

Policy Brief Workshop

How to translate your research into clear and impactful policy



Important note

Pages 2-3 of this document have been generated in part from the 2023/2024 workshop series titled “Skills for Research Impact” which was a collaboration between the Ontario Agri-Food Innovation Alliance, the Community Engaged Scholarship Institute, and the Research Innovation Office at the University of Guelph.

What is a policy brief?

Policy briefs are short stand-alone documents that summarize research findings in plain language and interpret the implications for evidence-informed policymaking.

A policy brief should inform readers of a particular issue, suggest possible policy options, and make recommendations. Be upfront about your purpose from the start, maintain a laser focus on your core topic area, and link every paragraph back to your purpose. A convincing policy brief should communicate the urgency of the issue and focus on the benefits and advantages of following your policy advice.” From [How to write a policy brief | IDRC](#)

It’s important to note that no one-size-fits-all approach is effective. It will vary depending on the topic and the audience. Understanding both will be key to determining the most effective strategy.

QUICK FACTS ABOUT POLICY BRIEFS

- Always write in clear, concise and easily-understood language
 - Pilot test your writing by having someone outside of your field give you feedback
- Focus on one main argument and avoid tangents
 - Link to additional supporting information as needed, consider writing a policy series if there are multiple main arguments
- Exact page limits may vary, policy briefs range from 2-10 pages
 - Find examples from your field or use guidelines from your submitting organization
 - Example: [Guide for submitting briefs to the House of Commons](#)
- Common concern: “But they won’t know all of the details of my research”
 - Exactly. No one will know your research better than you do, focus on the actionable information



Know your audience

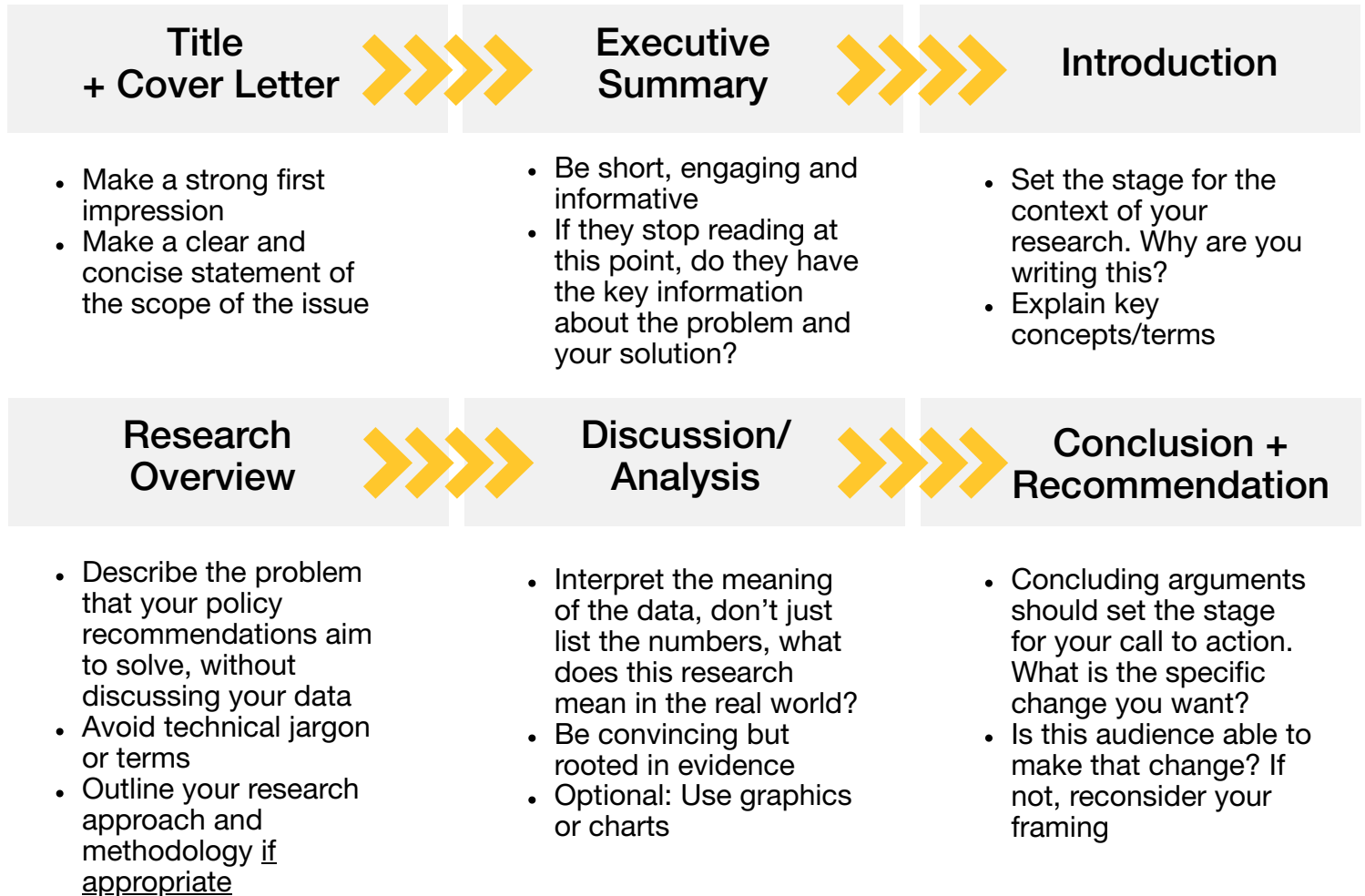
Knowing the audience you are presenting the information to informs the key message of your policy brief and the ways you can best communicate that information. Things to consider include:

