

Advancing AIS Management of Organisms in Trade in the Great Lakes Region

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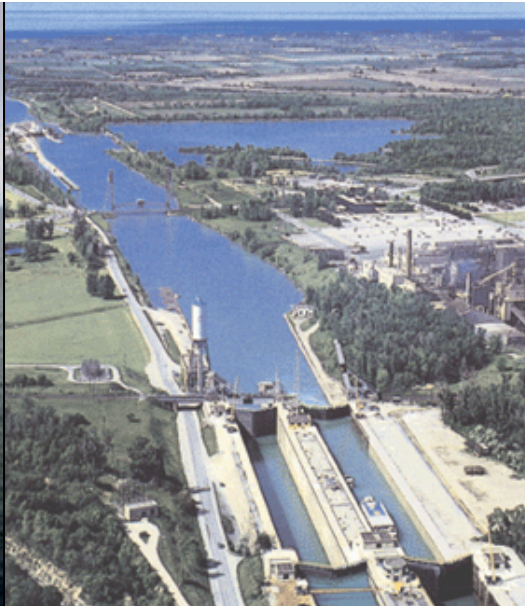
Presentation Outline

- Background
- Project Components
- Project Findings
- Challenges and Lessons Learned

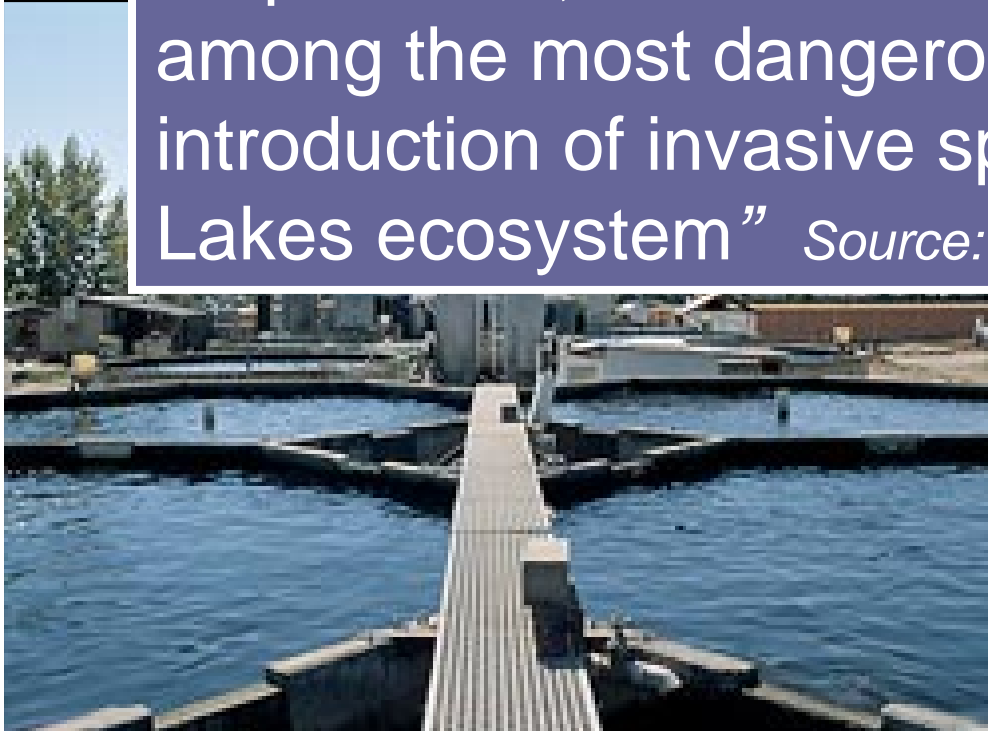
Definition of Terms



- Invasive species: An alien species whose introduction does or is likely to cause economic or environmental **harm** or harm to human health. *Source: U.S. Executive Order 13112 (1999) and National Invasive Species Council and Aquatic Nuisance Species Task Force (2007).*
- Pathway: The means by which species are transported from one location to another. Natural pathways include wind, currents, and other forms of dispersal in which a specific species has developed morphological and behavioral characteristics to employ. **Man-made pathways are those pathways which are enhanced or created by human activity. These are characteristically of two types: intentional and unintentional.** *Source: National Invasive Species Council and Aquatic Nuisance Species Task Force (2007).*
- Vector: An “umbrella” term used to describe a group of related pathways. Examples of vectors include maritime commerce, organisms in trade, canals and waterways and recreational activities.



