

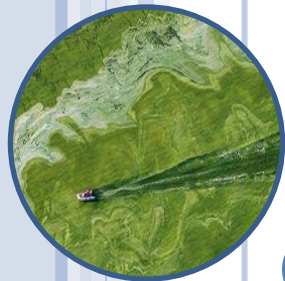
Environmental and Social Benefits of Transboundary Water Cooperation:

The North American Great Lakes

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NORTH AMERICAN GREAT LAKES



HISTORY OF ENVIRONMENTAL PROBLEM-SOLVING

ENVIRONMENTAL PROBLEM

TRANSBOUNDARY COOPERATION

INSTITUTIONAL MILESTONE

1909

- Dams and drainage canals diverting water

Boundary Waters Treaty

International Joint Commission (IJC) created

1972

- Nutrients and harmful algal blooms

Great Lakes Water Quality Agreement

IJC empowered, creates Science Advisory Boards

1978-87

- Toxic contaminants

Renegotiation of GLWQA #1

Public gets a formal voice in negotiations

2012

- Climate change, species habitat, and invasive species

Renegotiation of GLWQA #2

HISTORY OF ENVIRONMENTAL PROBLEM-SOLVING

ENVIRONMENTAL PROBLEM

ENVIRONMENTAL BENEFIT

SOCIAL BENEFIT

1909

- Dams and drainage canals diverting water

Minimum water levels to downstream users

International Joint Commission (IJC) created

1972

- Nutrients and harmful algal blooms

Maximum phosphorus concentrations

Cooperation and knowledge generation

1978-87

- Toxic contaminants

Maximum toxic contaminant concentrations

Transparency and accountability; strong NGOs

2012

- Climate change, species habitat, and invasive species

Renegotiation of GLWQA #2

ENVIRONMENTAL BENEFITS EXAMPLE

- Elimination of harmful algal blooms in the 1970s prompts changes in children's book "The Lorax"

- Excerpt:

You're glumping the pond where the
Humming-Fish hummed!

No more can they hum, for their gills are all
gummed.

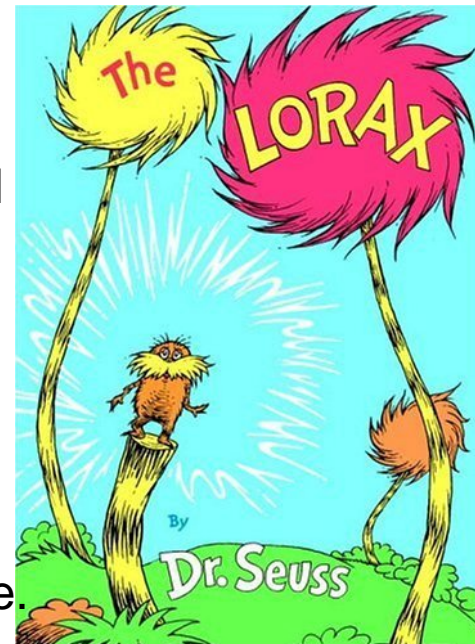
So I'm sending them off. Oh, their future is
dreary.

They'll walk on their fins and get woefully
weary.

in search of some water that isn't so

~~dreary~~ things are just as bad up in Lake Erie.

(line removed)



- May be premature since algal blooms have returned



APPROACHES FOR ASSESSING BENEFITS

Environmental benefits

- Ecosystem approach toward assessing environmental health
- Coordinated efforts to cooperate over environmental data collection and publication

Social benefits

- In-depth case studies identifying the factors leading to political, environmental and social success
- Comparative case studies identifying common or uncommon characteristics in this case



LESSONS LEARNED

- **Problem-solving approach is important**
Science advisory boards developed institutional legitimacy through solution-based assessment
- **Public engagement is critical**
Public sentiment spurred realization of positive environmental and social outcomes
- **Benefits are not always permanent**
One-time assessments of benefits do not guarantee sustainability

THANK YOU! QUESTIONS?



US EPA Head Lisa Jackson and Canadian Environment Minister Peter Kent sign the updated Great Lakes Water Quality Agreement in 2012