- Who are you directing this brief to?
- Are they able to take action?
- What understandings of the topics do they already have?
- Are there concepts/terminology you should explain or avoid?
- How can you demonstrate that you are knowledgeable and trustworthy?

Overview of components for a policy brief

- Executive summary or introductory letter
- Introduction
- Overview of research or problem
- Discussion/analysis of the findings
- Conclusion explaining policy recommendations

Components of a policy brief



Formatting considerations

- Organize your policy brief with subtitles and headings
- Lists can be:
 - Good visual breaks (vs. long paragraphs)
 - A strategic way to condense information
 - Most effective with 3-7 points
- Graphs and diagrams (optional)
 - Focus on the trends of the data, not every detail
 - Use clear labels and self-explanatory titles
 - Caption to describe the meaning of the image
- You don't need to be a graphic designer - logical flow of information should outweigh aesthetic flourishes

Sidebars like this can provide an opportunity to delve into more details to help the reader understand the topic. This could also be a space to explain terms or definitions.

You can also visually highlight your most important points.

ADDITIONAL RESOURCES

- [How to write a policy brief | International Development Research Centre](#)
- [Policy brief writing guide | University of Waterloo Defense Security Foresight Group](#)
- [Research meets policy: Writing for your audience | Simon Fraser University Knowledge Mobilization Hub](#)

Interested in learning more?

**WATCH OUR POLICY
BRIEF WORKSHOP
WITH DR. EVAN
FRASER**



May 8, 2020

RE: Governance Mechanisms to Transition Agriculture from a GHG Emission Source to a Sink

Dear XXX,

Thank you for the opportunity to share with you research that shows how, ***with the right policies and incentives, Canada's agriculture sector can play a significant role in climate change mitigation***. To realize this potential, however, Canadian farmers need incentives to take action, and the agriculture sector needs support to leverage existing activities that reduce greenhouse gas emissions.

The evidence we reviewed suggests Western provinces (especially Alberta and Saskatchewan) have already made significant strides towards turning their soils from a source of carbon emissions to a carbon sink, and that this shift began as early as 1997. However, this achievement is currently being undermined as producers intensify practices and change production systems to meet financial and market pressures. There is a strong role, therefore, for federal and provincial policy to help support farmers become a lasting solution to greenhouse gas emissions. This will, of course, also help Canada meet its international commitments to the Paris agreement. We would like to stress that such programs will provide incomes to parts of the country that are suffering from the collapse of the fossil fuel sector. In this way, ***developing a system to reward farmers for sequestering carbon could be part of a Made-in-Canada Green Recovery program***.

In the following pages, we offer further detail on the current status of greenhouse gas emissions from agriculture along with three key strategies for reducing emissions in Canadian agriculture: (1) elevating agriculture's role in the national carbon offset system; (2) collaborating with industry to develop carbon markets; and (3) leveraging existing agri-environmental initiatives.

We are extremely excited that you are tackling this important topic and we are happy to engage further in these topics as appropriate. Thank you for this opportunity to provide early input into your process.

Yours truly,

Background

Canadian agricultural soils can be significant carbon sinks, but due to the adoption of intensive practices, our soils are not realizing their full potential as a solution to climate change.

