



Emerging Municipal Roles in Invasive Species Management in Ontario

October 18, 2022 • Latornell Symposium

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AGENDA



The Invasive Species Centre



Invasive species and municipalities



Emerging Municipal roles in invasive species management



Funding invasive species action



Questions and discussion



The Invasive Species Centre acknowledges that we are living and working on the traditional territory of the Anishinaabe Peoples, in the Robinson Huron Treaty area. We recognize the long history of Indigenous and Métis Peoples in this area and across Canada and want to show respect to them and demonstrate our gratitude for their ongoing care of the land and water.



Invasive Species Centre

The **Invasive Species Centre** is a not-for-profit organization that connects stakeholders, knowledge and technology to prevent the introduction and spread of invasive species that harm Canada's environment, economy and society.

www.invasivespeciescentre.com



What do we do?

Priority Outcomes:

Vision: The Invasive Species Centre's vision is a Canada where land and water are protected from invasive species.

1

**Increase and
Diversify Investment**



2

Catalyse Action



3

**Share
Knowledge**



Municipalities and Invasive Species

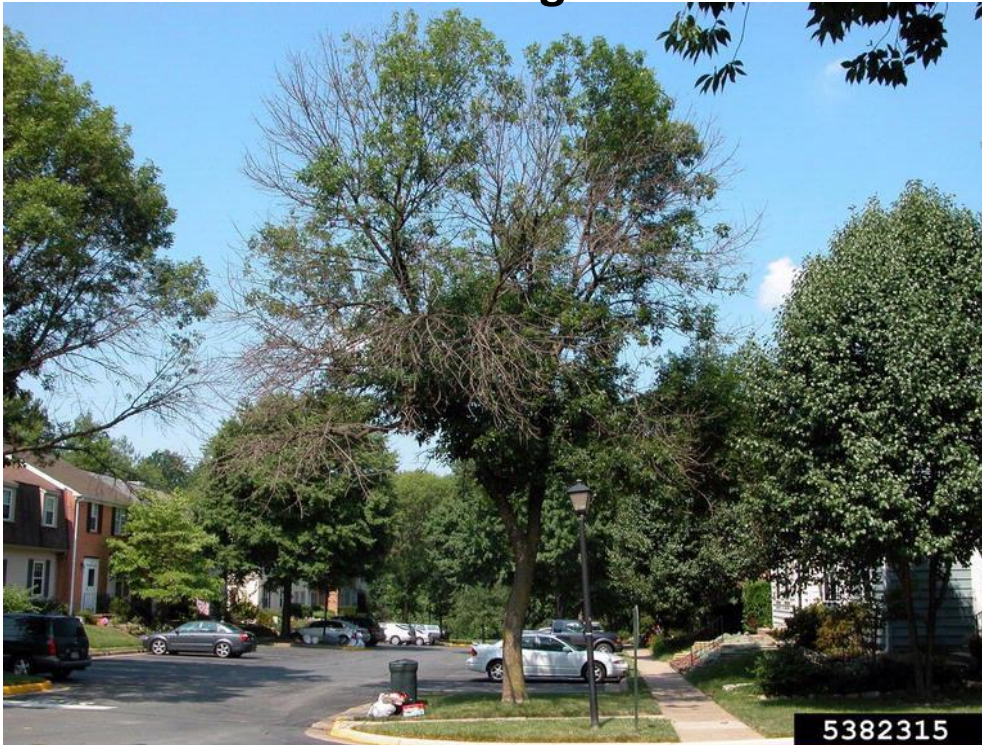
Invasive species negatively impact Canada's environment, economy and society.

Municipalities & CA's are often on the front lines of invasive species prevention, control and management in their community.



