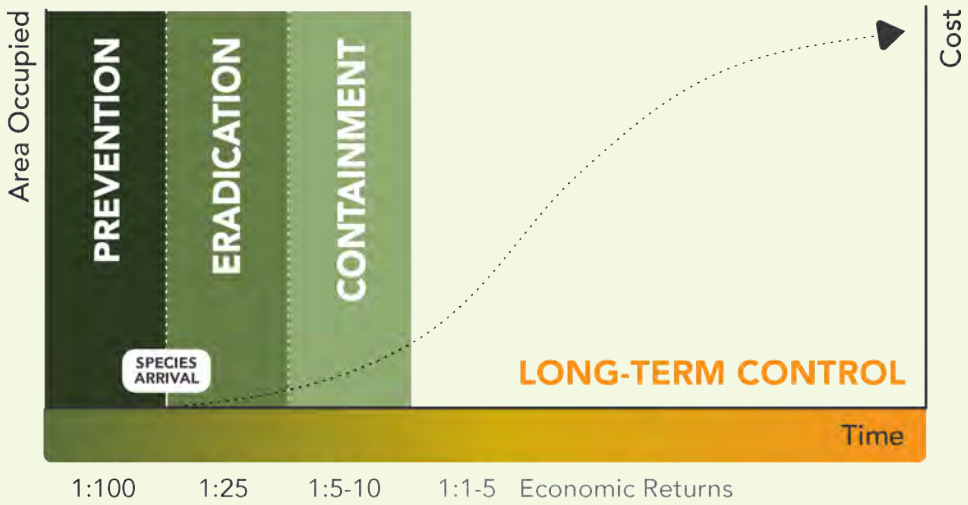
Economic Impacts of Invasive Species in Canada

When invasive species are introduced to Canada, they have the potential to harm the environment, economy, and society. Direct and indirect economic impacts, such as management costs, research and monitoring programs, reduced crop yields, job losses, damage to infrastructure, impacts to international trade and tariffs, loss of ecosystem services, reduced biodiversity, reduced resource production, impacts to tourism and recreation, and reduced property values, are felt on a national scale.

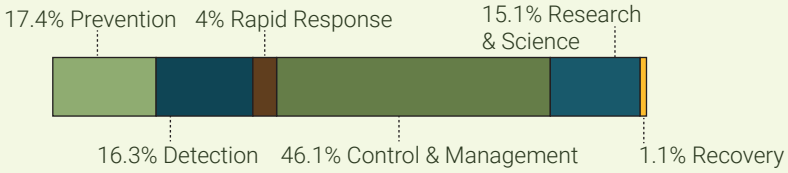


Economic costs of invasive species are much lower when funds are invested in prevention and early detection efforts.

Chart adapted from the Generalised Invasion Curve (Agriculture Victoria, 2009)

Invasive plants in crop fields and pastures **cost an estimated $2.2 billion each year** by reducing crop yields and quality, and increasing costs of weed control and harvesting.[1]

Breakdown of invasive species expenditures by management category for Federal, Provincial, and Territorial (FTP) governments in Canada, 2020-21



The graphic above shows the proportions of funds spent on different invasive species activities aggregated across federal, provincial, and territorial governments in Canada.

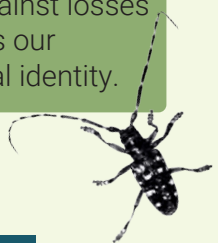
When broken down by government type, federal departments spend greater proportions of funding on research and science activities and detection activities, while provincial ministries spend greater proportions of funding on control and management.[2]

The 2022 FPT Invasive Species Expenditures Survey provided insight into invasive species spending and priorities for 31 federal, provincial, and territorial departments and ministries in Canada for the 2020-21 fiscal year.

