

A National Bioeconomy Strategy

BUILDING OFF OF CANADA'S
BIOMASS STRENGTH

BiDesign

FEBRUARY 20, 2019

Housekeeping



This webinar will be 1 hr and will be recorded and posted online.

Today: Presentation then Q&A.

Submit your questions at any time using the “Questions” tab on the webinar panel to the right.

You are invited to send your contributions to the project after the webinar and before March 4, 2019.

About us



BioNB and BioIndustrial Innovation Canada are developing a National Bioeconomy Strategy.

The partners and supporters for this project:

Project partners: BioAlberta, BIOTECanada, CRIBIQ, FPAC, FPIinnovations, Manitoba Agriculture, Nova Scotia Innovation Hub, Ontario Agri-Food Technologies, and Ontario Federation of Agriculture

Project supporters: Agriculture and Agri-food Canada

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Today's presenters



Murray McLaughlin

- President, McLaughlin Consultants



Meaghan Seagrave

- Executive Director, BioNB



What is the bioeconomy?

It is generally recognized that the key attributes of a healthy Bioeconomy is the knowledge-based, competitive, and innovative and sustainable use of biological resources, processes and principles to provide eco-friendly goods and services.

The breadth of the bioeconomy

The bioeconomy covers all sectors and systems that rely on biological resources (animals, plants, micro-organisms and derived biomass, including organic waste), their functions and principles.

It includes and interlinks: land and marine ecosystems and the services they provide; all primary production sectors that use and produce biological resources (agriculture, forestry, fisheries and aquaculture); and all economic and industrial sectors that use biological resources and processes to produce food, feed, bio-based products, energy and services.

Canada's bioeconomy

Current Bioeconomy

- Canada has an exciting history of innovation in the bioeconomy.
- Members of the bioeconomy are trying to break into new markets: chemicals, improved foods, composites, etc.
- The industrial bioeconomy is a key part of Canada's future.

The BioDesign Consortium

- The BioDesign consortium's mission is to build and support highly-innovative Canadian firms who seek to commercialize new bio-based products and develop new sustainable biomass-to-bioproducts technologies.
- A strong Canadian bioeconomy would have many benefits for the country, including economic growth, environmental benefits and new biotechnology innovations.

Canada needs a bioeconomy strategy

The products and technologies that comprise the bioeconomy will have a positive impact on economic growth of Canada while mitigating climate change

- It is important to use Canada's natural capital efficiently and effectively
- Cross-cutting technology development will lead to new products and materials that will change the nature of global supply chains.
- We must live, grow, and manufacture, more efficiently and effectively.

This project

We proposed this project to AAFC based on gaps we see for the industrial agriculture sector and the opportunity to craft an industry-led message and recommended actions for the bioeconomy.

This consultation

What we hope to achieve through these consultation sessions:

1. Validate our framework and identify any gaps.
2. Develop action-oriented recommendations.
3. Record examples of successes and challenges in Canada's bioeconomy.



9 events from coast to coast
277 attendees



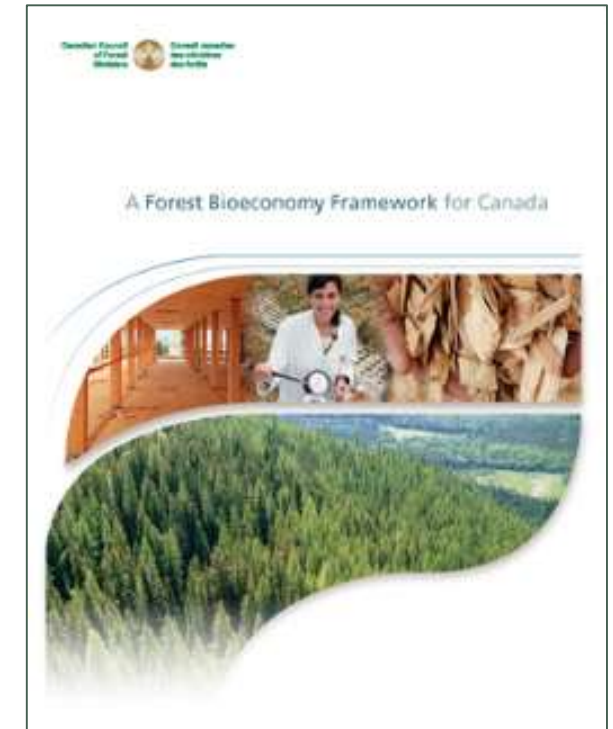
SARNIA September 13
VANCOUVER January 14
CALGARY January 15
SASKATOON January 17
WINNIPEG January 18

GUELPH January 29
HALIFAX January 31
MONTREAL February 4
MONTREAL February 7

Where did we start?

The foundation for a national bioeconomy strategy was well planted with:

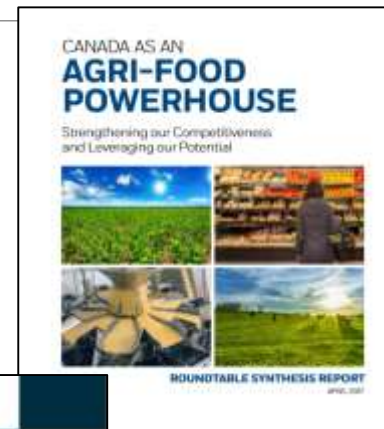
- The Canadian Council of Forest Ministers Forest Bioeconomy Framework for Canada (launched September 2017).