“Importation, interstate commerce and trade are among the most dangerous pathways for introduction of invasive species in the Great Lakes ecosystem” *Source: GLRC AIS Strategy Team*



Organisms in Trade



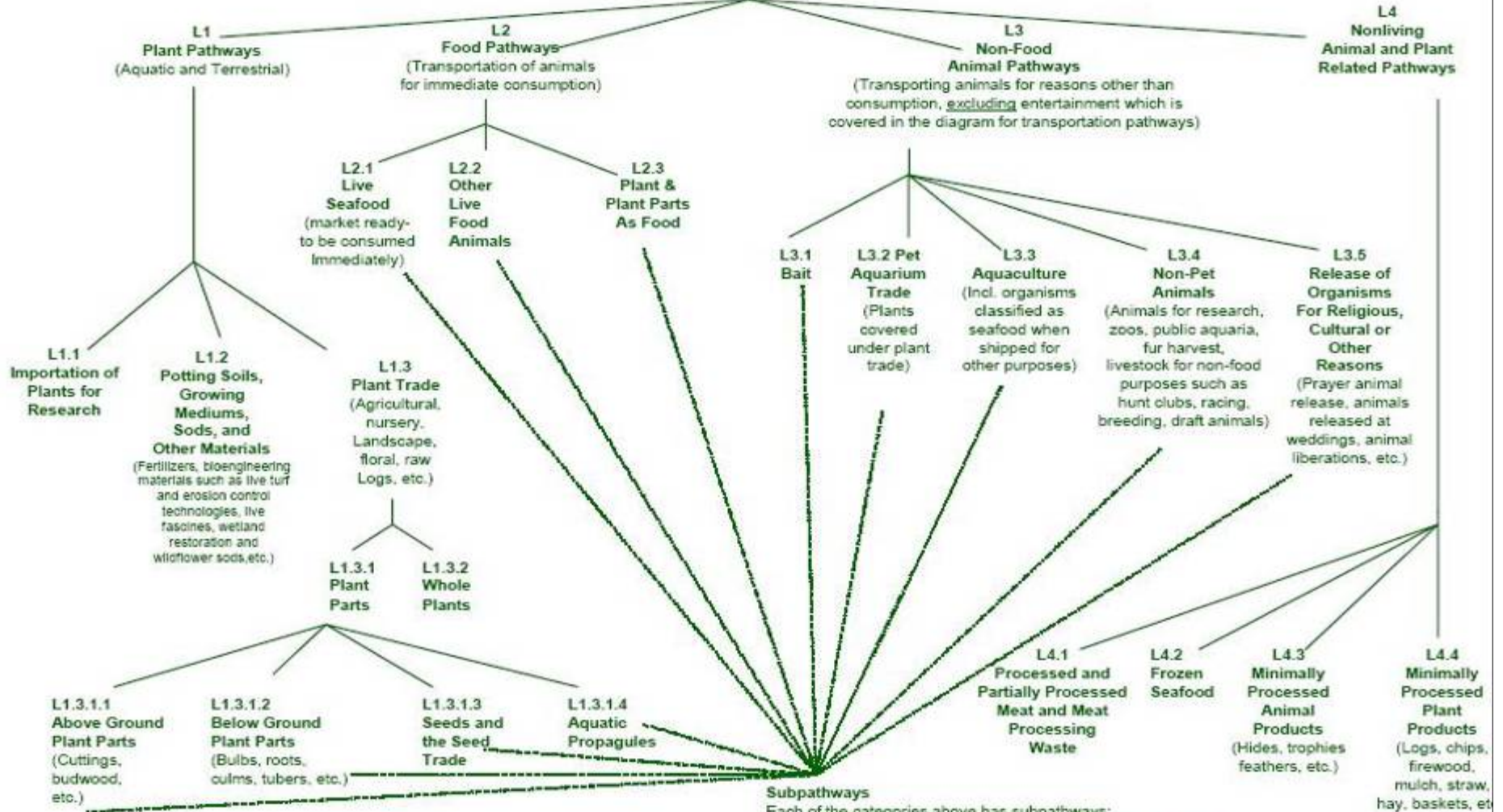
Aquaculture



Diagram 2

Living Industry Pathways

(includes all pathways associated with living organisms and/or their by-products)



Subpaths
 Each of the categories above has subpaths:
 1) The organism "in trade" itself – whether intentionally released (authorized or unauthorized) or escaped
 2) Hitchhikers on or in the organism in trade
 3) Hitchhikers in water, food, nesting/bedding, or growing medium
NOTE: Hitchhikers can include plants, animals, invertebrates, parasites, diseases and pathogens

Definition of Terms

VECTOR

Live Organisms in Trade (OIT)