Asian Longhorned Beetle Potential Impacts:

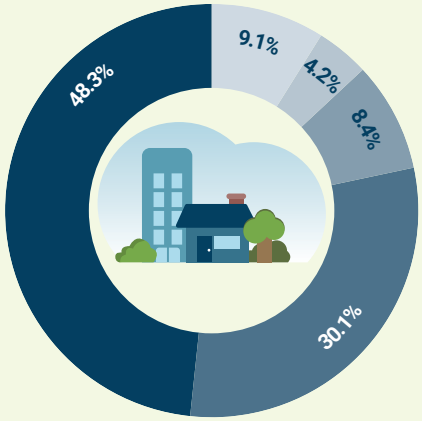
As of 2014, Canada has spent an estimated $35.5 million preventing the establishment of Asian longhorned beetle, an invasive pest that attacks hardwood trees, including maple trees. As of 2021, Canada's maple exports are worth $591 million.[3]

Investing in prevention protects against losses in this industry and in turn, protects our economy, environment, and cultural identity.



National Invasive Species Municipal Expenditures Survey, 2020-21

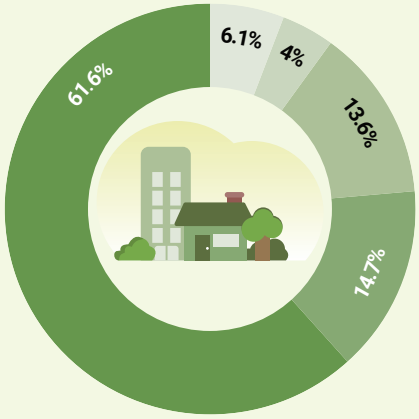
Reported Estimated Increases to Municipal Costs of Invasive Species Management in the Next 5 Years



- 9.1% Over 100% increase
- 4.2% 75-100% increase
- 8.4% 50-75% increase
- 30.1% 25-50% increase
- 48.3% Less than 25% increase

The 2021 National Invasive Species Municipal Expenditures Survey provided insight into invasive species spending and priorities for 231 municipalities across Canada. The estimated cost of invasive species to Canadian municipalities is **$247.9 million per year**.[4]

Proportion of Reported Municipal Spending by Invasive Species Activities



- 6.1% Habitat restoration
- 4% Research and science
- 13.6% Prevention
- 14.7% Detection
- 61.6% Control and management

Scan to visit our Economic Impacts webpage to learn more.

www.invasivespeciescentre.ca/economics

Invasive Mussels Impacts:

Zebra and quagga mussels pose a considerable threat to freshwater ecosystems and built infrastructure across Canada. The estimated cost of preventing, monitoring, and controlling zebra mussels and managing their impacts since their introduction to the country is approximately $7 billion.[5] They can be found in Quebec, Ontario (including the Great Lakes), and Manitoba, and are actively being prevented in other provinces and territories.

Invasive mussels rapidly colonize water intake structures, causing serious problems for water treatment and power plants. Preventative measures such as monitoring and watercraft inspection cost a fraction of the funds required to control and manage invasive mussels once they are established, yielding a much higher return on investment.

Invasive Species Centre

Environment and Climate Change Canada
Environnement et Changement climatique Canada

[1] Canadian Food Inspection Agency. 2021. Invasive Plants in Canada. Retrieved from: https://inspection.canada.ca/plant-health/invasive-species/invasive-plants/eng/1306601411551/1306601522570.

[2] Vyn, R.J. (2023). Expenditures on Invasive Species by Federal, Provincial, and Territorial Government Departments and Ministries: 2022 Survey Results. Report written for Environment and Climate Change Canada, March 2023.

[3] Statistical Overview of the Canadian Maple Industry. (2021). Retrieved from https://agriculture.canada.ca/en/sector/horticulture/reports/statistical-overview-canadian-maple-industry-2021.

[4] Vyn, R.J. (2022). Estimated Annual Expenditures on Invasive Species by Canadian Municipalities: 2021 National Survey Results. Report written for the Invasive Species Centre, March 2022. Available at www.invasivespeciescentre.ca.

[5] Government of Canada. (2022). Invasive Mussels found in Moss Ball products in Canada. Retrieved from https://www.canada.ca/en/fisheries-oceans/news/2021/03/invasive-mussels-found-in-moss-ball-products-in-canada.html.

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