

Risk Assessment Clearinghouse Update

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Background – AIS Risk Assessment Clearinghouse

- Identified in formal recommendations by GLP Ad Hoc Committee in 2017
- Purpose: Provide a mechanism to compile risk assessment information to track progress in meeting partner objectives, and to serve as a point of reference for managers to inform their decisions
- Highlighted importance for comparison of risk assessment methods and species summaries

Progress on Risk Assessment Clearinghouse

- Completed high-level risk assessment summaries
 - New York Invasive Species Information
 - University of Notre Dame's Science-Based Tools for Assessing Invasion Risk (STAIR)
 - Wisconsin Department of Natural Resources
 - Aquatic Weed Risk Assessments (USA, CAN, Great Lakes)
 - Fish Wildlife Service Ecological Risk Screening Summaries
- Under author review
 - US Department of Agriculture - Animal and Plant Health Inspection Service – Under Author Review
 - Michigan Department of Agriculture Rural Development – Under Author Review
- Not included at this time
 - Canada Department of Fishes and Ocean Centre of Expertise for Aquatic Risk Assessment (DFO CEARA)

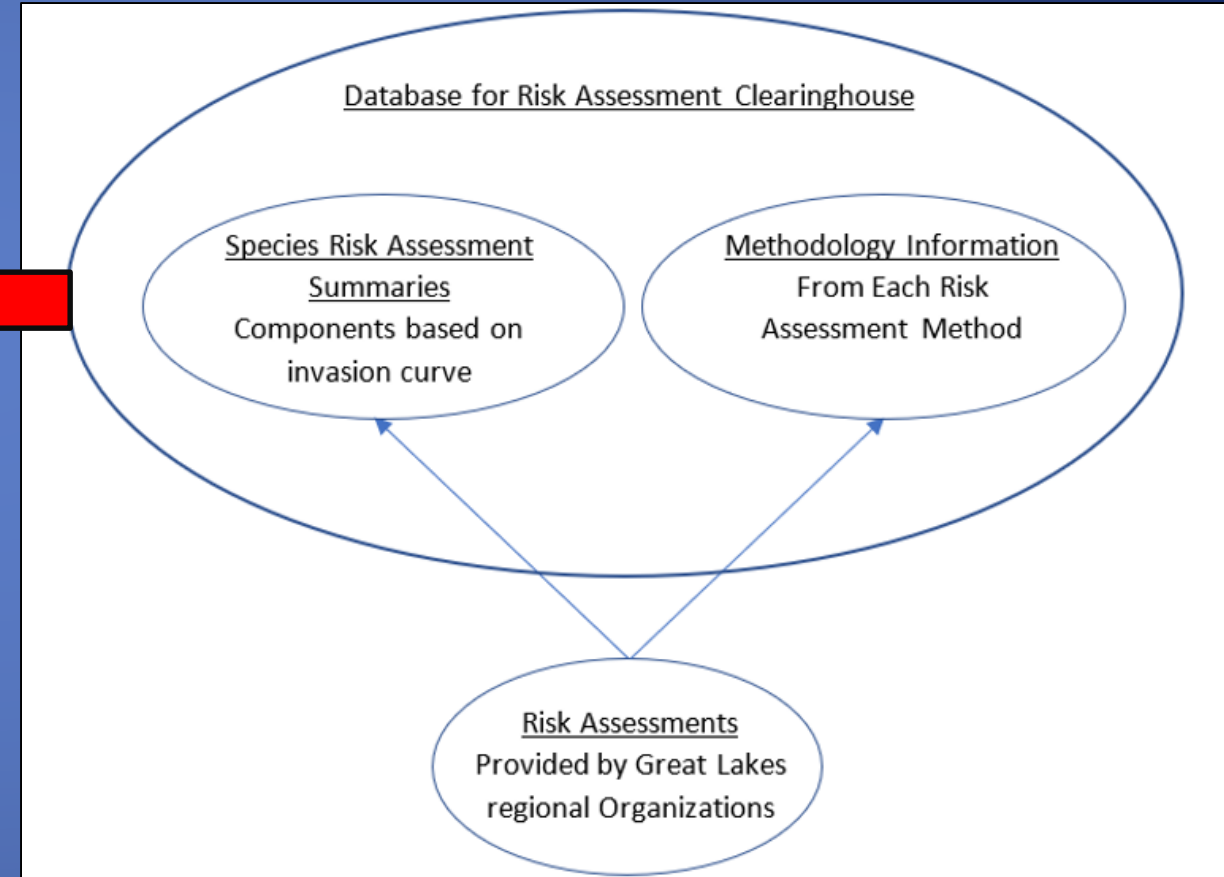
Clearinghouse Overview

Great Lakes Region Risk Assessment Clearinghouse

Clearinghouse Interface: Hosted by NOAA GLANSIS

Risk Assessment Methodology Explorer Species Risk Assessment Summaries Explorer

The screenshot shows two side-by-side web interfaces. The left interface is the 'Risk Assessment Methodology Explorer' and the right is the 'Species Risk Assessment Summaries Explorer'. Both are hosted by NOAA GLANSIS. A red arrow points from the 'Species Risk Assessment Summaries Explorer' interface to the diagram on the right.



