Why do boreal forests matter?

IBFRA & the Insight Process

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IBFRA Insight Side Event at Foret2019,
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BOREAL FOREST MATTER

Boreal forests will play an important role in meeting future climate goals, but they receive disproportionately low attention in many international processes.
We need to develop regionally appropriate mitigation and adaptation strategies. *Diverging views* about the best strategies, with very little consideration of climate change impacts. What strategies are technically feasible, climate effective, sustainable and socially acceptable?
BOREAL FOREST MATTER

We need to improve science communication
We need to strengthen existing communication channels between science and policy makers
We need to establish a permanent exchange platform for these discussion and information flows
The Circumboreal Working Group from the policy community of six boreal countries reached out to IBFRA to explore opportunities for science collaboration among boreal countries.
Invited 16 scientific experts from 6 boreal countries
Haparanda, Sweden, June 24-25, 2018
Presented results at Ministerial Summit, June 26.

- Two half days scientific discussion
- Half day science-policy dialogue
- Presented results at Ministerial Summit, June 26.
Boreal zone and boral forest facts

- Total area 1135.2 mln ha (29.5%)
  - Russia (61.2%)
  - Canada (29.7%)
  - USA (5.1%)
  - Finland (1.9%)
  - China (1.1%)
  - Sweden (0.8%)
  - Norway (0.7%)

- Carbon stock (32%) 272±23 Pg C
  - Live biomass 51.5 Pg C (19.9%)
  - Dead wood 14.5 Pg C (5.6%)
  - Litter 25.6 Pg C (9.9%)
  - Soil (1m) 167.0 Pg C (64.6%)

- Total C sink in global forests 2.4±0.4 Pg C
  - boreal forests 0.5±0.08 Pg C

FACTS  Diverse forest management situation in boreal zone

Area of managed and certified forests in Canada and Nordic countries 190 mln ha, in Russia 30 mln ha

Source: [http://forest.geo-wiki.org](http://forest.geo-wiki.org); Kraxner et al. 2017
Impacts of environmental changes on forests will be both positive and negative: growth, mortality, disturbances.

Understanding where, when and how these impacts will occur is necessary to design effective climate change mitigation and adaptation strategies for the boreal forest sector.

... will potentially lead to 20-50% loss of Siberian boreal forest (Source: Tchebakova et al., 2009)
FACTS  Area of wildfire in boreal forests/zone 2001-2016

Average area (mln ha)
Circumpolar boreal zone 9.4
Circumpolar boreal forests 4.5
Russia (total) 13.5
Russia (forests) 3.8
IPCC SR 1.5°C: by 2050 net negative in order to achieve 1.5 deg C!

FACTS

The boreal forest and negative emissions

Land-based Negative Emissions Technologies (NETs) will affect global forest sector

- Large increases in land-based carbon sinks required.
- Afforestation, reforestation, restoration … several 100 Mha to >2 Billion ha
- Intensification of forest management, conservation
- Increased use of long-lived wood products
- Increased use of bioenergy and biomass-based liquid transportation fuels
- Bioenergy with Carbon Capture and Storage (BECCS)

➢ The bioeconomy has great potential vs. sustainable supply for all?
➢ Boreal forests have an important role and can e.g. remove carbon with all additional benefits but they are under threat – CC→ large release (fire, pests, …)
➢ They receive disproportionally low attention (30% of global surface!)
• **** 1991 - USSR, USA, Canada, and Nordic Countries
• INTERNATIONAL public institution bringing together forest experts, policy makers, civil society organizations, and other stakeholders from boreal and other forest zones
• MISSION - “… to promote and co-ordinate inter- and trans-disciplinary research to increase the understanding of the role of the circumpolar boreal forests in the global environment and the effects of environmental change on that role …” (the White-Sea Declaration, 1991)
• PRODUCTS - comprehensive studies of boreal forests and valuating their role in providing stability of the earth climate system and global bioeconomy

→ 25 international experts forming the IBFRA Steering Group
→ series of broad international studies
→ scientific expeditions in Northern Eurasia and Alaska
→ 700+ research papers
→ 18 international conferences ~ 4,000 participants
An IPCC-like assessment of scientific consensus on selected topics.
Primarily meta-analysis and synthesis.
Science-based and policy relevant - but not policy prescriptive.
Focused on the boreal region.
Produces 1 report/policy brief (per funded topic)
Produces 1 scientific peer-reviewed article (per funded topic)
1 topic / term ~ 1 year
not a “one-off” process
IBFRA Insight Process

- **IBFRA Insight Task Force** represented by selected members of IBFRA Steering Group
- Identify potential sponsors for individual IBFRA Insight topics.
- Work with Circumboreal Working Group and sponsor to identify specific topics.
- Develop Terms of Reference for Insight Expert Team
- Form **IBFRA Insight Expert Teams** for specific topics representing
  - experts from boreal countries (for writing and reviewing)
  - both senior and young scientists
  - one hired position to help with writing
- **IBFRA Insight Task Force** oversees review, outreach and publication process.
- Develop key messages and communications strategy.
IBFRA Insight Process – STATUS-QUO?

Kick-Off at Skogens Dag 2019, 23 January, Stockholm, Sweden

1st IBFRA Insight Topic:

**Sustainable boreal forest management**

– challenges and opportunities for climate change mitigation -

It will address climate change impacts, role of forests in mitigating climate change and the ways in which the forest sector can contribute to net negative emissions.

**Funding under the framework of the National Swedish Forest Programme:**

To strengthen strategic collaboration on boreal forests in science-policy interface

Collaboration: Swedish Forest Agency, Future Forests at SLU, IBFRA.

The project funding from both SFA and SLU.
IBFRA Insight Process – Next Steps?

✓ Select Insight topic with Circumboreal WG and those funding the topic
✓ Announce the IBFRA Insight Process at Swedish Forest Day
✓ Identify relevant experts from boreal regions
✓ Identify format and arrange initial workshop with 15 – 30 participants from all boreal countries → **20-21 May 2019, Stockholm**
✓ Prepare first draft of document
☐ Review process of first draft
☐ Prepare second draft
☐ Arrange final workshop to complete and discuss report and paper (scientists + policy experts)
☐ Finalise report / policy brief and start preparing scientific paper
☐ Aim at completion of the first cycle within 1 year
Thank you | See you!

@ IBFRA Insight Process Workshop early 2020
@ Science-Policy exchange through UNECE ToS BF
@ IBFRA19 in 2020, Fairbanks, Alaska, USA
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