

JSGS 870 – Water Policy in an Age of Uncertainty

UNIVERSITY OF SASKATCHEWAN CAMPUS	
INSTRUCTOR:	Hayley Carlson
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TERM/SEMESTER:	Winter 2022
ROOM:	Virtual
DATE AND TIME:	Live (virtual) sessions held Monday/Thursday, 8:30-10:00 AM CST between January 10 and February 17

The syllabus for this course is comprised of this document and the document titled “JSGS Common Syllabus 2021-22.” This syllabus is a draft that will be finalized the first week of class.

CALENDAR DESCRIPTION

Will ask whether contemporary water systems embody principles that will allow them to adapt and function in a changing climate, a rapidly evolving economy, a changing settlement system, and new lifestyles. The format will include lectures, class discussion, jigsaw readings in which students read separate material and then teach content to peers, guest lecturers, documentaries, and Web-based content. Students will develop a collaborative, interdisciplinary framework for evaluating sustainable water governance. Each student will use this framework to evaluate climate adaptation policy in the water sector in a major world city.

LEARNING OBJECTIVES

JSGS 870 will provide students with an understanding of water policy and governance in the context of increasing global uncertainty and complexity. Following successful completion of this course, students should be able to:

- Articulate the relationship between water management, water policy and water governance;
- Analyze the application of different policy instruments to address water-related problems, particularly instruments well-suited to the contemporary context for water policy development;
- Understand the role of evidence, cognition and power in shaping water policy;
- Identify key issues in the Canadian water governance and policy landscape; and
- Recommend policy responses to address current issues.

COURSE CONTENT AND FORMAT

The course is designed to accommodate students in a number of locations and time zones and involves a mix of synchronous (classes running in real time) and asynchronous (content you can access and explore on your own time) content. Live (virtual) classes will normally be held twice a week on Mondays and Thursdays from 8:30 to 10:00 AM, however this time block may be slightly modified during the first

week of class and/or to accommodate presentations or guest lecturers. Any modification from this time block will be communicated as soon as possible to all students. Asynchronous content is a mix of pre-recorded lectures, readings, and videos. Synchronous content features a mixture of lectures, class discussion, polls, presentations, activities and guest lectures. To get the most out of class time it is recommended you complete readings and background lectures ahead of each class.

The approach of this course is to provide students with a framework through which to understand modern-day water governance systems and arrangements and to evaluate the effectiveness of these arrangements with attention paid to how they may help or hinder the achievement of desirable public policy outcomes. The course surveys a variety of water policy and governance arrangements focusing on the challenges and opportunities presented by each one. Special attention is paid to the Canadian system of water governance and policy.

COURSE OUTLINE

Date	Course Outline and Readings	Assignments
January 10, 2022	<p>Introduction to Water Governance and Water Policy</p> <p>Water governance sets the context for water policy. Governance is a term describing how people are organized and how the authority to take and implement decisions is distributed among them. It has become an accepted part of the lexicon in policy, administrative and business circles. This class will explore how governance systems are conceptualized and classified, and look at key trends and issues with respect to Canadian water governance.</p> <p>Readings</p> <p>Head, B. (2010). Wicked Problems in Water Governance: Paradigm Changes to Promote Water Sustainability and Address Planning Uncertainty. Urban Water Security Research Alliance Technical Report No. 38.</p>	One required reading
January 13, 2022	<p>Varieties of Governance: Multi-level, Adaptive, Anticipatory and Experimentalist</p> <p>Governance is concerned with who has the authority to make decisions. This class explores what types of governance arrangements might serve us well in a context of increasing complexity and uncertainty. This class also explores what governance, policy and management strategies are adaptive and resilient in the face of rapid change.</p> <p>Readings</p> <p>Huitema, D. et al. (2009). Adaptive Water Governance: Assessing the Institutional Prescriptions of Adaptive (Co-)Management from a</p>	Two required Readings Session review #1 (6%)

