



Annotated Bibliography

CIP Climate Change Committee, Issue 04

Title: Incremental Implementation Strategies for Taking Action on Climate Change

Preamble (to be included in all releases): The Canadian Institute of Planners Climate Change Committee is developing a series of annotated bibliographies as one of our deliverables for this year. Through these bibliographies we intend to tell a story that explores the dynamic and challenging issues that affect the ability of the planning profession to mitigate greenhouse gas emissions while adapting to the impacts of climate change. This story is the tale of a wicked problem, rooted in social complexity, policy and planning law, technological variability, and the geographic realities that define Canada.

Focus: Wicked problems are characterized by a range of factors, including complexity, rapidly changing characteristics, multi-sectoral impacts, and short response times. Collaboration and incremental implementation strategies allow for opportunities to learn and alter climate change mitigation strategies on the fly. This annotated bibliography explores how collaboration for climate change has been accomplished and examples of incremental implementation strategies in the literature.

Key Takeaways: Incremental implementation strategies are relatively unexplored in the literature and constitute a research gap for planners. Based on the limited resources available:

- Ensuring common language and mutual support is fundamental to the success of inter-disciplinary teams exploring long-term climate policy and solutions.
- Incremental approaches to climate change implementation are made possible by facilitating multiple viewpoints at multiple scales and by cultivating a corporate culture open to risk.
- Continued dialogue is required, given the unsubstantiated nature of incremental approaches to implementation, and disagreement over the long-term implications of such strategies.



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Title	Author(s)	Publication Date	Relevance to Planners	Link	Scope
Progress and Challenges in Incorporating Climate Change Information into Transportation Research and Design.	E. Douglas, J. Jacobs, K. Hayhoe, L. Silka, J. Daniel, M. Collins, A. Alipour, B. Anderson, C. Hebson, E. Mecray, R. Mallick, Q. Zou, P. Kirshen, H. Miller, J. Kartez, L. Friess, A. Stoner, E. Bell, C. Schwartz, N. Thomas, S. Miller, B. Eckstrom, and C. Wake.	2017	Over the last four years, Infrastructure and Climate Network (ICNet) members have developed and sustained collaboration and built trust among climate scientists, infrastructure engineers, and agency decision makers. Two case studies are provided from the engineer professional that examine the increasingly deeper conversations that are now yielding new knowledge, interesting research questions, and insights about communication between these communities. The case studies demonstrate how climate science and engineering researchers are embracing the paradigm of joint collaboration.	https://www.unh.edu/erg/sites/www.unh.edu/files/douglas_et_al_infrastructure_systems2017_2.pdf	International – adaptation
Scholarly motivations to conduct interdisciplinary climate change research	A. Milman, J. Martson, S. Godsey, J. Bolson, H. Johnes, C. S. Weiler.	2017	Understanding and responding to today's complex environmental problems requires collaboration that bridges disciplinary boundaries. As the barriers to interdisciplinary research are formidable, promoting interdisciplinary environmental research requires understanding what motivates researchers to embark upon such challenging research. However, a survey of 526 PhD scholars suggests that collaboration is impeded by communication across disciplines, longer timelines while conducting interdisciplinary work, and a lack of peer support. The survey also provides insight into the extrinsic and intrinsic factors that motivate interdisciplinary research. These factors and challenges are likely consistent with those faced by planners.	https://www.researchgate.net/profile/Holly_Jones/publication/282478438_Scholarly_motivations_to_conduct_interdisciplinary_climate_change_research/links/56a7cd1408ae860e025593ff/Scholarly-motivations-to-conduct-interdisciplinary-climate-change-research.pdf	International - foundation



