

# Eco-compensation: Lessons from US and Canada Waterbasins

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# Major Rivers



<https://www.worldatlas.com/webimage/counts/nariv.htm>

# Fully Price Water Uses & Services

- Address env. risks & protection, eco-restoration, climate change **full river basin & estuarine uses: Mackenzie R; Great Lakes & Saint Lawrence R; Columbia R, Colorado R, Mississippi R., Chesapeake Bay**

# Focus on Specific Ecological Outcomes

- **US Farm Subsidies**

**Farmers bid via auctions for creating defined land & water improvements (e.g. Chesapeake Bay)**



# Strong Scientific Basis for Action

- **Proof of lake ecosystem damage in Canada by controlled experiments & monitoring transboundary US-Canada control of acid rain sources around Great Lakes**  
**(<https://www.iisd.org/ela/>)**
- **Ecological basis for redlining Columbia and Fraser Rivers migratory salmon survival**

# Experimental Lakes Area

An aerial photograph of the Experimental Lakes Area, showing a complex network of small lakes and their drainage basins. The landscape is dominated by dense, green forest. The lakes vary in size and shape, with some being large and irregularly shaped, and others being smaller and more circular. The water in the lakes is a dark, greenish-blue color. The surrounding forest is thick and covers most of the land area. The overall scene is a natural, undisturbed environment.

**58 Small Lakes & their Drainage Basins**  
**Minimal external human influences**

# Columbia River Basin



# Salmon



MAP:  
<https://www.nwd.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-Vision-Article/475226/>

# Fully Value Ecological Services

- Carbon pricing of Canadian rivers **highest value by comparison to other services (e.g., Grand River, Ontario)**
- New York water supply guarantee by upstream land management **cheaper than water supply facility downstream**





# Grand River Ontario, Canada

[https://upload.wikimedia.org/wikipedia/commons/thumb/1/19/Grand\\_River\\_north\\_of\\_Waterloo.png/1024px-Grand\\_River\\_north\\_of\\_Waterloo.png](https://upload.wikimedia.org/wikipedia/commons/thumb/1/19/Grand_River_north_of_Waterloo.png/1024px-Grand_River_north_of_Waterloo.png)

# Fair 'User Pay' Taxes

- Hunters in USA buy 'stamps' for migratory birds **wetland conservation USA & Canada**



- Differential taxes on rural properties according to use **lakes and wetlands on farms assessed at lower rate if protected**

# Seek Co-management Benefit Sharing

- Benefit sharing between government(s) & users/protectors **Canadian constitution**  
**federal/provincial; First Nations treaties;**  
**Canada/US Great Lakes**

**& St Lawrence,**  
**Columbia River,**  
**Fraser River**



# Mississippi River & Great Lakes



<https://upload.wikimedia.org/wikipedia/commons/thumb/c/c3/Mississippiriver-new-01.png/654px-Mississippiriver-new-01.png>

# Enhance Third Party Actions

Tax frameworks, cooperation agreements, and various 'no net loss' and other habitat and species protection mechanisms **land conservancies, charitable NGOs such as the Nature Conservancy are partners with private landowners, gov'ts, scientists**



# Seek Full Cooperation of Business, Communities & Media

- **Build understanding of eco-compensation as investment in context of natural, human, and social capital at local to national & int'l level**  
**Great Lakes, all major river basins**

A photograph of a sunset over a body of water. The sun is low on the horizon, creating a bright, shimmering reflection on the water's surface. The sky is a deep orange, and the foreground shows dark, silhouetted rocks.

**Thank You**  
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