



Natural Resources
Canada

Ressources naturelles
Canada

Canada's Forest Bioeconomy

Source of innovative, low carbon solutions

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Natural Resources Canada
June 2018, Prince George



Canada's Forest Resource Advantage

Largest forests in the world?

1st RUSSIA
2nd BRAZIL
3rd

CANADA

4th USA
5th CHINA



210,000 jobs
9,700 Indigenous people

70% Indigenous communities in forested areas

Major source of Income for 105 municipalities



most forest area per capita in G20

37% world's certified forests

<0.5% forest area harvested /yr

Removed **20 Mt CO₂e** in 2016

65% of water source

2/3 species found in forests

Canada is a global leader in forest product exports

Commodity	Global production rank (volume)	Global exports rank (value)
Newsprint	1 st	1 st
SWL	2 nd	1 st
OSB	2 nd	1 st
Wood pellets	2 nd	2 nd
Chemical pulp	3 rd	3 rd
Printing and writing paper	9 th	7 th

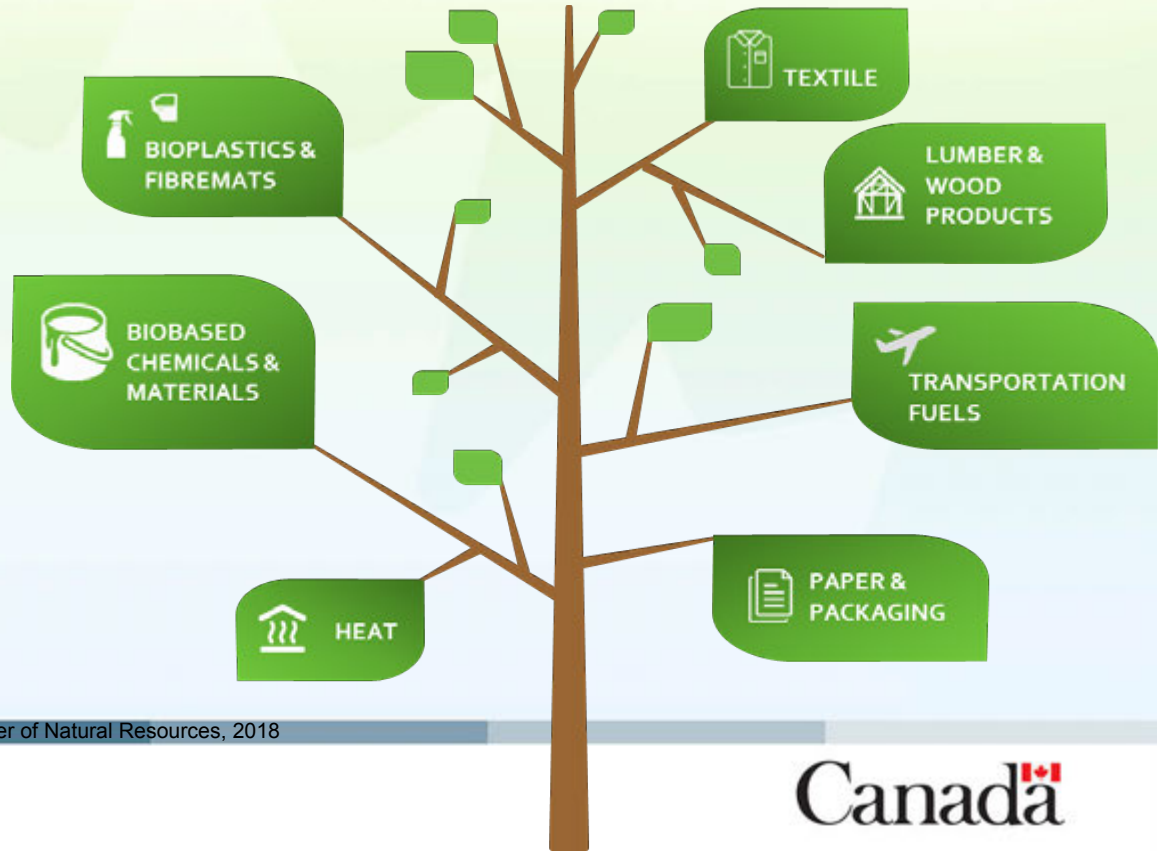
A strength that comes with vulnerabilities