- Although the Canadian agricultural sector is a net source of greenhouse gas emissions¹, our agricultural soils are a net carbon sink.ⁱ However: (1) carbon sequestration in Canadian soils is not achieving its full potential; (2) these benefits are concentrated in the West; (3) these benefits are being reversed.
- Between 1971 and 2015, a majority of farmers in western provinces adopted no-till² farming resulting in a reduction of summer fallow³ and a mass transition to deeper-rooted crops such as Canola.
- More recently, however, removal of atmospheric carbon dioxide by these croplands has been declining⁴ due in part to a switch from perennial to annual crops.ⁱⁱ Other provinces are also experiencing similar trends. For example, Ontario has witnessed a large decline in soil organic carbon⁵ over the past thirty years.ⁱⁱⁱ

Canadian agriculture does not only emit carbon dioxide. It also produces nitrous oxide and methane emissions. Reducing these emissions needs a different approach.⁶

- Nitrous oxide emissions are primarily from nitrogen fertilizer⁷ and methane emissions mostly come from raising livestock, especially cattle.
- There are significant opportunities to enhance efficiencies in (1) nitrogen fertilizer use, (2) feed-to-meat conversion ratios, and (3) manure management to reduce these emissions.
- One method is implementing anaerobic digesters on livestock farms that will turn methane emissions into usable biogas, a renewable energy source.^{iv}

Carbon Markets Reward Technological Innovation and Drive Green Investment

- Carbon markets can be either compliant or voluntary, and farmers can be included as credit holders. As credit holders⁸, farmers are paid for adopting climate change solutions including planting cover crops and adopting no-till practices to enhance soil sequestration.
- Farmers may also be supported for adopting technologies like anaerobic digesters and nitrogen management practices that reduce methane and nitrous oxide emissions.
- The Alberta Offset System is a compliant market with a carbon price of \$23/tonne. This is paid to farmers from emitters that are required to reduce their emissions. Another example is the Terraton Initiative⁹ led by Indigo Agriculture in the US.
- These examples demonstrate how carbon markets can stimulate the economy through green investment and innovation. Such programs also enhance farmers' economic resiliency by creating new streams of revenue.^{vii}

The scientific evidence shows that with the right policies and programs, farmland in Canada can help us meet our Paris commitments AND generate revenue for farmers.^{vii}

¹ Excluding fossil fuel use, agriculture accounted for 8.1% or 59 megatonnes of the national GHG inventory in 2018.

² No-till is a conservation practices that limits the disruption of soils and has shown to reduce greenhouse gas emissions.

³ Summer fallow is a practice that takes fields out of production for a growing season, which is a source of carbon dioxide.

⁴ Canadian agricultural soils removed 12 megatonnes of carbon in 2011 and declined to remove only 6.2 megatonnes in 2018.

⁵ It is estimated that 82 percent of Ontario's agricultural soils are currently losing carbon to the atmosphere.

⁶ Nationally, agriculture accounts for 76 percent of nitrous oxide and 31 percent of methane emissions.

⁷ Nitrogen fertilizer use in Canada has increased by 72 percent since 2005.

⁸ Farmers are participating in carbon markets in Australia, US, Quebec, Alberta, receiving carbon credits that range in value from ~15 to ~30 Canadian dollars per ton of greenhouse gas emissions reduced.

⁹ <https://terraton.indigoag.com/>

How to Turn Canadian Farms from a Net Carbon Source to a Net Carbon Sink

Strategy One: Elevate Agriculture's Role in the National Carbon Offset System

- Rationale - The Minister of Environment and Climate Change Canada is developing greenhouse gas reduction protocols to be included in the national carbon offset system. Canadian farmers can participate in this market as credit holders¹⁰. A key co-benefit of farmer participation is that this will allow us to create a benchmarked record of soil health¹¹.
- Challenge – Implementing compliant markets can result in extensive delays in terms of developing verified and regulated greenhouse gas protocols¹².^{viii}
- Recommendation - Accelerate the development of the national carbon offset system, including greenhouse gas protocols¹³ that adequately rewards farmers.
- Examples - Alberta's Offset System is a compliant market with ~5,000 farmers participating. The greenhouse gas protocols established in this system could be applied to other regions of Canada.^{ix}

Strategy Two: Collaborate with Industry to Develop Voluntary Markets in Canada

- Rationale - Purchasing agricultural carbon credits is attractive to firms working to meet carbon neutral targets¹⁴. Voluntary markets can stimulate the adoption of farming practices and precision agriculture technologies that result in carbon sequestration and greenhouse gas reductions.
- Challenge - Voluntary markets need to attract buyers willing to pay a price that both compensates farmers for reducing emissions as well as the costs of running the carbon accounting system¹⁵.
- Recommendation - Partner with existing voluntary marketplaces such as Indigo Agriculture (who run the Terraton Initiative) to explore the potential to expand into Canada.
- Example - This strategy has seen success in the US through a partnership between a voluntary carbon market, a precision agriculture firm, and a greenhouse gas reduction measurement tool funded by United States Department of Agriculture.^x

Strategy Three: Leverage Existing Agri-Environmental Initiatives and Programs in Canada