Where did we start?

Several other notable reports have been released:

- **Canada as an Agri-Food Powerhouse** (A Roundtable Synthesis Report from the Public Policy Forum and the Canadian Agri-Food Policy Institute);
- **Innovation in Agriculture** (Priorities and Recommendations from the Industry Members of the Industrial Bioproducts Value Chain Roundtable);
- **The Economic Sector Strategy Tables** (coordinated by ISED and industry-led), in particular:
 - Agri-Food Table,
 - Clean Technology Table; and
 - Resources of the Future Table



Where we hope to get to

From Independent Frameworks

- Consortium of Partners Focused on the Bioeconomy
- Forestry Bioeconomy Framework
- Agricultural Bioeconomy Framework

To

A merged National Bioeconomy Strategy for Canada



What did our review reveal?



Key Priority Areas

1. Creating Agile Regulations and Government Policy
 2. Establishing Biomass Supply and Stewardship
 3. Building Strong Companies and Value Chains
 4. Building Strong Sustainable Ecosystems
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Creating Agile Regulations and Government Policy

Why?

- A government whose policies and processes are relevant to the current and future state of advanced biotechnologies and bioproducts will enable the bioeconomy in Canada to flourish.
- It is important that the standards for bio-based technologies reflect sustainability, safety, quality, and traceability.

What we have heard

- Establish an industry advisory group
- Make standards, reference methods and data requirements smarter
- Make processes and procedures more efficient
- Consider innovation, growth and competitiveness as part of regulators' mandate
- Adopt a multisector approach that recognizes that products may fall between regulatory categories or face a complex regulatory environment
- Promote bio-based technologies and products in domestic and global value chains

Establishing Biomass Supply and Stewardship

Why?

- Agricultural and forest lands are crucial to the Canadian economy and our way of life. An evidence-based strategy is needed to ensure the best use of our natural capital.

What we have heard

- Invest in science to better understand sustainability and stewardship of agricultural and forest lands
- Invest in innovation and implementation
 - Yields, use of residuals, renewable energy, transformation (genomics, fermentation and enzymes), soil conditions, and reconnaissance of quantities of biomass
 - Increase productivity by transforming production and resource management practices
- Optimise efficient processing through R&D and upscaling at large-scale demo/flagship biorefineries
- Ensure transportation modes are available to serve the development of commodities and resources that underpin the bioeconomy value chain.

Building Strong Companies and Value Chains

Why?

- To better understand the conditions that create more anchor firms in the bioeconomy and establish Canada as a leader

What we have heard

- Government procurement programs focused on sustainability and bioproducts to encourage early adoption and market pull.
- Integrate knowledge and mentorship into financing leading firms. Help them structure bankable deals.
- Support producers and producer groups to leverage economies of scale with locally-led biorefining projects.
- Inventories, technology roadmaps and matchmaking support
- The development of recognized criteria to assist financial and ratings organizations with the evaluation of credit worthiness of bio-based projects

Building Strong Sustainable Ecosystems



Why?

- To develop high performing bioeconomy clusters across Canada

What we have heard

- Support for skills, talent and cluster building activities
- Support higher education institutions playing lead roles in innovation and academic adaptation in agriculture and forestry
- Promote partnerships with Indigenous peoples by continually engaging them on their visions for Canada's bioeconomy future

Relevance to climate change

Canada's Bioeconomy will:

- Link innovation, clean transportation and infrastructure, sustainable living, and Canada's commitments to climate change.
- Demonstrate the role our traditional industries play as integral partners in Canada's climate plan.
- Demonstrate how our natural capital can play a significant role in helping our country achieve its climate change goals.
- Our traditional industries can and should be early adopters of clean technology, innovation and jobs. New ideas for clean growth and a low-carbon future.

The circular economy

The circular economy is based on economic models that support environmental sustainability without forsaking the economic opportunity. Underpinned by a transition to renewable energy and renewable resources, the circular model builds economic, natural, and social capital. It is based on three principles:

- Design out waste and pollution;
- Keep products and materials in use; and
- Regenerate natural systems.

Although different than the bioeconomy, we believe the bioeconomy is integral and a first step in supporting Canada's move to a more circular economy.

How to participate in this consultation



Options

1. Provide your comments using our survey tool

<https://www.surveymonkey.com/r/BioeconomyCDN>

2. Contact us at jodonnell@bionb.org

Please contact us by March 4th, 2019 in order to be included in the final report.

Summary

- Our Canadian Opportunity is to build a national strategy that will capitalize on our abundant Biomass and our expertise to move these to commercialization with our partners and research capabilities.
- Let's become the World Leaders in the Bioeconomy

Thank you - Q&A Time



Please submit your questions through the GoToWebinar platform
UNDER QUESTIONS FUNCTION

Please remember to complete the **SURVEY** (Max 10 minutes):
<https://www.surveymonkey.com/r/BioeconomyCDN>

