

Global Water Institute Strategic Plan

Executive Summary

Introduction

The Global Water Institute (GWI) at Ohio State was formed in recognition of the critical nature of water issues facing Ohio, the Midwestern region, other parts of the USA and North America, and the world. As population climbs, urban centers continue to expand, and the impacts of climate change threaten human health and livelihoods, the need for availability of and access to abundant clean, fit-for-use water has never been more urgent. GWI works to develop strategies to adapt to these changes by integrating Ohio State's exceptional expertise in research, teaching, and outreach with external NGO, industry, governmental, educational, and foundational partners to create a top tier, world-renowned water institute.

Mission Statement

The Global Water Institute at Ohio State University connects the creative abilities of our university community and external partners to provide practical and innovative solutions to problems of water.

Vision Statement

Clean, available, accessible, sustainable water for all in an ever-changing world.

Programmatic Goals

- 1. Create a vibrant and visible institute through world-class research that solves real-world problems.**
 - GWI will target major funding opportunities, develop advanced infrastructure for research, and promote cooperative programs to create a holistic and interdisciplinary approach to water research.
- 2. Earn a reputation as a nationally and internationally competitive organization in evaluating and solving the world's most critical and complicated water problems.**
 - GWI will build capacity, within Ohio State and externally, to offer practical and sustainable solutions to critical water problems locally, nationally, and abroad.
- 3. Enhance revenue streams to promote expansion of GWI and develop bridge funding for special opportunities.**
 - GWI will diversify revenue streams, enhance grant revenues to provide indirect cost recovery offsets for staff, expand existing

funding streams, magnify impacts through industry and donor relationships, and create a rapid response team to allow GWI to respond nimbly to time-sensitive funding opportunities.

- 4. Contribute to the practice of water management through novel training and educational programs that fit our aspirations to be a world leader in solving water-related problems.**
 - We will expand existing training opportunities for in-country partners and develop new approaches and tools to broaden our reach and enhance scalability. We will also foster and expand international learning opportunities for Ohio State students.

Strategic Directions

- 1. Recognizing the missing pieces**
 - GWI will actively expand contributions from the arts, public policy, social sciences, business, public health, and medicine in project creation to build capacity across the university and ensure we develop comprehensive solutions to complex problems.
 - We will develop core laboratories that provide GWI and campus with a competitive advantage in water research.
 - We will also establish cooperative and educational agreements to make cutting edge software and equipment available to Ohio State's research community.

2. Projects and research that make a difference

A. *Water poverty and water security*

GWI will lead innovations in big data, sensor technologies, satellite monitoring, economic modeling, and water cycle modeling to develop sustainable strategies for optimal water use and resiliency for vulnerable populations. Importantly, we will develop water solutions that account for social, cultural, and historical norms.

B. *Hydrologic adaptations of societies to climate change (targeted partnership with Byrd Polar and Climate Research Center)*

GWI and Byrd will develop strategies and innovations that build coastal resiliency to sea-level rise, optimize management of water-supply declines due to diminishing ice fields and snowpack, and improve understanding of climate change-related rainfall variability. We will link these issues to proactive management of potential food and water shortages.

C. *Water nexuses with energy and food (targeted partnership with Ohio Water Resources Center and Sustainability Institute)*

Together, we will develop innovative and low-cost strategies for efficient energy and water use and reuse. Key to smart use of water resources is “dirty water to clean energy” strategies and training in agroecology and land management best practices.

D. *Novel technologies and strategies for creating freshwater (targeted partnership with Ohio Water Resources Center and CFAES Water Quality Initiative)*

GWI will work with OWRC and WQI to implement novel technologies that detect, evaluate, and treat emerging contaminants, as well as strategies to mitigate health impacts. We will create an innovative mobile water quality analysis unit (The Water Bus) to provide rapid on-site diagnoses and consultative services.

E. *Water and health (targeted partnership with Global One Health Initiative and Infectious Disease Institute)*

In partnership with GOHI and IDI, we will characterize the impact of poor water quality on health and disease, implement simple strategies for reducing health impacts in resource-poor settings, and examine risks of

urbanization on water management in developing countries.

3. Training, Education, and Communication

- GWI will enhance Ohio State student experiences through a diverse array of innovative programming (e.g., Engineers Without Borders), including student field trips, peer programs with partner universities, professional networking events, seed grant funding for student organizations, honors thesis support, and internships.
- Beyond campus, GWI will be involved in community outreach in Columbus City Schools (WOW, CCWA Global Scholars).
- We will increase our visibility on campus through Newsletters, e-magazines, social media activity, and digital advertising.

Organizational Structure

GWI currently consists of an executive director, three professional staff, an External Advisory Board, a Faculty Advisory Committee, and a Student Advisory Board.

GWI professional staffing needs will expand to include the addition of 15 professional staff and 11 Ph.D. domain specialists.

Strategic Partnerships

GWI has formed partnerships with governmental organizations, U.S.-based and international universities, NGOs and foundations, external research institutes, industry leaders, and internal campus colleges, offices, institutes, and centers. GWI is actively forming more targeted partnerships in each category to position itself as a world leader in water research and solutions development.