	<p>Governance Perspective and Defining a Research Agenda. <i>Ecology and Society</i> 14(1): 26</p> <p><i>and EITHER</i></p> <p>Quay, R. 2010. Anticipatory governance: A tool for climate change adaptation. <i>Journal of the American Planning Association</i>. 76(4): 496-511.</p> <p><i>OR</i></p> <p>Farrelly, M., Brown R. (2011). Rethinking urban water management: Experimentation as a way forward? <i>Global Environmental Change</i> 21 (2): 721-732.</p>	
<p>January 17, 2022</p>	<p>What makes water a policy problem? Policy, the Policy Cycle and Policy Instruments</p> <p>Public policy is a course of action (or inaction) undertaken by public authorities to address a problem. It can take many forms – such as a law, a subsidy or an educational campaign - and (ideally) passes through several phases of development. In this class we explore some policy fundamentals and the aspects of water that make it a matter requiring public policy attention.</p> <p>Readings</p> <p>Baka, J., Neville, K. J., Weinthal, E. & Bakker, K. (2018). Agenda-Setting at the Energy-Water Nexus: Constructing and Maintaining a Policy Monopoly in U.S. Hydraulic Fracturing Regulation. <i>The Review of Policy Research</i>, 35(3), 439-65.</p> <p>Henstra, D., Thistlethwaite, J., & Dordi, T. (2020). Evaluating the suitability of policy instruments for urban flood risk reduction. <i>Local Environment</i>, 25(2), 101-113.</p>	<p>Two required readings</p> <p>Session review #2 (6%)</p>
<p>January 20, 2022</p>	<p>Science, Evidence and Public Policy</p> <p>With water security an issue of increasing concern globally, organizations are investing in improved science and modelling to provide decision makers with new evidence to navigate challenges. Within policy circles there is increasing attention paid to ensuring that water policy is “evidence based”, where “evidence” means peer-reviewed science. This class explores to what extent water issues are scientific problems or policy problems; the extent to which new science can reduce uncertainties to improve decision making; and what factors improve the chances of science being taken up by decision makers.</p>	<p>Two required readings</p> <p>Session review #3 (6%)</p>

	<p>Readings</p> <p>Sarewitz, D. (2004). "How science makes environmental controversies worse." <i>Environmental Science and Policy</i> 7: 385-403</p> <p>Feldman, D.L. Ingram H.M. (2009). Making science useful to decision makers: Climate forecasts, water management, and knowledge networks. <i>Weather, Climate and Society</i>.</p>	
<p>January 24, 2022</p>	<p>The Role of Cognition, Ideas and Discourse</p> <p>In the next two classes we explore processes that occur between the generation of evidence and the implementation of public policy decisions. When making decisions, individuals rarely have the full information and exclusively act only in their own self interest. Instead, they are susceptible to cognitive errors and biases, and navigate a number of cognitive processes to generate ideas about the policy objectives they wish to achieve and the means that 'ought' to be employed to achieve them. This class will also explore different models of organizational decision making to help us understand why the decisions produced by organizations might not match the evidence generated about a water issue.</p> <p>Readings</p> <p>Molle, F. (2009). River-basin planning and management: The social life of a concept. <i>Geoforum</i>, 40(3), 484-494.</p> <p>Bakker, K., & Hendriks, R. (2019). Contested knowledges in hydroelectric project assessment: The case of Canada's Site C Project. <i>Water (Basel)</i>, 11(3), 406.</p>	<p>Two required readings</p>
<p>January 27, 2022</p>	<p>The Role of Power</p> <p>In addition to the influence of cognitive processes, we can recognize that decisions result in, and are a result of, power structures that become institutionalized in ways that help some and hinder others. Individuals use strategic means to try and influence institutions to work in their favor. This class explores the influence of economic institutions and power in constraining or enabling particular policy outcomes.</p> <p>Readings</p> <p>Heinmiller B.T. (2017): The Politics of Water Policy Development in Canada; in <i>Water Policy and Governance in Canada</i>; (eds.) S. Renzetti, D. Dupont; Global Issues in Water Policy Series, vol 17; Springer International Publishing, Cham, Switzerland; p. 215-229. DOI: 10.1007/978-3-319-42806-2</p>	<p>Two required readings</p> <p>Policy brief due (30%)</p>

