IISD-Experimental Lakes Area: The next 50 years

Matthew McCandless, Ph.D., P.Eng. September 14, 2018 #ELA50 Winnipeg



Mission

To conduct ecosystem-based research that improves our understanding of human impacts on the environment and provides science-based solutions for clean water and healthy ecosystems

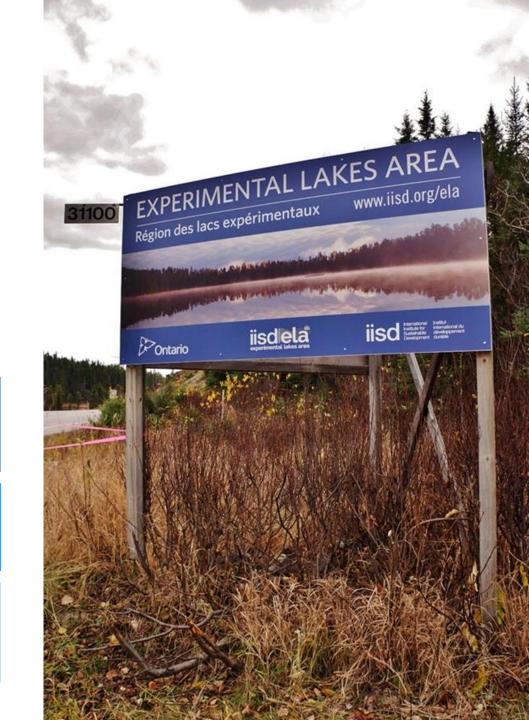
Conduct and facilitate collaborative research at the whole ecosystem level

Operate a robust Long-Term Ecological Research program

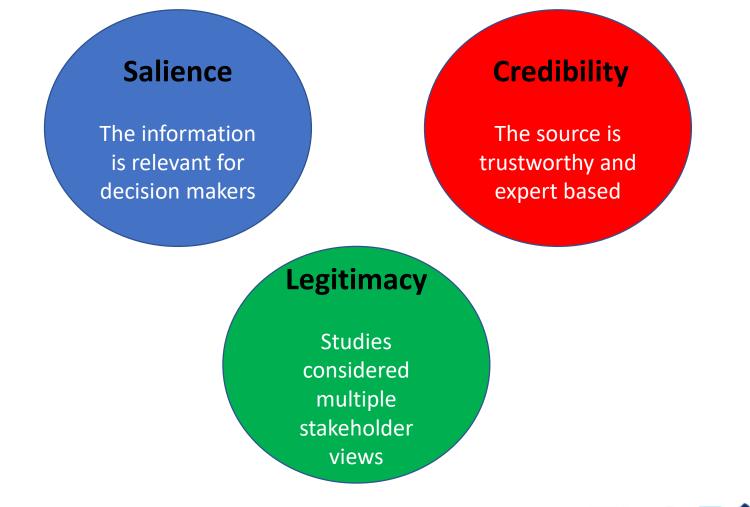
Support strong linkages between scientific research and policy formation

Provide a platform for science education and innovation

Communicate with the public, governments and the scientific community



Ingredients to Influence Policy





SETAC PNC 2017

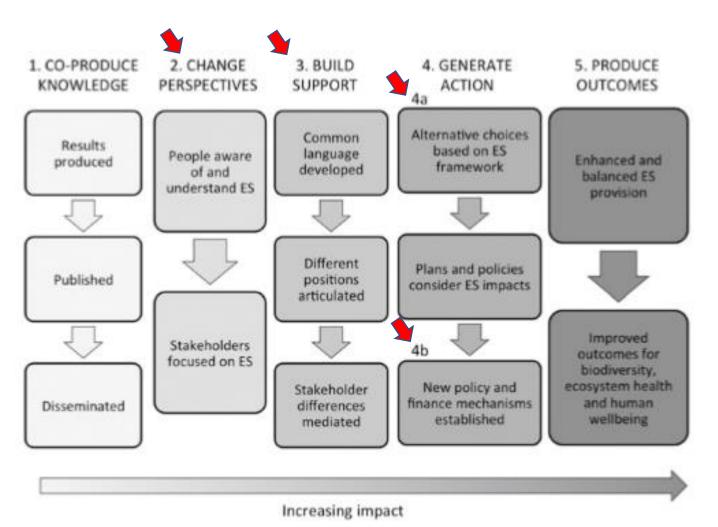
Quantitative Analysis

- 15 studies evaluated that used similar tools and approaches but with different outcomes
- Sent questionnaires to decision makers, NGOs and experts that aim to bridge science and policy
- Asked to define attributes that led to effective Sci/Tech-Policy linkages