Examples of Municipal Impacts of Invasive Species

Tree decline and removal from invasive insect damage



Credit: Eric R. Day, Virginia Polytechnic Institute and State University, Bugwood.org

Clogging of intake pipes from invasive mussels



Credit: Craig Czarnecki, Michigan Sea Grant, Bugwood.org



Municipal Assets at Risk

Green infrastructure



Parks and gardens



Grasslands and forests



Urban trees



Wetlands

Grey infrastructure



Drinking and waste water treatment



Stormwater management



Public buildings



Roads and sidewalks



Direct and Indirect Costs to Municipalities

Direct

- Management costs (mechanical, chemical, and biological)
- Research and management programs
- Reduced crop yields
- Job losses
- Damage to infrastructure
- Impacts to international trade and tariffs

Indirect

- Ecosystem service loss
- Reduced biodiversity and resource production
- Impacts to tourism and recreation
- Reduced property values

Indirect costs to municipalities are extremely challenging to quantify



Invasive Species Impacting Municipalities

 CBC

Destructive, invasive wild pigs in Alberta have breached national park boundary for 1st time

About half of Saskatchewan's 296 rural municipalities now have wild pigs, said Ryan Brook of the Canadian Wild Pig Research Project based at...



Oct 11, 2021



John Ghent, John Ghent, Bugwood.org



Terry English, USDA APHIS PPO, Bugwood.org



Leslie J. Mehrhoff, University of Connecticut, Bugwood.org



Howard Russell, Michigan State University, Bugwood.org

Toronto

Toronto's ash trees face extinction

CBC News - Posted: Jun 20, 2011 10:31 AM ET | Last Updated: June 20, 2011

Firelight Park in West Lethbridge. (City of Lethbridge)

By David Opinko

Household pet fish becoming problematic invasive species in Lethbridge lakes

Oct 26, 2021 | 1:33 PM

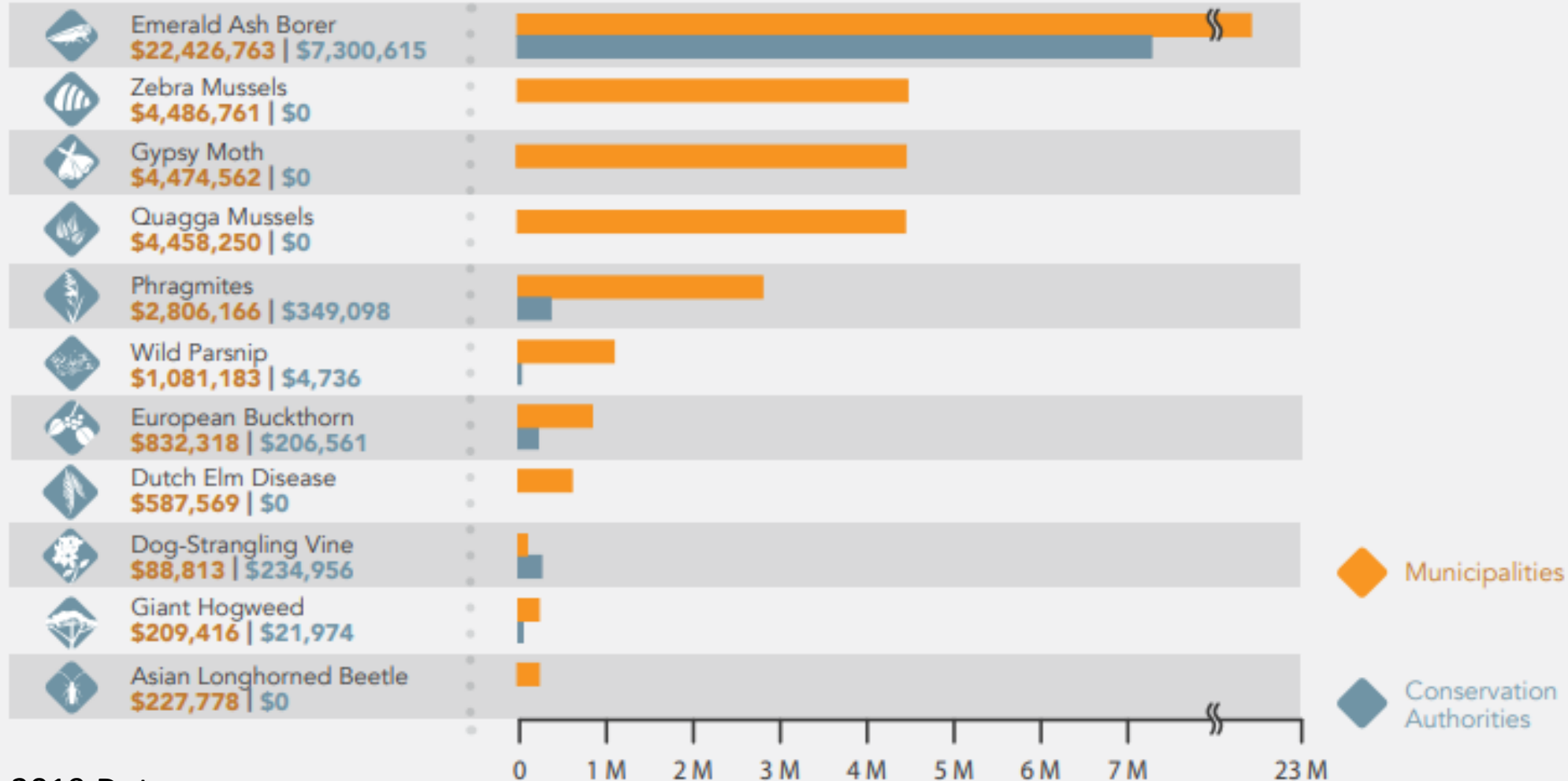
Economic Impact of Invasive Species on Municipalities in Ontario