	<p>Andrews, E., Reed, M., Jardine, T., & Steelman, T. (2018). Damming Knowledge Flows: POWER as a Constraint on Knowledge Pluralism in River Flow Decision-making in the Saskatchewan River Delta. <i>Society & Natural Resources</i>, 31(8), 892-907.</p>	
<p>January 31, 2022</p>	<p>Innovations in Water Policy</p> <p>The past several classes explored processes that influence decision-making that may generate public policy solutions poorly matched to the context in which they are applied. In this class we will explore methods in which policy practitioners use to influence better public policy, with an eye to public policy development in Canada. How do we achieve water policy innovations?</p> <p>Readings</p> <p>Straith, D., Adamowski, J., & Reilly, K. (2014). Exploring the behavioural attributes, strategies and contextual knowledge of champions of change in the Canadian water sector. <i>Canadian Water Resources Journal</i>, 39(3), 255-269.</p> <p>Daniell, K., Coombes, P., & White, I. (2014). Politics of innovation in multi-level water governance systems. <i>Journal of Hydrology (Amsterdam)</i>, 519, 2415-2435.</p>	<p>Two required readings</p> <p>Session review #4 (6%)</p>
<p>February 3, 2022</p>	<p>Evaluating Water Policy</p> <p>Policy evaluation applies criteria and methods to examine the success or failure of policy interventions. In this class, we explore two of the most common criteria used to evaluate public policies. Efficiency (getting the most output for a given input) – and the associated economic instruments used to assess the relative merits of alternative policy options – is an influential idea in contemporary public policy discussions. Equity (fairness or justice) is another common evaluation criteria, particularly in the context of resource scarcities, a broader recognition of Indigenous rights and environmental sustainability.</p> <p>Readings</p> <p>Mickwitz, P. (2003). A Framework for Evaluating Environmental Policy Instruments: Context and Key Concepts. <i>Evaluation</i> 9(4): 415–436</p> <p>Sjodin, J., Zaeske, A., Joyce, J. (2016). Pricing instruments for sustainable water management. Working paper Nr. 28. SIWI, Stockholm</p>	<p>Three required readings</p>

	<p>Chan, N. (2012). Urban Water Pricing: Equity and Affordability. http://www.globalwaterforum.org/wp-content/uploads/2012/04/Urban-water-pricing-Equity-andaffordability-GWF-1209.pdf</p>	
<p>February 7, 2022</p> <p>*Class to start at 9:00 am CST</p>	<p>Canadian Water Governance and Policy</p> <p>This class will explore defining characteristics of Canadian governance and policy systems, including the fragmented landscape for water policy and the reduced role of the federal Government in recent decades. We will also explore trends characterizing modern water governance and policy and Canada, and current issues such as the introduction of the Canada Water Agency.</p> <p>Guest Speaker: Davin Budreau, Senior Policy Analyst, Prairies Economic Development Canada</p> <p>Readings</p> <p><i>Read the executive summary of:</i></p> <p>Western Economic Diversification Canada. (2020). Prairie Prosperity: A Vision for the Management of Water Resources across Saskatchewan and the Prairies. https://www.wd-deo.gc.ca/eng/20090.asp-0.0</p>	<p>One required reading</p> <p>Session review #5 (6%)</p>
<p>Thursday February 10, 2022</p>	<p>Indigenous Water Rights and Policy</p> <p>This class explores the context around Indigenous water rights in Canada, including the many legal challenges faced by Indigenous peoples proving rights and title to water and water related activities. We will also explore Indigenous ways of knowing and relating to water, and examine the impact of incorporating (or not incorporating) these views in water policy and management.</p> <p>Guest Speaker: Warrick Baijius, PhD candidate, Department of Geography and Planning</p> <p>Readings</p> <p>Walkem, A. (2004). Indigenous Peoples' Water Rights: Challenges and Opportunities in an Era of Increased North American Integration. University of Victoria: Centre for Global Studies.</p> <p>Anderson, K., Clow B., & Haworth-Brockman, M. (2013). Carriers of water: Aboriginal women's experiences, relationships, and reflections. <i>Journal of Cleaner Production</i>, 60, 11-17.</p>	<p>Three required readings</p>

