

Report: 'Water and Agriculture in Canada: Towards Sustainable Management of Water Resources'

February 26 2013

Canadian agriculture is faced with great opportunities, but also challenged by water-related risks and uncertainties. An expert panel convened by the Council of Canadian Academies has found that water and land resources in Canada can be more sustainably managed by developing forward-thinking policies and effective land and water management strategies, adopting effective governance mechanisms, and harnessing technological advancements.

The agricultural sector is an important contributor to Canada's prosperity and well-being. In 2011, primary agriculture alone produced \$51.1 billion in gross farm receipts. It also plays a vital role in the food sector which is linked to nearly \$100 billion per year in economic activity and approximately 1 in 7.5 Canadian jobs. As the world's population grows, so does the demand for food. Rising incomes are causing a shift in global patterns of [food consumption](#) towards higher-value forms of agricultural production. There is also increased demand for non-food agricultural products such as biofuels and natural fibres.

Dr. Howard Wheeler, chair of the Council's [expert panel](#) noted, "Agriculture and water provide us with our most basic needs, and are intimately connected. While most farmers are their own [water managers](#), using rain and snow for crop production, irrigation and [livestock farming](#) are major water consumers and face increasing competition from other water uses. Agriculture has changed much of our land area and can

affect the water environment in many ways. It also faces major challenges due to the uncertain impact of [climate variability](#), including floods and droughts, and climate change." He added, "Our expert panel explored these issues in great detail and our report lays out five practical areas where additional science and action can contribute to better sustainable management of water in agriculture."

Additional science is needed regarding:

- the risks and uncertainties of market conditions, competition for land and water resources, and [climate change](#)
- improved monitoring, modelling and forecasting to facilitate adaptive management
- the interaction between land management and water resources – including assessment of beneficial management practices (BMPs), conservation agriculture, and ecosystem services approaches
- promising farm-scale technologies that could contribute to efficient water use, reduced environmental impacts, and sound investment decisions
- governance structures, valuation techniques, economic incentives, and knowledge transfer strategies that would help to facilitate better management decisions and uptake of sustainable practices

"Agriculture and Agri-Food Canada asked the Council to conduct this in-depth assessment and I am confident that the Panel's work has been comprehensive and the evidence provided within this report will be of significant value and insight for policy- and decision-makers, stakeholders and the wider research community," said Elizabeth Dowdeswell, President and CEO of the Council of Canadian Academies.

More information: For more information, or to download a free copy of the report, please visit www.scienceadvice.ca

Provided by Council of Canadian Academies

Citation: Report: 'Water and Agriculture in Canada: Towards Sustainable Management of Water Resources' (2013, February 26) retrieved 20 March 2024 from <https://phys.org/news/2013-02-agriculture-canada-sustainable-resources.html>

| |
|--|
| <p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p> |
|--|