Variables Legitimacy Salience Credibility **Co-production** Personal Interactions Trust Local knowledge Dissent Year Representation Length Institutional Capacity



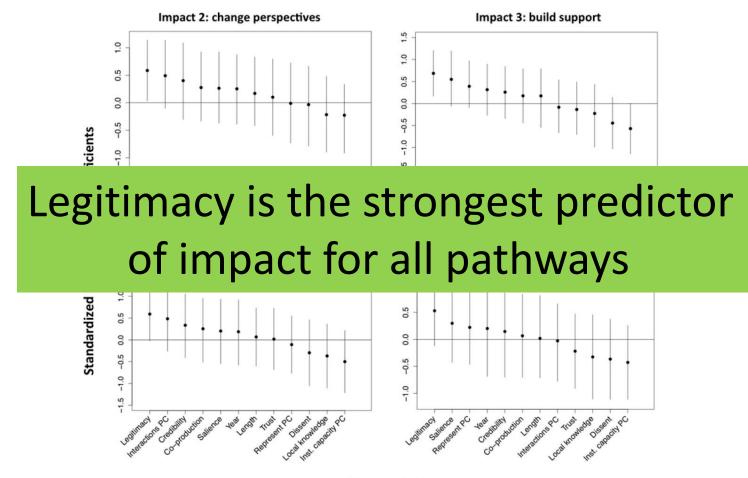
Case Studies – Evaluation Framework





Ruckelshaus et al. 2015 Ecol. Econom.

Analysis



Predictor Variables



Posner et al. 2016 PNAS

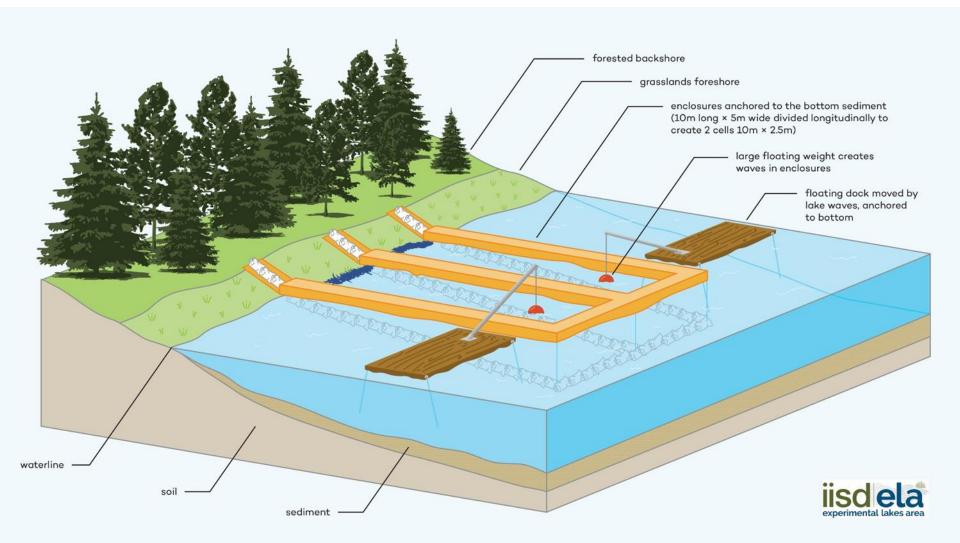
Conclusion

"The finding that legitimacy appears to matter more than credibility puts great responsibility on researchers to engage with stakeholders directly or in consultation with decision makers"

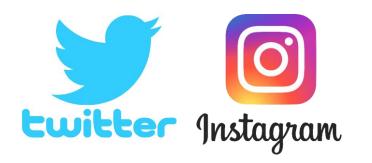
- Posner et al. 2016



FOReSt



Opening Our Doors To The World!







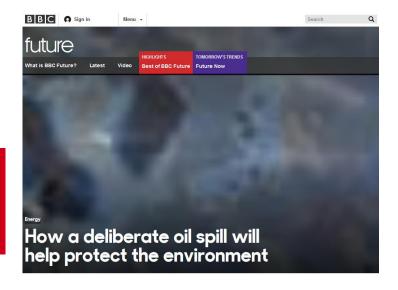
IISD Experimental Lakes Area

Okay, so who would have known back in 1968 that our long-term dataset on water quality would still be going 50 years later? September's recreation of a classic #ELA50 photo is one of our favourite yet... bit.ly/2n6WS7S