- **Did you know?**
- The potential economic impacts of invasive species on Ontario's economy is **\$3.6 billion/year**



How Are These Investments Allocated?

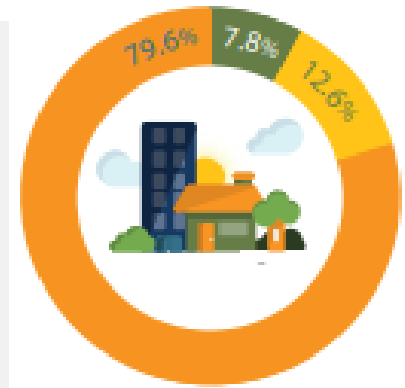
ESTIMATED ANNUAL EXPENDITURES ON INDIVIDUAL INVASIVE SPECIES



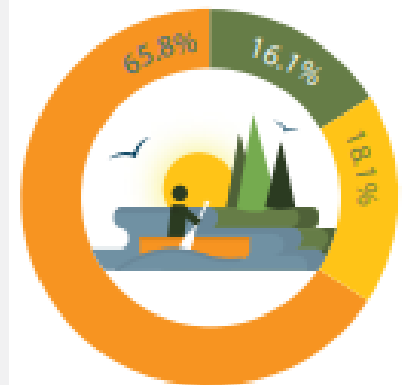
2019 Data

HOW WAS THE MONEY SPENT?

Municipalities



Conservation Authorities



- ◆ Prevention
- ◆ Detection
- ◆ Control & Management

National Invasive Species Municipal Expenditures Survey



Enquête sur les dépenses municipales associées
aux espèces exotiques envahissantes