- Rationale - There are many ongoing activities in Canada that focus on improving soil health and on-farm production efficiencies that could also help transition agriculture from being a net greenhouse gas source to a net greenhouse gas sink.
- Challenge - Many existing activities would need to be amplified and focused on greenhouse gas reduction and carbon sequestration to have larger scale impact.
- Recommendation – Bring together the Canadian Agricultural Partnership's agri-environmental programs with private initiatives like Fertilizer Canada's 4R certification program, and innovative technologies from agri-tech companies (e.g. Terra Mera and Famers' Edge) to focus on farm management practices that reduce emissions.
- Example - The 4 per 1000 initiative led by France has one objective: increase soil organic carbon to mitigate climate change. It brings together diverse actors that contribute to this objective through their own initiatives.^{xi}

¹⁰ To ensure a nation-wide complaint market's success and its viability for farmer participation, a menu of greenhouse gas protocols must be developed that can attract a diverse range of farmers.

¹¹ Farmer participation in carbon markets can contribute to efforts in addressing the agri-environmental data deficit in Canada.

¹² To address this challenge, first advance greenhouse gas protocols that have been implemented in other compliant markets, including nitrogen management plans, grasslands restoration, and renewable energy (e.g. anaerobic digester) protocols.

¹³ In agriculture, greenhouse gas protocols classify on-farm practices and outline the guidelines that farmers have to follow to verify their credits through an accreditation process that follows standardized greenhouse gas measurement methodologies.

¹⁴ Many private firms view purchasing agriculture carbon credits as an attractive means to meet their carbon neutral targets because they can market how their purchasing of offsets is contributing to food security and sustainable agriculture (e.g. Maple Leaf Foods).

Additional Reading and Background References

- ⁱ This is the executive summary of the “national greenhouse gas emissions and sinks” report. This report demonstrates that agriculture is a net source of GHG emissions, and croplands are a carbon sink.
<http://publications.gc.ca/site/eng/9.816345/publication.html>
- ⁱⁱ This webpage outlines key trends in greenhouse gas emissions from Canada’s agriculture sector. Trends include how the increase in nitrogen fertilizer use has led to increases in nitrous oxide emissions.
<http://www.agr.gc.ca/eng/agriculture-and-climate/agricultural-practices/climate-change-and-agriculture/agricultural-greenhouse-gas-indicator/?id=1461014704763>
- ⁱⁱⁱ This report presents Ontario’s current soil health status and outlines a strategy to address declines in soil organic carbon. <http://www.omafra.gov.on.ca/english/landuse/soil-strategy.pdf>
- ^{iv} This webpage outlines what anaerobic digesters are, how they can reduce methane emissions, and produce biogas. <http://www.omafra.gov.on.ca/english/engineer/facts/07-057.htm>
- ^v This webpage provides an overview of farmer participation in the Alberta Offset System.
<https://www.alberta.ca/agricultural-carbon-offsets-overview.aspx>
- ^{vi} The Terraton Initiative was launched in 2019 by the private firm, Indigo Agriculture. The Terraton Initiative is a voluntary market that seeks to work directly with farmers to gather data, analyze soil samples, and verify carbon that has been sequestered to then sell to interested buyers. <https://terraton.indigoag.com/>
- Explainer video: <https://www.youtube.com/watch?v=fQv-sxZ4CzY>
- ^{vii} This report outlines available natural climate solutions in Canada and different governance approaches that can be taken to capitalize on Canada’s potential to mitigate climate change by investing in nature.
<https://institute.smartprosperity.ca/sites/default/files/nbsreport.pdf>
- ^{viii} This paper outlines how to overcome the delays in developing greenhouse gas protocols in the agriculture sector by streamlining the implementation process under a singular umbrella process.
<https://www.tandfonline.com/doi/full/10.1080/14693062.2019.1599802>
- ^{ix} This webpage outlines how Albertan farmers can earn carbon credits by adopting practices including no-till. In the Alberta system aggregators work directly with farmers to measure, verify, and sell their carbon credits.
[https://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/ba3468a2a8681f69872569d60073fde1/2e6e7bd43e2f18448725734f007441ee/\\$FILE/184-AlbertaOffset-Tillage-4.pdf](https://www1.agric.gov.ab.ca/$department/deptdocs.nsf/ba3468a2a8681f69872569d60073fde1/2e6e7bd43e2f18448725734f007441ee/$FILE/184-AlbertaOffset-Tillage-4.pdf)
- ^x Nori is a voluntary market place in the US specifically focused on selling carbon credits from farmers. They are in a pilot program phase, but have attracted significant interest from buyers and farmer participation.
<https://nori.com/>
- ^{xi} This is the homepage for the 4 per 1000 initiative led by France. It is a global initiative focused on improving soil health to mitigate climate change with diverse stakeholders supporting and advocating its message.
<https://www.4p1000.org/>