PATHWAYS

Aquaculture

Aquarium

Bait

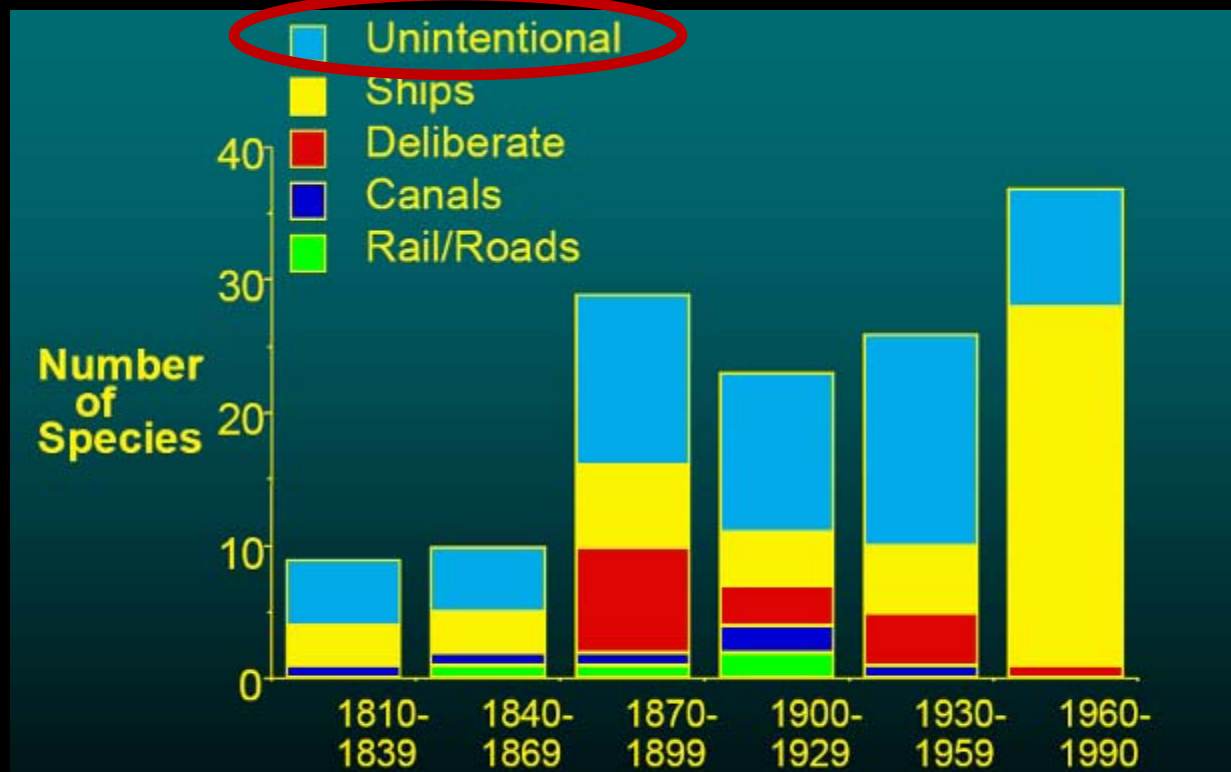
Horticulture / Water Gardens

Food Fish

Others



Great Lakes Aquatic Invasions



Mills et al., *J. of Great Lakes Research* (1993)

What Can We Do?

- Bring together key players (government, commercial, research, technology and non-government sectors)
- **OUTCOME: Partnerships** between government, industry and others that will help reduce the introduction and spread of AIS through OIT

What Can We Do?

- Improve understanding and assess the issue (state of knowledge, availability of information, status of management)
- **OUTCOME:** Identification of gaps, risks and associated **opportunities** to advance management of the OIT vector

Building a Framework to Advance Aquatic Invasive Species Management of Organisms in Trade into the Great Lakes Region

- **Funder:** Great Lakes Protection Fund
- **Timeframe:** January – December 2008
- **Premise:** Scoping and planning exercise
- **Participants:** Industry, NGOs, Agency Experts
- **Goal:** *To investigate and characterize the OIT vector in efforts to develop a project to reduce the invasion risks of OIT based on a cooperative effort between the public and private sector.*

Project Components: Structure

- Coordinator: Great Lakes Commission
- Advisory Committee: agency, industry, NGO
- Pathway Expert Teams / Pathway Summaries
 - Aquaculture
 - Live Bait
 - Live Food Fish
 - Aquarium
 - Horticulture / Water Gardens



Project Components: Workshops

- *Exploring the Organisms in Trade Vector*
- *Proposed Projects to Advance Management of Organisms in Trade*