Invasive
Species
Centre



Centre des
espèces
envahissantes



Environment and
Climate Change Canada

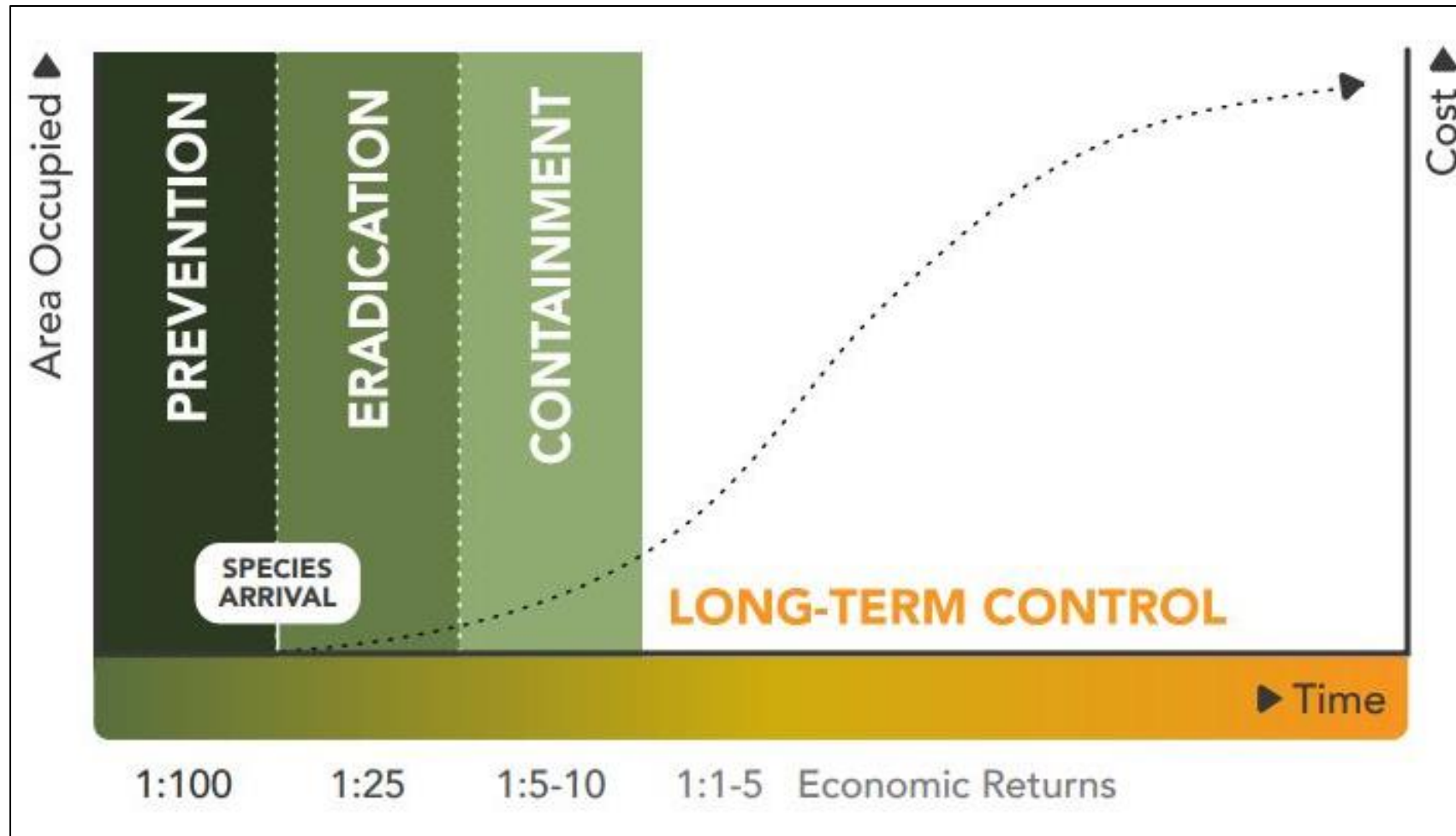
Environnement et
Changement climatique Canada

National Survey Results

- 179 (77.5%) municipalities indicated costs incurred due to invasive species activities, but 140 respondents indicated **funding was not sufficient** for management
- Average expenditure across all responding municipalities: **\$142,101/year**
- The majority of expenditures were incurred for **control and management** activities (61.6%)



The Invasion Curve: *Prevention = Value*



Controlling invasive species before they become established in an area will reduce their impact on human health, biodiversity, the economy and society.

Examples of Municipal Action to Prevent Invasive Species

1. Invasive Species Strategies

- Different types: species specific, property specific (e.g. ESAs, County Forests, etc.)
- Provide an actionable, fundable path to sustained IS action & avoid 'random acts of stewardship'
- Low cost, medium cost, high-cost activities and recommendations:
 - Control planning
 - Prevention
 - Policy
- Prevention – the “watch” list
- Containment – the “just got here” list
- Management – the “established” list

Ojibway Prairie Complex **Invasive Species Strategy**



2. Supporting Rapid Response

- Municipalities are key drivers of Rapid Response in Ontario:
 - Enablers & connectors
 - Public announcements and engagement
 - Advocates for rapid response investments in Ontario



European Water Chestnut Rapid Response Program

- Delegations to Council, requests for:
 - Receive and distribute a promotional kit, including a letter to river front landowners
 - Attend Paddle with a Purpose events



Clean Equipment Protocol for Industry

Inspecting and cleaning equipment for the purposes of invasive species prevention