BBC





9:03 AM - 5 Sep 2018

10 Retweets 40 Likes 🕢 🌚 🚭 🚭 🌜 --- 🛞 🍑 🌍 🗊

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Outreach:

- Tours and open houses
- Media
- Social media







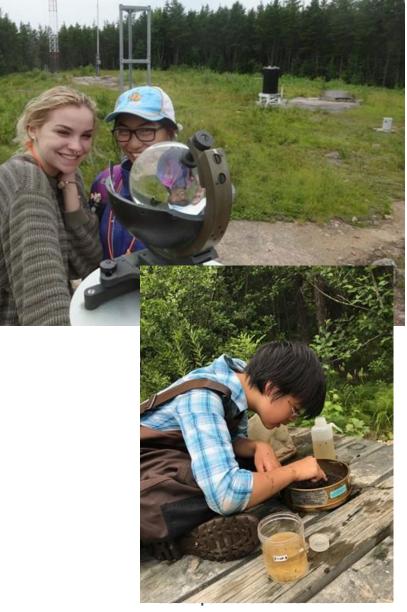
Outreach – Treaty 3



Education:

- Field courses
- Field trips
- School visits





Next 50 years

Volume

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Lots of data the USGS

Landsat Image Archive includes over 7 million images of the Earth's surface from 1972.

Variety

To understand our environment we need data from many sources to work together!

Big Data

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Veracity

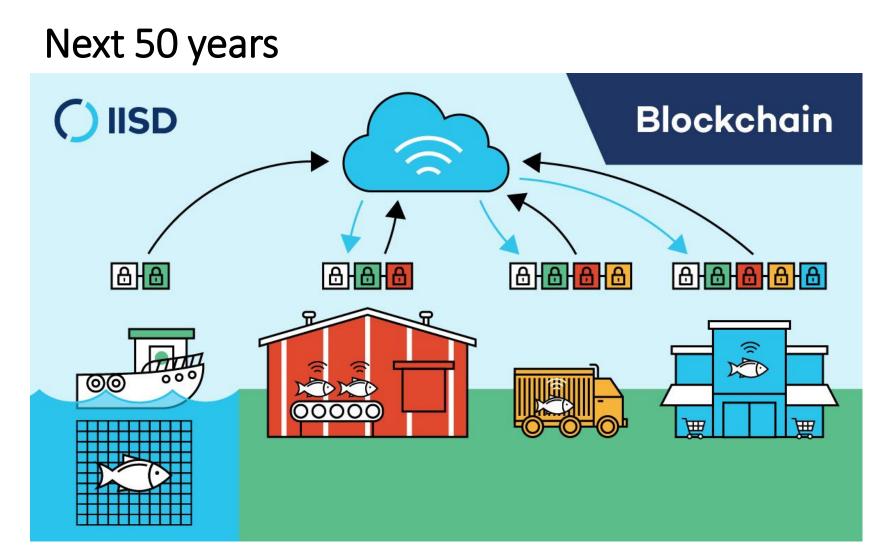
Data needs to be checked and monitored to ensure it's giving us reliable data patterns. Velocity

Some sensors, like those on this mooring, transmit water flow data many times a second.



RBC Foundation











Thank you!

- Government of Ontario
- Fisheries and Oceans Canada
 Kozminski Household
- Anonymous
- Gail Asper and Mike Paterson Jonathan Paterson
- Manitoba Hydro
- Johnston Group Inc.
- Richardson Foundation
- RBC Foundation
- Polaris Canada
- Tides Canada Foundation
- Jim Richardson
- The Thomas Sill Foundation
- ECO Canada
- The Salamander Foundation
- EQ3
- Cooke Household
- The McLean Foundation
- The Winnipeg Foundation
- Stephen Paterson

- Kris Benidickson
- TELUS
- - Forest Helicopters Inc.
 - Mercedes-Benz Winnipeg
 - J.W. McConnell Family Foundation

 - Lake Winnipeg Foundation
 - Thorsteinson and Glass Household
 - Thomson Household
 - Gagnier Household
 - Tetra Tech Canada Inc.
 - Gilbert and Wall Household
 - Rodney Paterson
 - Western Canada Water & Wastewater Association
 - Sheila Fraser

- Joan Richardson
- Blanchfield and Orihel Household
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- Guenther Household
- Linney Household
- Gibb Household
- Dresser and Wiens Household
 Stepanik and Kirby Household
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 - Atwood Household
 - Dearnley Household
 - McCoubrey Household
 - Filmon Household
 - Eisenreich Household
 - Mayhood Household
 - Aviva Community Fund
 - Nicholls Household



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