	LaBoucane-Benson, P., Gibson, G., Benson, A., & Miller, G. (2012). Are We Seeking Pimatisiwin or Creating Pomewin? Implications for Water Policy. <i>International Indigenous Policy Journal</i> , 3(3), 10.	
Monday, February 14	<p>Water Law and Legislation</p> <p>Laws are an important part of any water policy framework in most jurisdictions. This class will explore the legal context for water in Canada, and how this framework shapes water policy.</p> <p>Guest Speaker: Chad. P. Eggerman, Partner, MLT Aitkins</p> <p>Readings</p> <p>Hurlbert, M. 2006. Water Law in the SSRB. Available at: http://www.parc.ca/mcri/pdfs/papers/iacc027.pdf</p>	One required reading
Thursday, February 17	Final Project Presentations and Class Discussion	Final project presentations due (15%)

ASSIGNMENTS

Policy Brief (30%) Due January 27

Prepare a 3-to 5-page decision briefing note on a contemporary water policy issue in any jurisdiction of your choice. For the purposes of preparing this note, the issue you have selected is scheduled to be discussed at an upcoming meeting in the jurisdiction of your choice. You are writing from the perspective of a senior advisor who has been asked to draft a briefing note that summarises the situation and sets out three options to be used to brief a senior political leader. Use the policy brief template provided on canvas and discussed on the first day in class. This assignment is due by midnight on February 7 by email to hayley.carlson@usask.ca.

Session Reviews (30%) Due by midnight on days labelled in course outline

Complete five (6% each) "session reviews" by answering questions about the readings and class discussion in order to demonstrate competency and understanding. The questions will be available on Canvas shortly after the class ends and answers should be returned by email any time before midnight the same day.

Final Project (40%) Presentation due Feb 17; Report due Feb 18

Develop a presentation (15%) and report (25%) assessing a real-world water issue and providing a recommended response plan with the following components:

- **Background:** Describe the problem, including how it arose and the current situation, the symptoms and underlying problems, who is affected by the problem and the current situation.

Provide any relevant background information (e.g. governance context, historical developments, and scientific information) required to fully describe the problem.

- **Assessment:** Diagnose what is happening in the policy space using concepts from class. This section should answer questions such as: why is this a “problem”? Who are the policy actors and how do their perceptions about the problem play into the issue? How is evidence being used in the decision-making process? What is the governance context and how does it influence the problem? Have policy approaches been employed and if so, how did they perform? Are systems of power playing a role in constraining or enabling policy action?
- **Response:** Based on your assessment of the situation, identify any policy measures that can be pursued to remedy the situation. What would be your recommended response given the situation you have laid out. Identify any policy measures that can be pursued to support

For this project, students may work alone or in up to groups of 3. Let the instructor know groups and topics by Jan 27 so a schedule for presentations on the last day of class can be drawn up.

The presentation should be no more than 10 minutes and will be presented during class on Feb 17. The report should be no more than 6 pages (in 12 point Times New Roman Font, single-spaced) and is due by midnight Feb 18.

Marks will be allocated based on how well you are able to identify the key issues, your ability to link these issues with the theory and material discussed in class, and how you defend your analysis and recommendations.

EVALUATION

A rubric is provided with details about how both the policy brief and final project will be evaluated.

ENROLLMENT

Class enrollment will be normally limited to 30 students.

INTELLECTUAL PROPERTY ACKNOWLEDGEMENT

This course was developed Hayley Carlson with material adapted from Dr. Jeremy Rayner.