- Trade disputes
- Cost increases
- Changing consuming trends
- Increasing global competition



The bioeconomy offers new opportunities

- Forest companies are re-thinking
 - Residue use
 - Opportunities to move up the value chain
 - Diversifying their products and markets
- New opportunities
 - Environmentally effective alternatives to non-renewables
 - Solutions to mitigate GHG



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Canada will build on strengths in biobased sectors

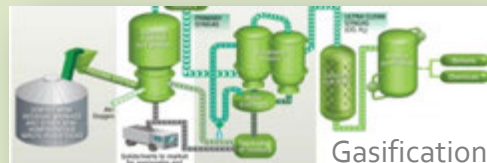
1 Large supply of sustainably managed biomass resources



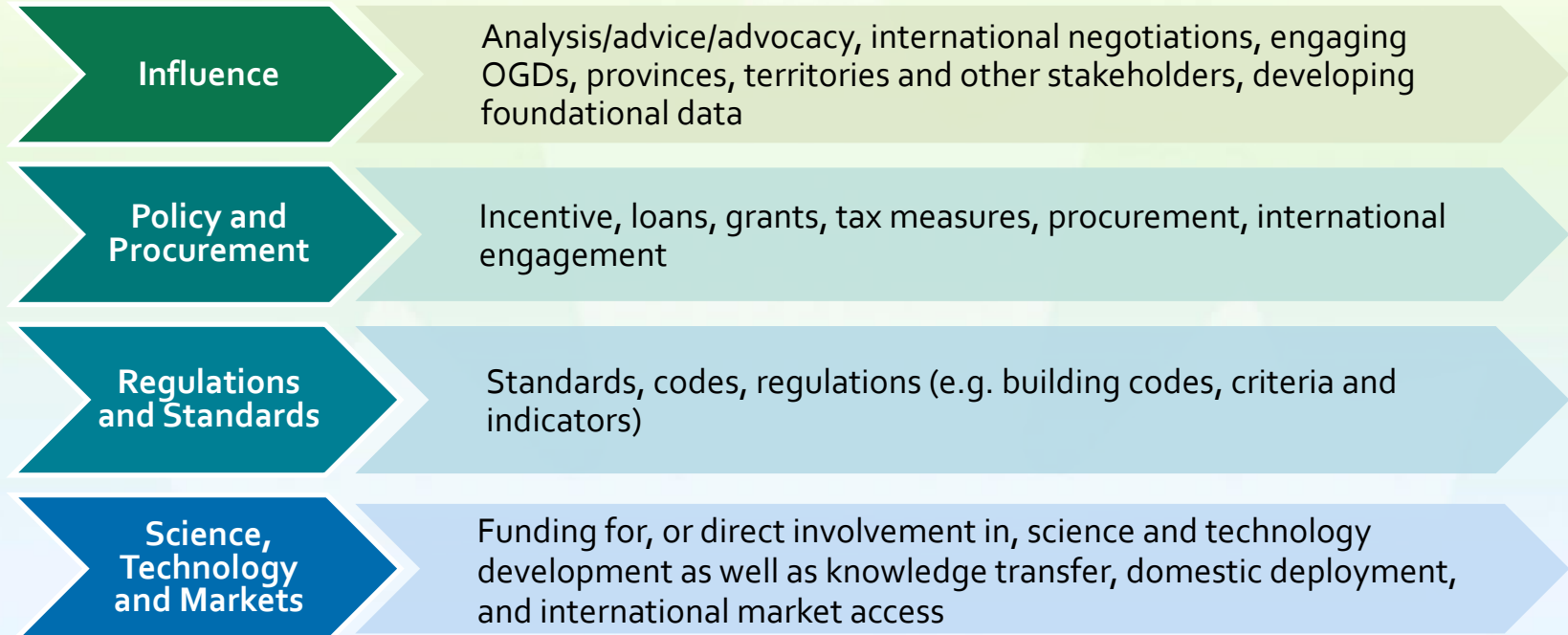
2 Well-integrated supply chains



3 Biomass technology leadership



Governments can make the bioeconomy happen faster



NRCan supports the forest sector transformation



Aligning actors, building bridges

Forest Bioeconomy
Framework

Indigenous participation

Public trust

International
engagement



Enabling innovation & market access

Eliminate trade barriers

R&D&D

Expanding market
development



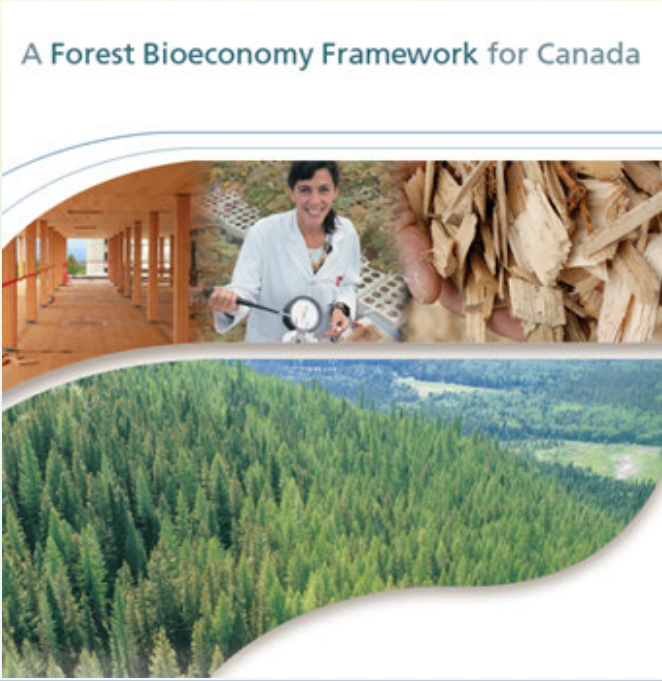
Deployment of clean growth solutions

De-risking innovation

Clean Energy for Rural
and Remote
Communities- Bioheat

Green construction

Aligning actors: Forest Bioeconomy Framework for Canada



Canada will be a global leader in the use of sustainable forest biomass as part of the transition to a low carbon economy.

CCFM Forest Bioeconomy Framework for Canada (2017)



Communities



Supply



Demand



Innovation

Enabling innovation & market access: NRCan programs



Supporting the deployment of clean growth solutions: New program! Clean Energy for Rural and Remote Communities

- **Objective:** reduce reliance on fossil fuels in rural and remote communities and industrial sites by supporting the transition to more sustainable energy solutions
- **Budget 2017 Funding:** \$220M over six years (starting in 2018/19)
- Program components
 - Deployment of renewable electricity technologies
 - Demonstration of innovative clean energy projects
 - **Deployment of proven bioenergy technologies (BioHeat): \$55M**
 - Energy efficiency
 - Capacity building
- **CERRC offers a continuous intake for proposals.** Please register below and prepare your application materials in advance of our next review period (late October 2018).
- **More Information**
<https://www.nrcan.gc.ca/energy/science/programs-funding/19791>



Photos: NVIT students; Kwadacha First Nation Biomass System

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Growing the bioeconomy: there is more to do yet!



Growing Consumer Demand



Embracing Value Co-creation



Developing New Partnerships



Implementing Ways of Mitigating Risk



Building an Enabling Environment

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ANNEX

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Federal support across the innovation continuum

