Re: Draft Ontario Invasive Species Strategic Plan

Subject: Strengthen prevention by closing the horticultural/nursery and aquatic ornamental plant pathway

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Thank you for the opportunity to comment on **Ontario's Draft *Invasive Species Strategic Plan*** (Draft OISSP). I support Ontario's effort to modernize its approach to invasive species prevention and management, and I appreciate the Plan's recognition that invasive species spread is strongly shaped by human-assisted pathways. This is an important step if Ontario is to reduce long-term management costs and help meet **Target 6 of the *Kunming–Montreal Global Biodiversity Framework***, which calls for reducing the rate of introduction and establishment of known or potential invasive alien species by at least 50% by 2030 (COP15, 2022).

However, to strengthen this Plan, **key pathways must be prioritized through specific action plans with measurable prevention outcomes**. The Draft OISSP Table 2 identifies twelve pathways. In this submission I focus on the pathway within my area of expertise: **the horticultural/nursery pathway**, including aquatic ornamental plant commerce.

Why this pathway deserves priority

Horticulture is THE primary route by which invasive plants are introduced and spread. It is also a significant pathway for the spread of pests and diseases through plant and soil movement. The horticultural pathway broadly includes the importation, sale, and distribution of plants through nurseries, garden centres, the aquarium and water-garden trade, and e-commerce, followed by escape into natural areas. **Stronger trade controls** therefore deliver co-benefits for both biodiversity protection and plant health. Because **trade pathways are primary and preventable** sources of introductions, they require upstream regulatory controls supported by education, not education alone.

Research has found that most invasive plants harming biodiversity were introduced intentionally for ornamental use. For example, one recent analysis found that invasive taxa were introduced via ornamental pathways at very high rates (e.g., 87.1% for trees and shrubs; 80.95% for vines; 40.1% for terrestrial and aquatic herbaceous plants) (Culley & Feldman, 2023; Culley et al., 2022). Climate change is expected to intensify this pathway by increasing establishment success and spread potential (Beaury et al., 2023).

Ontario's Auditor General (2022) found that Ontario is not effectively managing invasive species risks and identified lengthy **delays in regulating invasive species** that increase the risk of introduction and spread. The Auditor General also found that **invasive species remain available for purchase at nurseries** and through online sales and noted that inspection efforts do not adequately target key pathway locations such as garden centres. These findings are consistent with **ongoing public confusion**: neither the public nor many industry professionals have easy access to consistent, authoritative risk information or clear lists of invasive ornamental plants to avoid.

Governance context: fragmented responsibility and the need for stronger federal coordination

Canada's invasive species governance remains fragmented across mandates and departments. Risk assessment, regulation, inspection, and enforcement are distributed across multiple federal bodies and provincial/territorial governments, with gaps that are particularly evident for aquatic invasive plants and organisms moved through trade. The federal framework for invasive plant prevention is not comprehensive. As a result, provinces and municipalities are left managing costly downstream impacts.

These federal gaps and mandate inconsistencies have been documented by the Canadian Coalition for Invasive Plant Regulation. CCIPR's white paper, ***Reducing Sales of Invasive Plants in Canada: To Safeguard Biodiversity and Human Health***, highlights how Canada's invasive plant prevention remains fragmented and calls for a more coherent national biosecurity approach, including coordinated risk screening and trade pathway controls to reduce introductions at source (CCIPR, 2024).

Ontario's Plan should acknowledge this fragmentation and **commit to advocating for stronger national biosecurity coordination, including coordinated risk screening, improved cross-jurisdictional information sharing, and improved approaches to prevent movement of invasive plants through the plant trade, including strengthened labelling requirements to inform consumers**. In the absence of federal action, Ontario should commit to filling critical gaps within provincial jurisdiction.

Municipal implementation gap: costs are local, but prevention tools are weak

The draft plan recognizes that **municipalities are significantly impacted** and play a role in invasive species management, outreach, and education. However, it provides little practical guidance for municipal prevention, despite acknowledging that **municipalities can implement**

bylaws and regulations under the *Municipal Act*, 2001 to address invasive species impacts and movement. This is a major missed opportunity. Municipalities spend significant sums to control invasive species, yet the plan does not provide the tools, templates, or coordinated support needed to reduce introductions at source.

Without upstream trade controls, invasive species costs will continue to be downloaded onto municipalities and taxpayers. **Ontario should strengthen the plan by explicitly supporting municipal use of legal authority and procurement tools to reduce horticultural introductions and spread, including standardized model bylaws, procurement guidance, and best practices for managing soil, yard waste, and landscaping pathways**.

Requested additions to Ontario's Draft Plan (horticultural pathway)

To deliver measurable prevention outcomes, Ontario should add a dedicated action stream on Trade Pathways and Point-of-Sale Prevention with targets, deliverables, and accountability measures, including:

1. **Risk screening for traded plants** (terrestrial and aquatic):
   Establish a transparent, science-based risk assessment protocol supported by watchlists and phase-out mechanisms.
2. **Point-of-sale prevention and retailer accountability**:
   Implement mandatory labelling and consumer warnings for potentially invasive plants; set clear provincial standards for garden centres, wholesalers, landscaper supply chains, and online sellers; and require removal timelines when species are deemed high-risk.
3. **Inspection and enforcement aligned with the pathway**:
   Prioritize inspections of garden centres, wholesalers, and e-commerce sales channels, addressing the enforcement gaps identified by the Auditor General.
4. **Aquatic ornamental plant sales and disposal controls**:
   Explicitly address aquarium and water-garden plant sales, including prohibitions on high-risk taxa, clear disposal and containment requirements, and alignment of regulated taxa with **DFO-identified high-risk species** (Gantz, Mandrak, & Keller, 2013; Gordon et al., 2012) and with **neighbouring jurisdictions** (e.g., Manitoba's prohibited aquatic plant list; Manitoba *Aquatic Invasive Species Regulation*, 2015) to reduce cross-border spread and reinvasion. Alignment matters because **inconsistency across borders undermines prevention and increases reinvasion risk**.
5. **Early-action triggers:**
   Commit to prevention actions before species spread further, based on risk and presence in trade, consistent with the well-established principle that **costs and harms escalate sharply after establishment**.

Comparable model: Many jurisdictions provide models for trade-based prevention. For example, Maine demonstrates that regulating the horticultural pathway is feasible. Under Code of Maine Rules 01-001, Chapter 273 (*Criteria for Listing Invasive Terrestrial Plants*), Maine restricts the sale and distribution of listed invasive terrestrial plants, maintains a "Do Not Sell" list and a Watch List, and requires **point-of-sale warnings to inform consumers** (e.g., "Invasive Plant – May be Harmful to the Environment" and "Ask About Alternative Plants"). Maine also reduces risk from aquarium and water-garden commerce by prohibiting the sale, propagation, or introduction of a defined list of invasive aquatic plants under its aquatic nuisance species control framework.

Ontario's Plan should adopt similar **trade-focused tools, including risk screening, watchlists and phase-outs, and enforceable point-of-sale accountability** using Ontario's *Invasive Species Act*, supported by strengthened provincial labelling requirements that help consumers prevent the spread of potentially invasive plants, as well as potentially harmful pests and pathogens that may be transported on plants or in soil.

Closing

Ontario's Plan is an important opportunity to "**turn off the tap**" for one of the most controllable introduction routes. The Plan should strengthen its horticultural pathway measures into a prevention and compliance system capable of measurably reducing new invasions. It should also support municipalities with practical prevention tools and call for stronger federal coordination and biosecurity leadership to resolve jurisdictional gaps.

Respectfully submitted,

Cathy Kavassalis

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