3. Policies, by-laws, procedures

- Development of local noxious weed bylaws
- Native species or non-invasive planting policies
- Including Clean Equipment Protocols in select tenders
- Integrate priority species monitoring in existing monitoring programs (e.g. Oak Wilt & Windsor)

4. Training and Professional Development

- ISC's Webinar Series
- ISC Forum Feb 7-9 2023
 - Abstract deadline: Oct 31, 2022

www.invasivespeciecentre.ca/forum

- ISC's Online Training Courses



Upcoming Webinars

Knock, knock, knocking on non-natives' doors

Monday, Oct. 31 | 11 a.m. EDT

Coming in Hot: Early Detection and Rapid Response Priorities in SE Michigan

Tuesday, Dec. 6 | 11 a.m. EDT

Visit our [Events](#) page to see more upcoming invasive species webinars, workshops, and other learning opportunities.

Past Webinars

Hemlock Woolly Adelgid Expert Panel – Question and Answer Session



Featuring experts from the Canadian Food Inspection Agency, Natural Resources Canada, and the Invasive Species Centre



5. Collaborations & Community Engagement

- GS Regional Phragmites Collaborative pilot areas:
 - Thunder Bay & Kenora
 - York Region
- Public education & Community Engagement
 - Landowner Tool Kits
 - Public outreach on herbicides over water
 - Websites and information resources

***Ontario Phrag-
Free by 2033***

**Regional Plan Guidebook
2021-2022**



Learn more about regional Phragmites collaboration opportunities at www.greenshovels.ca

Tools to Fund Invasive Species Programs

Local Action Grants

Integration into Operations budgets

Emergency Reserve Funds

Asset Management/Natural Asset Management
(NAM)

Municipal Green Bonds

"User fees" (parking, trail head-donation, facility
rentals, etc.)

Modest Steps Towards Supporting Local IS Action

- Invasive Species Microgrants
- Invasive Phragmites Control Fund via Green Shovels



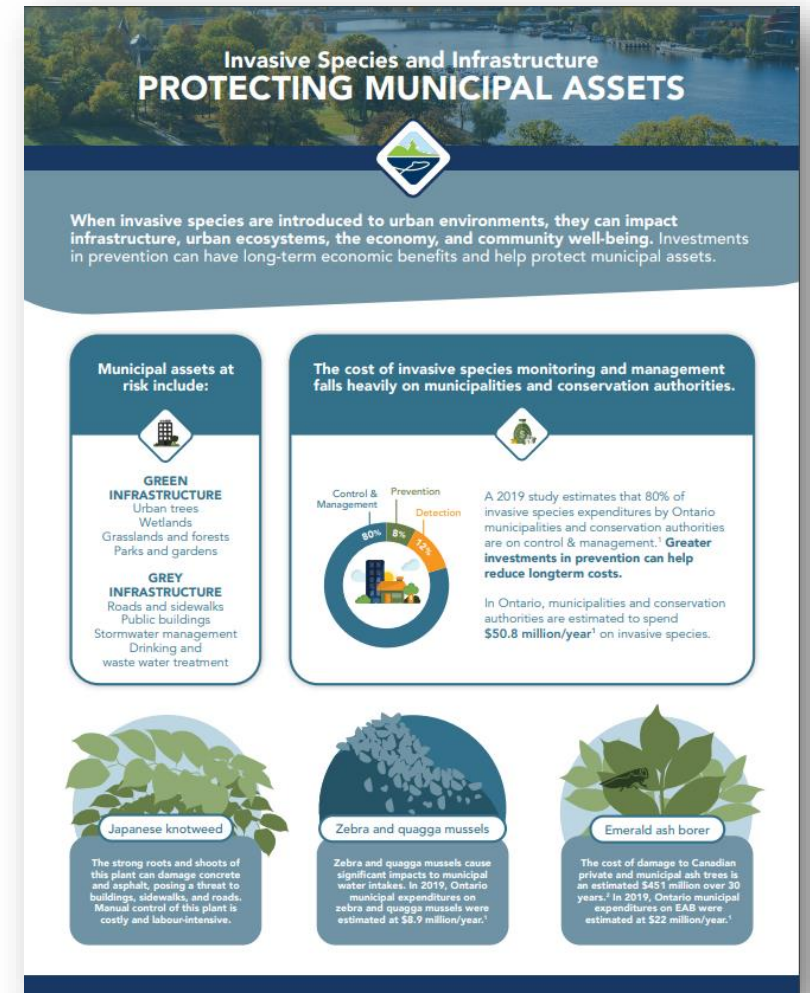
ISC Work with Municipalities



Online peer-to-peer space to encourage collaboration between municipalities and conservation authorities involved in invasive species management at the local level

