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# Working through Wicked Problems - Together : Transdisciplinary research to tackle land management challenges in Saskatchewan

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Global Water Futures Prairie Drainage Governance: Diagnosing Policy and Governance  
Effectiveness for Agricultural Water Management during Times of Change

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Artwork: Greg Hargarten

# Working through Wicked Problems - Together

## Transdisciplinary research to tackle land management challenges in Saskatchewan

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It sounds like the beginning of a joke: “A filmmaker, an anthropologist and a biologist walk into a bar...” but it wasn’t far from the truth.

It all started when the University of Saskatchewan threw an anthropologist — Phil Loring — and biologist — me — together to teach about sustainability. The graduate course, called Sustainability in Theory and Practice, focused on understanding sustainability frameworks and applying concepts of sustainability. Among other topics, we tackled problems like agricultural wetland drainage, asking about the impacts and what wetlands we need for water security, wildlife and other benefits. I first met filmmaker Don Selby when he was working on a documentary with Phil called Wetland / Waste Land, which looked at the emerging conflicts in the Canadian prairies over wetlands and agriculture. Agricultural wetland drainage is a hot topic in the prairies — and nationwide. Drainage has major benefits to farmers, but drainage impacts aren’t only on the field and they aren’t only beneficial.

Don, Phil and I come from different perspectives but we knew there must be a better way to work towards a more sustainable prairie landscape. The three of us started working together, and that collaboration was influential on all of our work.

Phil shared what he’s learned from me, saying: “From Helen, I’ve learned that sometimes, nature doesn’t behave as neatly and tidily as our sensibilities would like it to, but that’s OK and part of the brilliance of our jobs.” From Don I’ve learned about the audience and how even the subtlest of cues can influence how stories and information are regarded.”

With guidance from Phil and me, Don is now working on a thesis where he works with local knowledge holders about how they view the Prairie Pothole region of Southern Saskatchewan in the future. He is trying to understand how people think about what the future might look like for farms and rural communities in the prairies, considering things like climate change, economics, and environmental science. He used his research to elicit from experts a series of different possible scenarios for the future, and hopes these scenarios can help people start talking about and planning for the future.

But as we think about building a resilient prairie, the question becomes, what relationships do we need to do it? And what stories and visions can help us build those relationships?

Working together has taught us that having empathy and seeing things from different perspectives can help us understand what needs to change. Creating different scenarios can help us think outside of our biases and talk about where we are and where we want to go without turning healthy conflict into harmful conflict. It’s important to understand how we frame problems, so we can work together to make decisions.

Thanks to our collaborations, we have learned that while wetlands present us with what is called a 'wicked problem', seemingly impossible to solve, looking at how we can frame the problem differently to move past conflict into understanding will help us do essential groundwork for collaborative decision making. We have also learned that how people conceptualize wetlands and wetland ecology influences how they think about problems and solutions. For example, some may assume that flooding will result from drainage, while others do not think it will. As a result, they may not come to the same conclusions in terms of the benefits and costs of different management or policy options.

Agriculture is under incredible pressure to change, and studies like these will help us better understand how to work together to bring about that change in a harmonious way. We've heard about downstream landowners, flooded off their land. We've heard about damage to roads. And we've heard about conflict — either driven by flooding, or by other factors like people refusing to cooperate in a drainage network proposal. Thanks to the work, a filmmaker, an anthropologist, and a biologist did together, we're getting closer to being able to talk about solutions that meet the needs of farmers, rural residents, Indigenous communities and others who can draw on the prairie values of cooperation, community, and resilience.

Find out more:

Wetland/Waste Land: <https://youtu.be/-ut3x-wGyuQ>

Philip A. Loring, Hannah L. Harrison, Valencia Gaspard, Sarah Minnes & Helen M. Baulch (2021) Science, Data, and the Struggle for Standing in Environmental Governance, *Society & Natural Resources*, 34:12, 1584-1601, <https://doi.org/10.1080/08941920.2021.1979150>

