

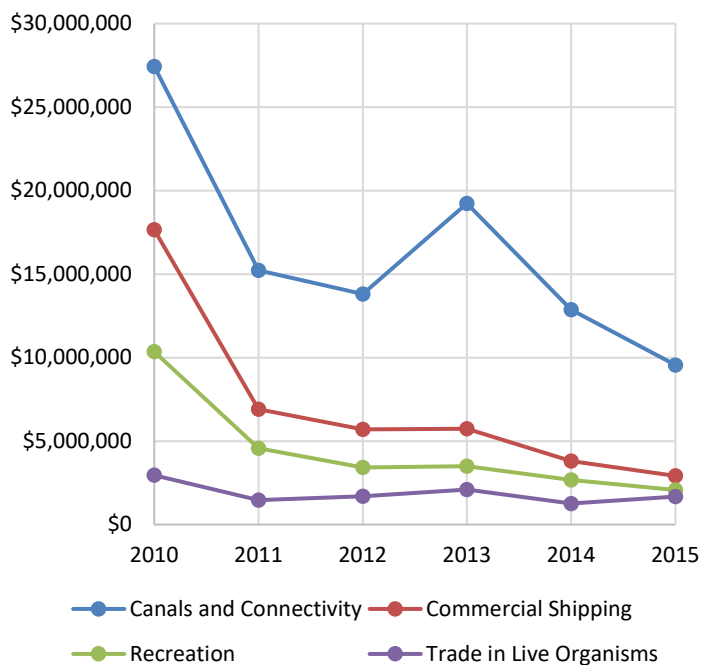
# Great Lakes Restoration Initiative Funding for Aquatic Invasive Species: Pathways

**A**quatic invasive species are moved into and throughout the Great Lakes basin through a variety of pathways. In its Aquatic Invasive Species Research Priorities for the Great Lakes document, the Great Lakes Panel on Aquatic Nuisance Species' Research Coordination Committee has identified a subset of primary pathways for which funding is a regional priority: Canals and Connectivity (e.g., natural dispersal, dredging activities), Trade in Live Organisms (e.g., aquarium pet/plant trade, bait trade, water gardens), Recreation (e.g., trailered boats, aquatic recreational gear), and Commercial Shipping (e.g., ballast water, hull fouling). The document further delineated five focus areas for research: Prevention; Detection, Monitoring, and Rapid Response; Control and Management; Coordination and Information Management; and Threats and Impacts to Ecosystems, Human Health and Economic Values.

For the purposes of this analysis, a sixth focus area, Education and Outreach, was also included. To determine the extent to which the GLRI has funded projects in support of these regional research priorities, the Research Coordination Committee analyzed publicly available project information for federally-dispersed Great Lakes Restoration Initiative (GLRI) funds (i.e., FY2010-2015 funding dispersed directly to recipients for project implementation through a federal agency's GLRI request for proposals). Data was derived from U.S. Environmental Protection Agency's Environmental Accomplishments in the Great Lakes (EAGL) database, associated data metrics and project descriptions, and supplemented with information from the Asian Carp Action Plans (2010-2015).<sup>1</sup>