Summary of Clearinghouse Content

Table 1: This table shows the overall, and by-taxa, composition of risk assessment summaries through the number and percent of comparable species across the risk assessments, the number of unique species, and the overall number of species entries.

| Taxon | Number of species assessed by more than one assessment method (as a % of unique species) | Number of unique species | Number of total entries by taxa |
|--------------------|--|--------------------------|---------------------------------|
| Algae | 3 (10%) | 29 | 33 |
| Amphibians | 1 (10%) | 10 | 11 |
| Crustacean | 38 (12%) | 326 | 380 |
| Fishes | 167 (11%) | 1530 | 1752 |
| Bivalve | 15 (42%) | 36 | 63 |
| Gastropod | 28 (37%) | 76 | 120 |
| Plants | 159 (53%) | 301 | 768 |
| Other ¹ | 3 (6.1%) | 49 | 52 |
| ALL | 414 (18%) | 2357 | 3179 |

1) "Other" taxon category refers to risk assessment summaries grouped by taxa with less than 10 entries for each taxon in the clearinghouse.

Clearinghouse Information Groups

- **Method information**
 - organization (if different from methodology), methodology, citation, date, geographic scope
- **Species taxonomy**
 - group (e.g., fish, plant, crayfish, etc.), family, genus, species, common name, synonyms
- **Risk assessment components**
 - introduction, survival, establishment, spread, impact (socio-economic and ecological), overall, certainty/confidence

Summarized risk assessment components

| Components | Working Definitions |
|--|---|
| Introduction | Referring to the arrival of a species within the geographic scope of the species assessment, and the ability to arrive in new environment. |
| Survival | Ability of the species to survive in a new environment, and to what extent (geographic, and population size). |
| Establishment | Ability to establish self-sustaining populations in a new environment, and potential for establishment in the Great Lakes region. |
| Spread | Ability of the species to spread beyond the initial introduction. |
| Impact (socio-economic and ecological) | The potential socio-economic and ecological impacts of the species. Is this species invasive (causes measurable harm?) and include where species management information can be found in the assessment, if available. |
| Overall | Does the assessment give an overall scoring or result based on its determination of risk? |
| Certainty/confidence | Is the certainty/confidence of the risk assessment or methodology directly reported? |
| Notes | Any additional designation or information determined to be necessary by expert review for the interpretation of the species risk assessment. |

Review Methods

- Both internal and external, iterative process
- Internal review
 - Three way approach -- within assessment and taxa groups (e.g., plants, fish etc.), within assessment across taxa, and across assessment methods
- External review
 - with risk assessment experts or authors were contacted for review process, and evaluation of the finalized examples of risk assessments

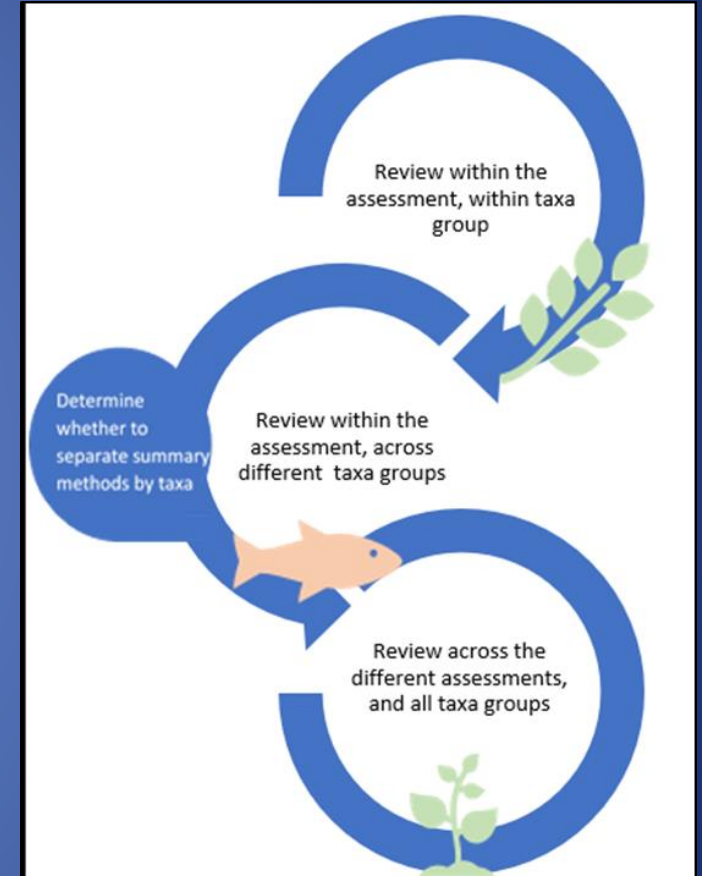


Figure 1: Internal iterative review process to evaluate the methods for summarizing information present in the clearinghouse.

