 43% of the common indicators remained stable, while the rest split equally between deterioration and improvement.



Evolution of some indicators



PARTNERS

GOVERNMENT OF CANADA

- Environment Canada
- Ficheries and Oceans Canada
- Parks Canada

GOVERNMENT OF QUEBEC

- Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques
- Ministère des Forêts, de la Faune et des Parcs

- Stratégies Saint-Laurent

www.planstlaurent.qc.ca

Catalogue No: En154-74/2014E-PDF
ISBN: 978-1-100-25341-1

Photographs:
Gulf of St. Lawrence © A. Pérot, Stratégies Saint-Laurent
Great Blue Heron © S. Miller, Stratégies Saint-Laurent
St. Lawrence River © Ministère du Tourisme du Québec

Aussi disponible en français

ST. LAWRENCE Action Plan 2011-2026

The State of the St. Lawrence Monitoring Program:

AN ESSENTIAL TOOL OF THE ST. LAWRENCE ACTION PLAN

The Overview 2014 innovates through its use of results integration and reporting approaches

Canada Québec

WHAT IS THE MONITORING OF THE STATE OF THE ST. LAWRENCE?

The State of the St. Lawrence Monitoring program was established in 2003 as part of the Canada–Quebec Agreement on the St. Lawrence. Since then, the partners have been pooling their expertise in their regular reports on the state and evolution of the St. Lawrence River.
The results of environmental indicator monitoring are made available through the publication of a series of fact sheets, the holding of the Rendez-vous St. Lawrence event every three years, and the publication of the Overview report every five years.

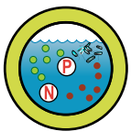
INNOVATION

Overview 2014

- Standardized visual signature
- Harmonized status classes
- More systematic use of criteria or reference thresholds
- Mapping information at local, sector and overall levels per indicator
- Integration of monitoring results in an overall finding

2014 HIGHLIGHTS

According to the **index of bacteriological and physicochimical quality** (IQBP), water quality was in the moderate-good category in 2008–2010. However, the percentage of stations where the IQBP was good or satisfactory decreased from 75% in 2003–2005 to 67% in 2008–2010.



In terms of **toxic contamination of water**, the substances of most concern are polybrominated diphenyl ethers (PBDEs), and pharmaceuticals and personal care products.

Regarding the **toxic contamination of sediments**, the fluvial section between Montréal and Sorel has the largest number of most highly contaminated sediment sites and the highest number of substances exceeding criteria.

As for **fish contamination** in the fluvial lakes, only mercury in Walleyes and Northern Pikes from Lake Saint-Louis, and PBDEs and polychlorinated biphenyls (PCBs) in the White Suckers in Lake Saint-Pierre are still a concern.

Among the **contaminants measured in Great Blue Heron eggs**, only PBDEs slightly exceeded the criteria at three of the four colonies analyzed.

The St. Lawrence **beluga** population is still threatened, but the situation has worsened due to a decline in abundance, high mortality of newborns in 2008, 2010 and 2012, and a decrease in the proportion of immature belugas and newborns. In December 2014, COSEWIC has assessed this population as endangered.

Northern Gannets are showing signs of difficulty, with a loss of abundance and a significant decline in reproductive success. However, the concentrations of toxic contaminants in eggs are all below the criteria.

The **Shellfish waters** of the Magdalen Islands and the Lower North Shore are of excellent quality. However, shellfish waters in the Gaspé Peninsula and Lower St. Lawrence are more strongly affected by anthropogenic bacterial contamination.

The years 2008, 2009 and 2011 resemble one another with **annual average flows** that are near the historical average, whereas the flows observed in 2010 and 2012 are lower. The 2008-2012 observations correspond to average to low flows.

The fluvial section and Sorel islands have a diminished richness of **benthic macroinvertebrates** and a higher proportion of species tolerant to pollution.

The health status of **fish communities** has remained stable overall since 1995. However, in Lake Saint-Pierre, Yellow Perch has suffered a major decline, mainly due to the degradation of its habitat.

The loss of **wetlands** due to direct human intervention has declined sharply. However, the Boucherville Islands sector is still undergoing relative drying and the wetlands of Lake Saint-Pierre sector are bordered by a low proportion of natural environments.

Boucherville and Lake Saint-Pierre are the sectors most heavily affected by **invasive plants**. The most problematic species is the Common Reed.

Striped Bass is showing encouraging signs of recovery. Its distribution, rate of growth and abundance are improving. The natural reproduction of Striped Bass demonstrates that the species is in a favorable environment; this progress marks an important milestone for the species' recovery in the St. Lawrence River.

Among the **oceanographic processes**, several physical changes (milder, almost ice-free winters, early springs, and the warming of summer surface waters) have been observed in the Gulf over the past decade.

Changes in oceanographic processes have led to changes in the **phytoplankton and zooplankton communities**; these changes include early spring phytoplankton blooms and changes in the zooplankton community that favour Atlantic species to the detriment of Arctic species.

The increased warming of surface waters in summer increases the risk of **toxic algal bloom**.

Among the **seabirds**, the populations of Herring Gulls, Common Murres and Razorbills are in good shape, while the Atlantic Puffin population has been declining since 1993, and Caspian Terns are still very scarce.

Poor	Moderate-Poor	Moderate	Moderate-Good	Good