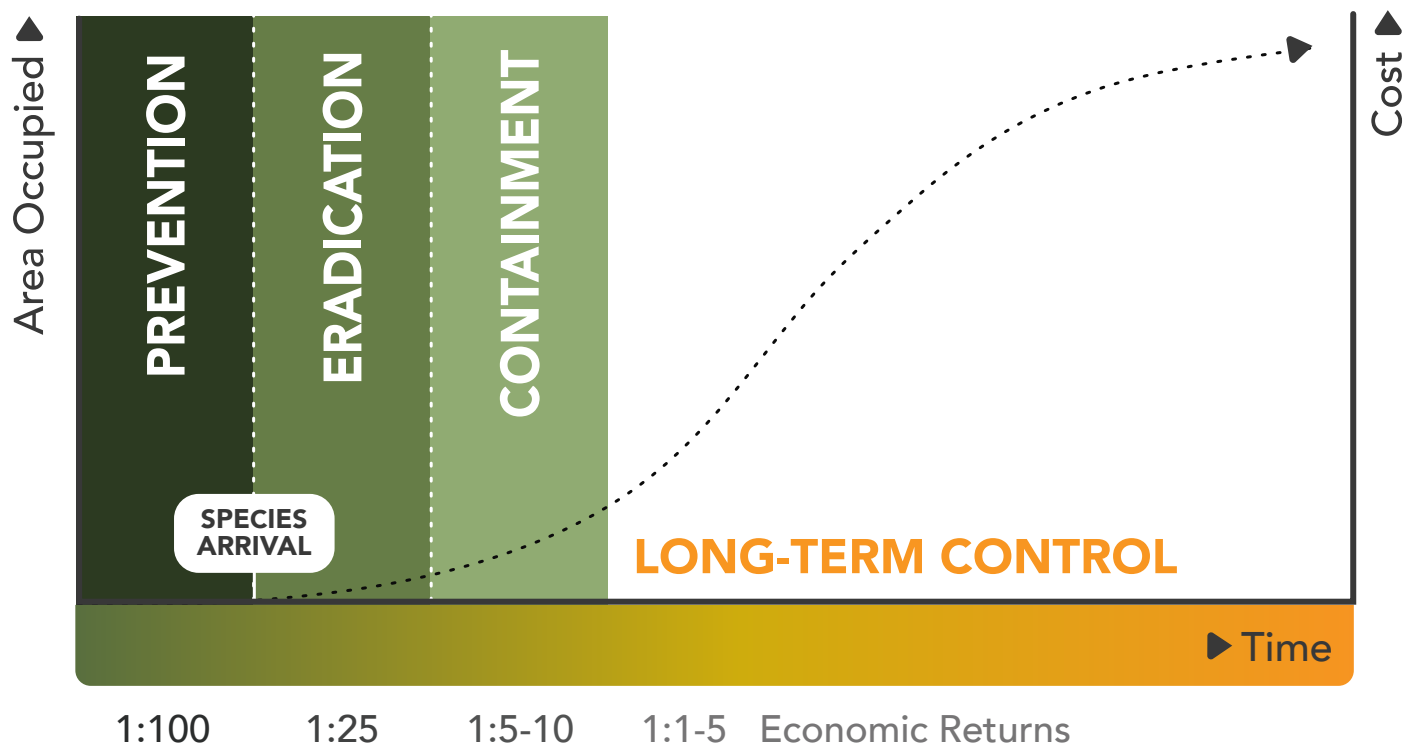


Invasive Species and Stages of Management

INVESTING IN PREVENTION



Prevention is the most effective and low-cost solution for managing invasive species. Waiting until an invasive species is established to start management is costly and can harm valuable infrastructure and the natural biodiversity needed for healthy ecosystems.



THE INVASION CURVE shows the stages of invasive species management from pre-arrival (prevention) to long-term control. After a species is introduced, management costs increase and likelihood of eradication decreases as time passes.¹

PREVENTION:

The most cost-effective solution for managing invasive species. Public awareness is essential for this stage.

ERADICATION:

Removing a species population in its entirety. If populations are localized, eradication is possible.

CONTAINMENT:

Reducing further spread of an introduced species. As populations increase, eradication becomes increasingly unlikely and priorities shift to preventing further spread.

LONG-TERM CONTROL:

The most costly stage of invasive species management. Eradication is unlikely to impossible and we instead focus on limiting populations and protecting remaining resources.²

Investing in prevention provides **ECONOMIC RETURNS UP TO 100X HIGHER** than trying to manage a species after it arrives.³



As of 2014, Canada has spent an estimated **\$35.5 MILLION**⁴ preventing the spread and establishment of **Asian longhorned beetle**, an invasive pest that attacks hardwood trees, including maple trees. As of 2017, Canada's maple industry is worth **\$494 MILLION**.⁵

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

How can you prevent the spread of invasive species?



- ◆ **Stay up-to-date on potential incoming threats.**
- ◆ **Plant a diverse tree canopy to increase ecosystem resilience.**
- ◆ **Conduct a tree inventory to assess resources at risk.**
- ◆ **Survey existing invasive species within their current geographic range.**
- ◆ **Create a volunteer program to encourage reporting and promote invasive species management.**
- ◆ **Take actions to prevent the spread: don't move firewood; clean, drain, and dry watercraft; and wipe mud and debris off of outdoor gear.**

¹ Adapted from the Generalised Invasion Curve (Agriculture Victoria, 2009).

² Harvey, R. G., & Mazzotti, F. J. (2014). The invasion curve: A tool for understanding invasive species management in south Florida. *University of Florida IFAS Extension, WEC347*.

³ Invasion Curve. (2019). Retrieved from <http://cceonondaga.org/environment/invasive-nuisance-species/invasion-curve>.

⁴ High Cost and High Risk: Asian Longhorned Beetle. (2014). Retrieved from <https://continentalforestdialogue.files.wordpress.com/2014/12/continental-dialogue-activities-alb.pdf>.

⁵ Statistical Overview of the Canadian Maple Industry 2017. (2017). Retrieved from <https://www5.agr.gc.ca/eng/industry-markets-and-trade/canadian-agri-food-sector-intelligence/horticulture/horticulture-sector-reports/statistical-overview-of-the-canadian-maple-industry-2017/?id=1524607854094>



**Invasive
Species
Centre**

The **INVASIVE SPECIES CENTRE** is a non-profit organization that connects stakeholders, knowledge and technology to prevent and reduce the spread of invasive species that harm Canada's environment, economy, and society.

For more information and to sign up for invasive species news, visit www.invasivespeciescentre.ca.    