

Water Management and Climate Change in Bhutan: Canadian and Bhutanese Perspectives

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CAPI Boardroom**

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1. Introduction

Known for its environment-friendly regulations, Bhutan still faces significant climate effects, including rapid glacier melt and water resource challenges. Climate-mitigating strategies also face challenges. The Paro Forum was inaugurated in 2023, alongside the Jigme Singye Wangchuck (JSW) School of Law's new Climate Change and Environmental Law Centre. The purpose of the Paro Forum is to bring together not only academics but people from all segments of life, from grassroots activists to policymakers, as well as local and international experts from Bhutan and beyond, to discuss climate change and environmental factors that affect all societies, but particularly Bhutan. In 2025, the theme of the Paro Forum was Water Management and Climate Change. Sponsored in part by the Asia Pacific Foundation of Canada and the Centre for Asia-Pacific Initiatives (CAPI) at the University of Victoria, it was held on the JSW campus in Pangbisa, Bhutan, from 22-24 February 2025, with dozens of Bhutanese and international participants in attendance.

On 16 June 2025, a smaller group of Bhutanese and Canadian participants from the Paro Forum gathered for a follow-up workshop at CAPI. The workshop started with an overview of Paro Forum, then proceeded with a brief description by each speaker of how their professional background connected to the themes of the workshop, key points from the Paro Forum, and the next steps on how Canada (especially UVic) and Bhutan (especially JSW) could further engage and collaborate to address water governance challenges.

2. Overview of the Paro Forum

In 2025, the theme of the Paro Forum was water management and climate change. The participants reviewed several water-related challenges and suggested potential solutions. Challenges included deglaciation, reduced snowpack, and changes in the annual water cycle – factors that lead to diminished surface water. Other panels at the Paro Forum discussed commercializing water in Bhutan, hydrology, investing in sustainable water and climate adaptation, urban and rural water management practices, integrating water resource management, and groundwater use. A stakeholders meeting was also convened to address concerns related to water shortages.

There are also challenges in addressing the identified problems, including a lack of data on monitoring surface and groundwater resources, insufficient resources for data collection, and a lack of funding for infrastructure and development projects. Difficulties in coordination, both domestically and internationally (e.g., cross-border water management) were also identified.

Several potential solutions were proposed. Bhutan needs monitoring and data, such as a centralized database (information repository), as well as long-term investment in human capital. Workshop participants proposed the revival of international water-use agreements, increased collaboration within the local community to enhance water management (such as through technological advancements, local knowledge, and the incorporation of proven technologies), streamlining and consolidating water management by governments and authorities, and using public-private partnerships. Participants also highlighted the importance of a climate-resilient approach that prioritizes long-term economic and environmental sustainability.

Some connections and similarities between Bhutan and Canada

Despite their differences, Canada and Bhutan have much in common. Both have powerful neighbours: China, India for Bhutan, and the United States for Canada. Both have mountainous regions with abundant water resources. They also both face climate-related impacts, including the unpredictability of rainfall, deglaciation, and water-related challenges. Some highland villagers in Bhutan no longer have access to water. As a result, herding and agriculture have been significantly affected, with many emigrating. A food security crisis is a real possibility. Bhutan and Canada are largely corruption-free, which may facilitate the process of addressing the water problems.

What are some of the possible areas of focus from Canada-Bhutan cooperation?

Among the many key issues identified in and related to the Paro Forum, panellists highlighted the following issues that require urgent attention:

- Limited financial resources: Bhutan is trying to boost its revenue, such as through the Climate Fund. Bhutan's public resources come from tourism, hydro-power projects (power is mainly sold to India), agriculture, and contributions from donor countries. Gelephu Mindfulness City aims to attract businesses that prioritize spirituality and sustainability.
- The need to move away from a one-size-fits-all approach: Relying entirely on the state to address the problem is ineffective. Based on Canadian experience, there should be a watershed consensus involving people at the watershed level. This involves understanding what responses, including legal and customary responses, will be appropriate for communities when different scenarios occur in the future. Instead of treating extreme water events as emergencies, we can establish plans in advance that

help communities understand how to respond effectively. Thus, we need to clarify the priorities for action.

- Donor money should not dictate the agenda of civil society or government in Bhutan.
- There is a significant lack of knowledge and information sharing in Bhutan due to competition among agencies to secure grants and funding, including from donors.

3. Implications for Canada-Bhutan Collaboration

How can we bring together diverse communities, constituencies, and individuals to collaborate effectively?

Based on experience in British Columbia, the government does not necessarily need to take the lead in bringing constituencies together. What united the different parties was their shared interest in solving urgent and critical problems. Effective leadership and facilitation styles increased the likelihood of successful collaboration. Some leaders provided legitimacy to the meeting; others worked behind the scenes for a long time.

It is also essential to have the right subject matter experts in the room as well as people who understand local protocols and know how to navigate local governance and the local way of doing things. Sometimes, the same people possess both technical and cultural knowledge; however, in some circumstances it may be necessary to form diverse teams of people with different skill sets. Indigenous leaders may champion and push projects forward, garnering the attention of government officials and ministers and successfully bringing people together.

The requirements for bringing people together to address the problems included:

- Being respectful, building respect and trust.
- Practicing information transparency as a means of building trust. A transparency laws can be helpful, but freedom of information must inform practice. Government departments must be transparent about their information and their work. Such transparency is also needed to develop coalitions at the local, regional, and national levels.
- Using “follow-the-money” strategies: Where are the economic benefits of water flowing? What plans can be put into place without having to spend money to conserve water resources?
- Revitalizing Indigenous laws and customary practices. These practices can be expressed through contemporary Indigenous legal orders. Indigenous law can inform others how to engage with Indigenous communities in their territory, especially around water. They can set their own rules for how the state or others interact with their community and their lands based on laws and policies that account for the impact of climate change.

What are some of the knowledge-sharing opportunities for Canadian and Bhutanese researchers?

- As a relatively new democracy, Bhutan is interested in insights from Canada on which aspects of democracy work or do not work in Canada. Canada could share its experience of the limits of resource development and what actions should be taken in Bhutan to ensure sustainable and ecological development.
- Canada could provide funding for Bhutanese students to study in Canada and conduct research on sustainable groundwater use and including on the optimal ecological and legal framework.
- A community of practice could be established to share issues, timelines, and urgency, such as a Track 2 dialogue or even a Track 1.5 dialogue connecting appropriate government officials in Canada and Bhutan for meaningful exchanges. We could identify the elements that would have the most significant impact and ensure they are promoted at the appropriate level in Canada. Additionally, establishing a discussion framework through research or discussion groups could be beneficial. It is essential to examine the issues Canada tends to address or avoids addressing—but having a shared platform, such as having an interdisciplinary group where we can learn together, would be invaluable.
- Schools, including law schools, in Bhutan and British Columbia could share their experiences with each other on interdisciplinary approaches to teaching and researching, and to addressing wicked problems.
- Bhutan and Canada could also exchange knowledge on the application of local norms, laws, and legal orders to govern or allocate water use.