Additional work:

- Management plan support
- Training and outreach
- Community science support

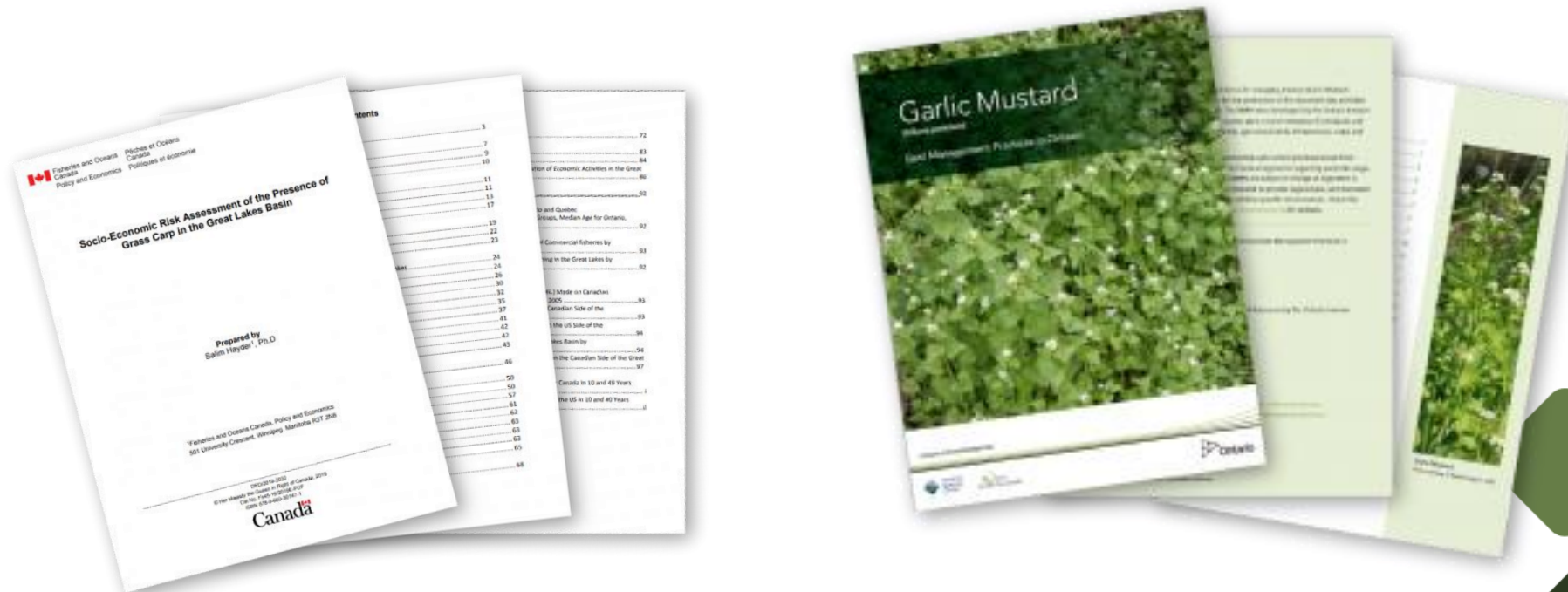


Factsheet available on invasivespeciescentre.ca

Additional Resources

ISC has 3 searchable, publicly accessible databases on our website:

- Best Management Practices Database
- Risk Assessment Database
- Pathway Risk Assessment Database





Visit our website to sign up for

- Quarterly newsletters
- Bi-weekly media, research, and events scans
- Event and webinar invitations

www.invasivespeciescentre.ca

Please reach out if we can support your efforts to mitigate the impacts of IS!

Colin Cassin

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Species
Centre