

Global Water Futures 2021 Operations Team Meeting – Project Reporting Template

Instructions: All GWF projects are asked to provide a summary update on their activities and accomplishments in preparation for the upcoming Operations Team meeting. **Please submit these by email to chris.debeer@usask.ca by no later than December 2.** These will be used to help guide discussions and breakout synthesis activities and will be made generally accessible on our website in advance of the meeting.

Project Name:	Linking Water Governance in Canada to Global Economic, Social and Political Drivers
Our major accomplishments to date are:	
<ul style="list-style-type: none">• PhD student Erin Murphy-Mills completed an exhaustive study of the drivers of eutrophication in the western Lake Erie basin, and evaluated the extent to which they are accounted for in the water governance system. Core findings will be published in three manuscripts, which will be submitted shortly after her defense in early 2022. We also delivered presentation and briefings to key organizational actors in the Ontario provincial government, and to the Great Lakes Water Quality Board of the International Joint Commission.• Post-doc Bereket Isaac completed a novel study that explored how the perspectives of new Canadians are serving as a driver in water governance systems in Ontario. New Canadians from other parts of the world bring different expectations regarding governance, and the extent to which our governance system accounts for these will influence outcomes.• Dustin Garrick, Rob de Loë and Fabiola Alvarado completed a study of drivers from the agriculture sector that shape water governance outcomes globally, and which have implications for governance in the Great Lakes basin.	
Our current activities are:	
<ul style="list-style-type: none">• The project is essentially complete.• We are wrapping up publications (some to be submitted early in Winter, while others are in the revise re-submit stage).	
The main accomplishments expected by the end of the project are:	
<ul style="list-style-type: none">• An improved understanding of the role and importance of external drivers from adjacent action situations on governance for water in the Lake Erie basin, and beyond.	
Here is a key visual from the project (figure, photo, table, graph, etc.)	

Figure 1. Conceptual perspectives on agricultural markets and adaptive water governance

	Market pressures as disturbances	Barriers to market access	Trade as telecoupling
Boundary problems			
Description	Integration of traditional systems into commercial agriculture	Collective action to increase market access for smallholders	Spatial separation of agricultural production and consumption
Focal exogenous variables (market integration)	<ul style="list-style-type: none"> Distance to markets Pace of integration Prices and subsidies 	<ul style="list-style-type: none"> Distance to markets Transportation costs Length of value chain 	<ul style="list-style-type: none"> Virtual water flows Large-scale land acquisitions
Selected endogenous variables (farmer organization)	<ul style="list-style-type: none"> Social interconnectedness Free riding (payments or labor) 	<ul style="list-style-type: none"> Type and value of agricultural products Farmer organization Group characteristics 	<ul style="list-style-type: none"> Land and water rights Control by local elites Collective (re)action
Selected relationships and/or causal mechanisms	<ol style="list-style-type: none"> Low(er) and slow(er) articulation with external markets linked with high(er) social interconnectedness Market proximity (distance) linked with free riding on labor to sustain irrigation systems Commercialization of agriculture leads to individualization (i.e. privatization) of irrigation systems 	<ol style="list-style-type: none"> Likelihood of farmer organization decreases with distance to markets* Smallholder competitiveness lower for longer value chains Reduced welfare of small-scale producers when lack of trust, high transaction costs, non-inclusiveness, financial constraints, market power “Outsiders” (public, private, NGO) can facilitate organization when local groups 	<ol style="list-style-type: none"> Global water use efficiency gains from trade associated with depletion in exporting country Large-scale land acquisitions in the context of weak(er) local institutions leads to higher risks of water grabbing, leading to conflict and food insecurity Water grabbing enabled by favoritism and corruption by local elites Net effects of LSLA involve complex causal chains linking land