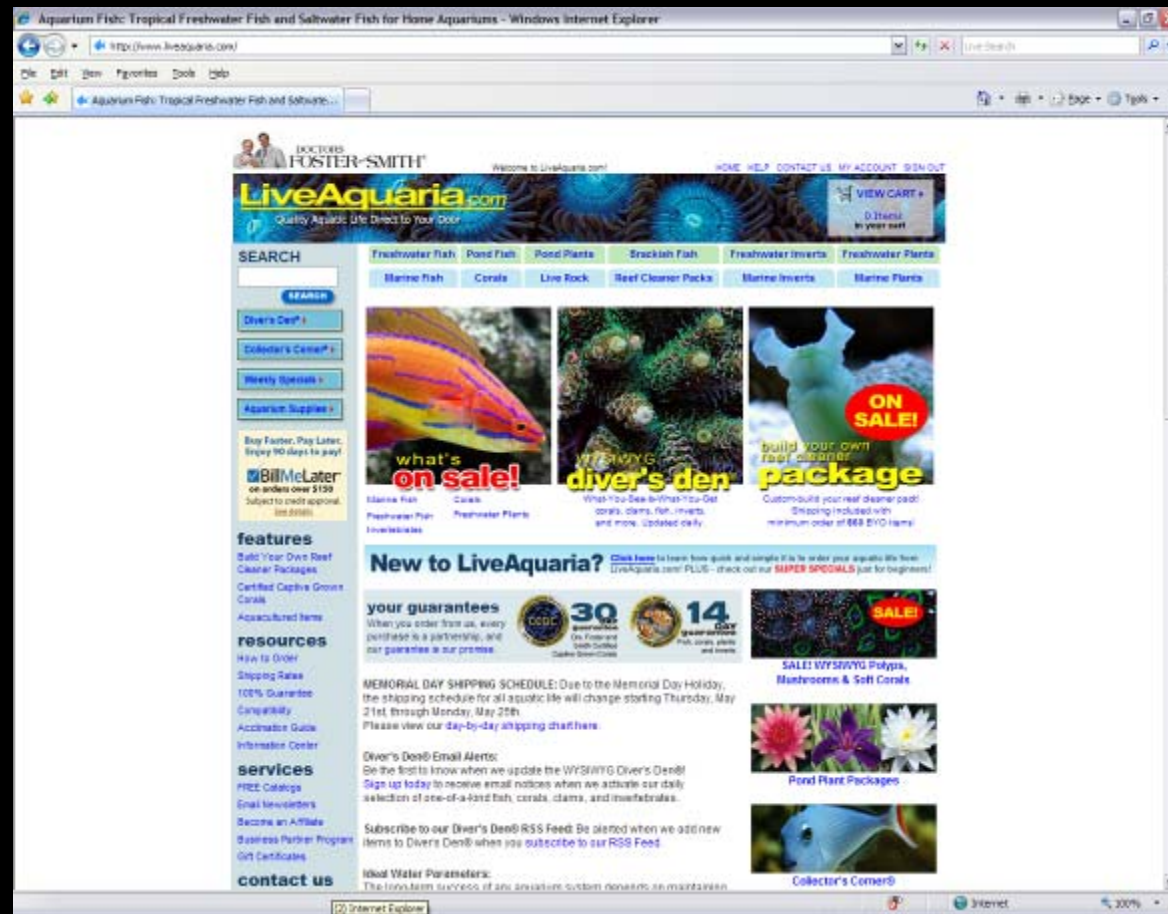
- Proposal ideas developed in the following areas:
 - Risk assessment for potential new invaders
 - Internet monitoring for sales of invasive species
 - Advancing efforts to reduce AIS risks in private and public aquaculture

Project Findings

- Missing, inaccurate or uncertain information
- Need more/better information
- Inconsistent regulations
- Limited understanding or awareness of regulations or potential impacts
- Need more support for non-regulatory tools




Project Findings




- Inaccurate identification of species or hitchhikers
- Availability of species through “non-regulated direct sales” (e.g. internet)

Project Findings


- Consumer behavior (e.g. primary mechanism of introduction from aquarium trade is **owner release of unwanted pets**)
- Need to strengthen our understanding of how to influence behavior



Graphic courtesy of Paul Lerner, Queensland, Australia; Source from the Queensland State Department of Primary Industries and Fisheries, Australia



Habitattitude.
PROTECT OUR ENVIRONMENT
DO NOT RELEASE FISH AND AQUATIC PLANTS



www.habitattitude.net

Alternatives to Release

- Contact a retailer for proper handling advice or for possible returns.
- Give/trade with another aquarist, pond owner or water gardener.
- Donate to a local aquarium society, school or aquatic business.
- Seal aquatic plants in plastic bags and dispose in trash.
- Contact veterinarian or pet retailer for humane disposal advice.
- Know your state regulations regarding these alternatives.

**It's Not About Fish and Plants,
It's About Responsible
Consumer Behavior.**

Challenges and Lessons Learned

- Building consensus
- Effectively reducing risk while maintaining the economic viability of the industry
- Reaching the “bad actors”
 - Potential solution: Increasing demand for “certified” products
- Addressing the complexity of OIT



Questions?

Project Web Page:

<http://www.glc.org/ans/initiatives.html#oit>

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