Next Steps

- Hand-off support to NOAA GLANSIS
- Summary report of work completed (to be reviewed by GLP prior to finalizing)
- Draft guidance for development of RA clearinghouses
 - Needs GLP review
 - Product of GLP?

Species Risk Assessment Summaries

- <https://www.glerl.noaa.gov/glansis/riskAssessment.html>

GLANSIS Definitions and Criteria for Listing (Watchlist)

The watchlist is intended to be precautionary: if there is debate about a species probability of invasion (introduction, survival, establishment, and spread) in the Great Lakes, the preference is for inclusion on this list until such doubt is resolved.

Geographic criterion: Lives in a known donor region (such as rivers adjacent to Great Lakes, inland lakes in the Great Lakes region, western Europe, the Ponto-Caspian region) or in a zone with high specialization, species pool, or climate conditions that match the Great Lakes.

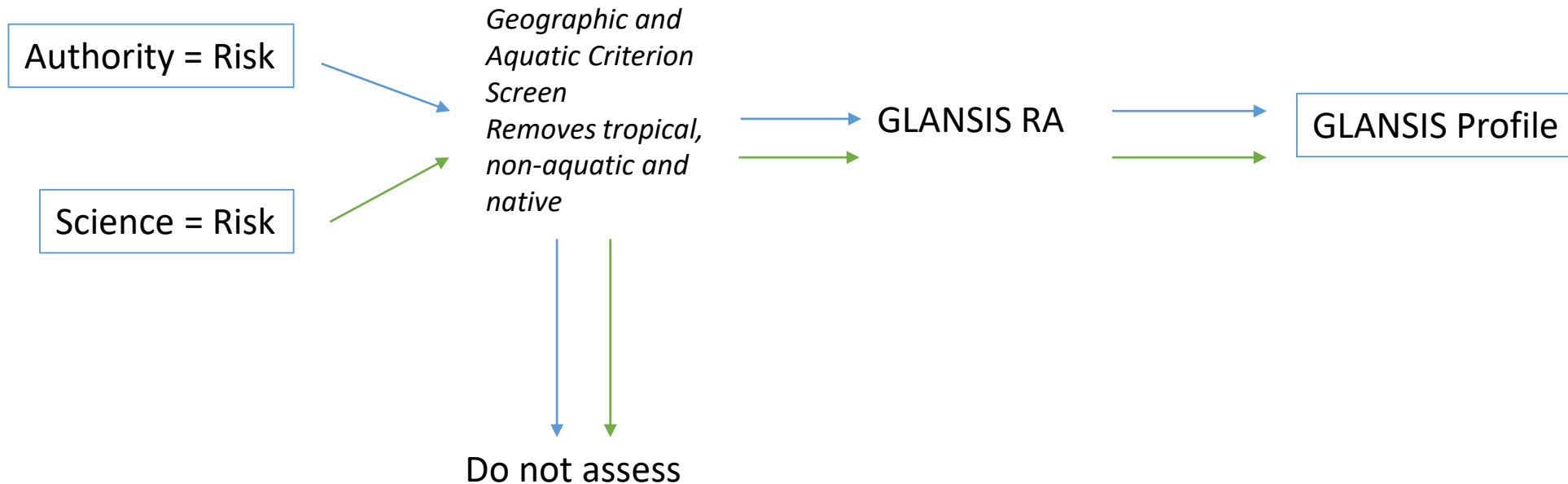
Aquatic criterion: The criterion of including only aquatic species is unchanged. USDA wetland indicator status is used as a guideline for determining whether wetland plants should be included in the list: OBL, FACW, and FAC wetland plants are included in this list as aquatic; FACU and UPL plants are not. Waterfowl, amphibians, reptiles, and mammals are not currently included.

Establishment criterion: Not already established in the Great Lakes, but assessed as 'likely' to become so in peer-reviewed literature¹ or via our assessment (TM-169) as follows:

1. **Vector Subcriterion:** A transport vector currently exists that could move the species into the Great Lakes. The species is likely to tolerate/survive transport (including in resting stages) in the identified vector. The species has a probability of being introduced multiple times or in large numbers.
2. **Reproduction and Overwintering Subcriterion:** Based on known tolerances or climate matching, the species is likely to be able to successfully reproduce and overwinter in the Great Lakes.
3. **Invasion History Subcriterion:** The species has been known to invade other areas

OR

1. The species has been officially listed as a potential invasive species of concern by federal, state or provincial authorities with jurisdiction in the Great Lakes basin.



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