## PATHWAY FUNDING PER YEAR

GLRI Pathway Funding per Year

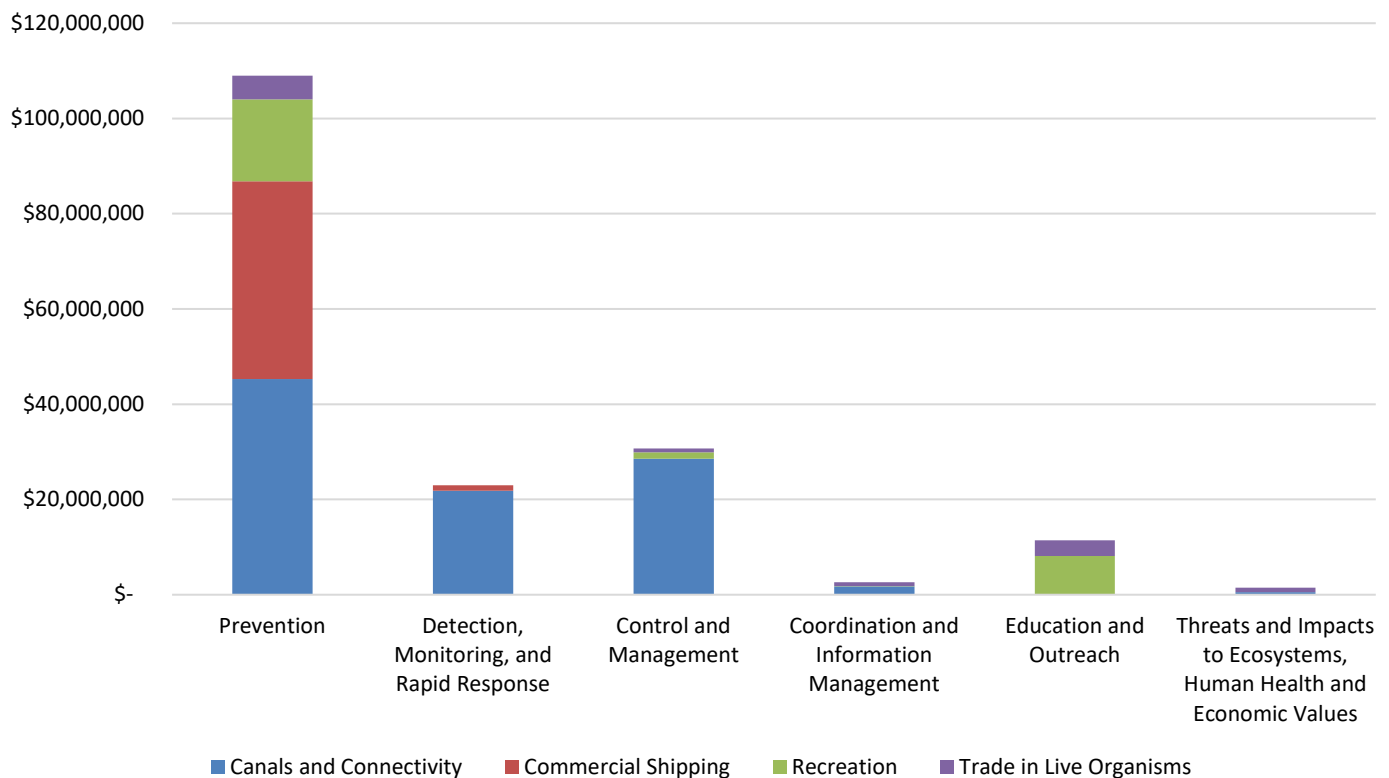


- The Canals and Connectivity pathway, funded at a higher rate than other pathways, is closely connected to work conducted through the Asian Carp Action Plan. The plan provides consistent funding guidance and direction for invasive carp, including bighead, silver, black, and grass carp, prevention and control efforts in the Chicago Area Waterway System and Illinois Waterway in Illinois, and GLMRIS Secondary Pathways in Indiana and Ohio.
- Funding for the Trade in Live Organisms and Recreation pathways has remained fairly level but is consistently lower than Canals and Connectivity. Management responsibility for these pathways rest primarily at the state level where the majority of projects are implemented.
- The majority (81%) of Commercial Shipping funding is focused on developing and testing new technology for treating ballast water, presumably driven by regulatory requirements for adoption of treatment systems.

Note: Projects undertaken through or funded by state aquatic nuisance species management plans are not included in this analysis

## FOCUS AREA FUNDING

### Primary Focus of Pathway Projects



Note: Some focus areas may be underestimated in terms of funding because projects were categorized based on the primary goal of the project, rather than attempting to divide funding amongst all project components

- The Research Coordination Committee has identified Prevention research needs that are specific to understanding and managing each pathway, as well as research priorities that can be applied to a pathway. The importance of Prevention as the cornerstone for management is reflected in the large proportion of GLRI funding for Prevention-focused projects relative to other focus areas and evidenced as the only focus area with dedicated funding within all four primary pathways.
- The majority of Canal and Connectivity funding is related to preventing the movement of invasive carp into the Great Lakes.
- A higher level of funding for education and outreach in the Recreation pathway (versus other management areas) likely reflects the stronger understanding of this pathway at the onset of the GLRI.
- Not all the Research Coordination Committee focus areas are identified as priorities in the GLRI Action Plans. Thus, Coordination and Information Management and Threats and Impacts to Ecosystems, Human Health and Economic Values have no corresponding objectives in the plan, and receive limited GLRI funding.
- The funding level for Education and Outreach is likely underestimated here, as all GLRI projects must contain some aspect of education/outreach, and we are unable to fully parse out the exact amount spent on education and outreach for each project.

<sup>1</sup> The information used in this analysis is derived from the EAGL database and was provided to the Great Lakes Commission by the U.S. Environmental Protection Agency. This dataset is supplemented with funding and project information from the Asian Carp Action Plans for fiscal years 2010-2015. Data regarding funding agency, funding year, recipient, project coordinates, and project award amount was entered directly from the EAGL dataset metrics, while information about species and/or pathways covered by the project, project work focus areas, and recipient categorization was determined based on information included in project descriptions in the EAGL database. For a full list of granting agencies and grant recipients, please visit [www.glri.us](http://www.glri.us)