

An aerial photograph of a small, rectangular wooden fishing platform floating on a river. The platform is supported by several wooden posts and has two large, cylindrical floats attached to its sides. The water is a vibrant green, likely due to the presence of water hyacinths. In the background, there are rolling green hills and a large body of water with a long pier and a ship. The sky is blue with scattered white clouds.

BASELINE WATER QUALITY ANALYSIS IN GLOBAL TRANSBOUNDARY RIVER BASINS

World Water Quality Alliance
2nd Annual Global Meeting
27 January 2021

COMMUNICATION OF WATER QUALITY IMPACTS



- In addition to insufficient monitoring data, UNEP and WWQA have identified that a lack of risk awareness impairs water quality management
- This gap hampers legislative frameworks, social engagement, and further data collection
- Given the potential for contaminant fate and transport, water quality must be managed at a basin scale which complicates governance of the world's 309 transboundary basins

"鹿港福鹿溪口抽水站也受紅水污染 Red water pollution at Lukang 7-5" by Changhua Coast Conservation Action is licensed with CC BY-NC-SA 2.0. <https://creativecommons.org/licenses/by-nc-sa/2.0/>

CONTEXTUALIZING IMPACTS IN TRANSBOUNDARY BASINS

Creation of a web-based, open-access analytical screening database and data layers

- Transboundary basin scale
- SDG 6.3.2 Level 1 and 2 criteria screening
- International agreements and institutions

Complemented by white paper of human health exposure

	Analyte	Chemical Family	Exceedance Criteria	Concentration
Chemical Exceedance	Total Mercury	Heavy Metals	Level 2 (National)	521 µg/L
	Aroclor 1254	PCBs	Level 2 (National)	0.08 µg/L
Transboundary Agreements	Great Lakes Water Quality Agreement, Treaty (1972) Great Lakes Commission, River Basin Organization (1955)			
Not Sampled	Pesticides			

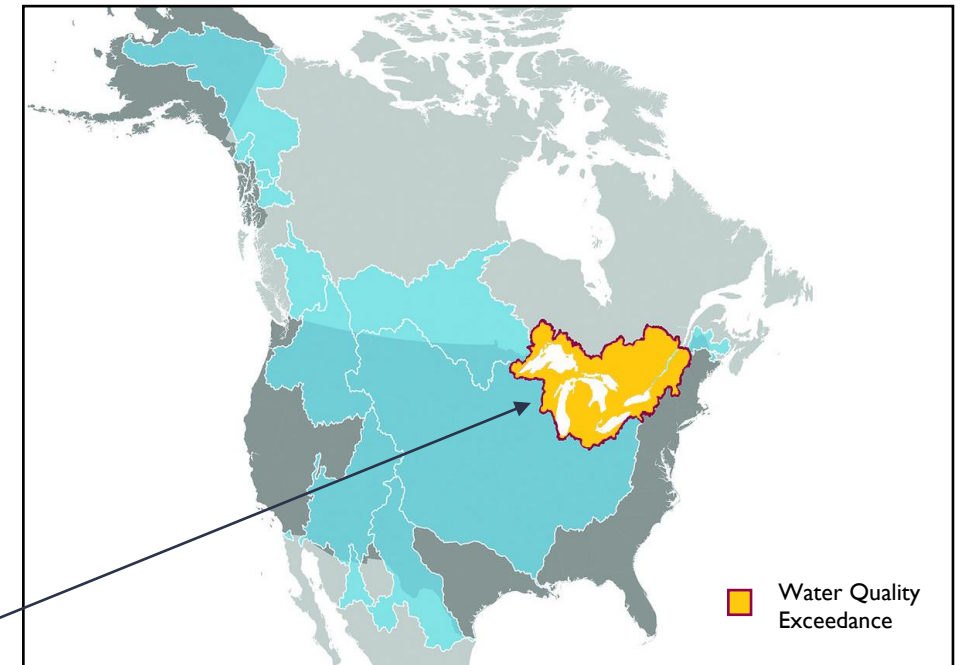


Image adapted from Gronewold et al. (2018). Resolving Hydrometeorological Data Discontinuities along an International Border. *Bulletin of the American Meteorological Society*, 99(5), 899-910. <https://doi.org/10.1175/BAMS-D-16-0060.1>

PROJECT CONTRIBUTIONS

- Deliverables

- Database and data layers
- Human health white paper
- Global trends journal article



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- Anticipated Outcomes

- Support risk-awareness and understanding of the widespread water quality impacts
- Mobilize international governance to address gaps in regulatory frameworks
- Improve basin-wide framing for international and nexus-conscious management
- Engage decision-makers and stakeholders
- Provide a foundation for a broader water governance workstream

QUESTIONS?

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