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<p>Constraining and enabling factors to using long-term climate information in decision-making</p>	<p>L. Jones, C. Champalle, S. Chesterman, L. Cramer, T. Crane</p>	<p>2016</p>	<p>Long-term climate information relates directly to urban planning and infrastructure, as well as flood and coastal management. An analysis of the identified literature highlights five categories of constraints: disconnection between users and producers of climate information, limitations of climate information, financial and technical constraints, political economy and institutional constraints and finally psycho-social constraints. Five categories of enablers to the uptake of long-term climate information in decision-making are also identified: collaboration and bridge work, increased accessibility of climate information, improvement in the underlying science, institutional reform and windows of opportunity for building trust.</p>	<p>https://www.odi.org/sites/odi.org.uk/files/resource_documents/10681.pdf</p>	<p>International - adaptation</p>
<p>Governing global problems under uncertainty: Making bottom-up climate policy work.</p>	<p>C. Sabel and D. Victor</p>	<p>2015</p>	<p>The authors argue that enabling climate change to “decompose” into smaller, interest driven, policy issues is a natural first step to managing the interdisciplinary nature of climate change. This approach to problem solving provides value when there is a thin consensus among actors regarding an urgent problem: no sharp disagreement over fundamentals (that this particular problem exists, and is urgent), but no capacity to formulate a comprehensive and detailed plan of attack, to say nothing of monitoring it. Flexibility is created because participating organizations are empowered to act on experience and take action conventionally characterized by high risk of failure. Policy outcomes are then compared through various forms of peer review so successes can be quickly identified and if possible generalized, failures rejected early on and faltering efforts corrected in view of the advances of more promising ones</p>	<p>http://www3.law.columbia.edu/sabel/papers/Sabel%20and%20Victor%20Climatic%20Change%20MAY%2027.pdf</p>	<p>International – adaptation</p>



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<p>Including indigenous peoples in climate change mitigation: Addressing issues of scale, knowledge and power.</p>	<p>M. Brugnach, M. Craps, A. Dewulf.</p>	<p>2013</p>	<p>Involving indigenous peoples in the development of mitigation measures for climate change presents procedural, conceptual and structural challenges. Collaborative approaches to policy and decision-making can overcome such issues by focusing on issues of scale, knowledge, and power, including how they interrelate to act as a barrier or opportunity for the involvement of indigenous groups. The authors argue that multi-scalar negotiations, blended knowledge and power-sharing structures are all necessary to include indigenous communities as valuable partners in climate change mitigation, and we suggest strategies and recommendations for actively accomplishing this inclusion.</p>	<p>https://www.researchgate.net/profile/Art_Dewulf/publication/271833461_Including_indigenous_peoples_in_climate_change_mitigation_addressing_issues_of_scale_knowledge_and_power/links/54d4d1cc0cf2970e4e63b326.pdf</p>	<p>International - mitigation</p>
<p>Policymaking under pressure: The perils of incremental responses to climate change</p>	<p>C. Coglianese and J. D'Ambrosio</p>	<p>2008</p>	<p>Policymakers are increasingly encouraged to foster climate action through an incremental approach. While such efforts are commendable, the authors disagree with the potential for success associated with an incremental strategy. Rather than signifying valuable policy progress, or even serving as potential stepping stones toward a more comprehensive solution, existing piecemeal state, federal, and even regional climate change policies pose nontrivial risks of policy failure.⁹ In some cases, the policies themselves could lead to problems at least as severe as the ones the policies originally aimed to solve.</p>	<p>http://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=1222&context=faculty_scholarship</p>	<p>International - mitigation</p>



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Interested in the broader academic theory on planning and climate change and looking for additional resources? These libraries provide extensive reading the subject policy and planning as they relate to climate change:

- Planning Theory and Practice (<http://www.tandfonline.com/loi/rptp20>).
- Researchgate (<https://www.researchgate.net/>)

This annotated bibliography is intended to provide an introduction to the subject area and further exploration by the reader. It is not intended to be comprehensive. We have also focused solely on open source resources to ensure the referenced resources can be accessed by a broad audience. That said, we are interested in your feedback! If you have additional resources or themes you would like us to explore, please contact CCC Chair, Mike Sullivan at mike@sullivanplanning.ca.

The Climate Change Committee is a volunteer committee established by the Canadian Institute of Planners provide current, cutting edge guidance and direction on how to address the impacts of climate change on our communities and within the professional practice of members.

Acknowledgements: Climate Change Committee

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