
The Paris Agreement: Implications for Forest Industry, Energy and Forest Agencies

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Paris Agreement : Big Picture

Heralded as an historic moment

- Clear signal that all countries recognize the need to de-carbonise the global economy
- Five-year review cycle for country targets
- Transparency requirements on all countries.
 - ...flexibility for developing countries in light of their capacities.
- Forests are formally recognized in the Agreement



Paris Agreement: Big Picture

New deal is weak.

- No concrete measures to address climate change.
- No new meaningful pledges on finance.
 - Merely promised to extend the annual \$100 bn promised by the developed countries through 2025 and beyond.
 - Even if this target is reached, it is highly unlikely it will be in the form of public, government-to-government transfers, mainly through the Green Climate Fund.
- Formalisation of a pledge-and-review type process.
 - Non-Annex 1 countries have no obligation to commit to emission limits, but are encouraged to do so.



Paris Agreement: Big Picture

Conclusions?

- Paris successfully moved climate change negotiations from a failed top-down model (tried in Kyoto & Copenhagen) to a bottom-up approach that stands a good chance of inspiring fresh waves of national effort on de-carbonisation.
- The falling cost of clean energy technologies gave policy-makers growing confidence that shifting to a low-carbon future is feasible over time.
 - But is bioenergy – especially from forests – competitive?
 - Lower fossil fuel demand in the developed world will put downward pressure on coal and oil prices. If developing countries do not implement policies to decarbonize, market forces will provide an incentive for greater use of coal and oil in developing economies - an unintended consequence.



What Else is Happening?

UN Climate Negotiations are important, but real action is also happening at other levels – arguably even more important.

- International financial institutions have dramatically shifted their funding away from fossil-based projects and into clean energy.
- There are bilateral processes linking the U.S. with China, China with Indonesia, Indonesia with the Netherlands, and so on.
- Dynamic initiatives are happening at the sub-national level in states like South Australia, the Basque Country, British Columbia and California.
- Large cities are self-organizing, making commitments and exchanging best practices with each other.
- In the context of the forest sector, the MEGAflorestais Working Group may even have a role to play in terms of sharing information and ideas.



Forests in the Agreement

- Article 5 requires Parties to take action to conserve and enhance sinks and reservoirs of greenhouse gases, including forests.
 - Clause 55 specifically recognizes the need for financial resources to support forest-related activities, with particular mention of joint mitigation and adaptation to climate change.

- Article 5.2 encourages parties to implement and support the existing REDD+ Framework.
 - Over 60 countries made reference to REDD+ in their Intended Nationally Determined Contributions (INDCs).
 - Brazil and Norway renewed their \$1bn partnership to reduce deforestation until 2020.
 - Germany, Norway and the UK announced \$5bn to support country-based REDD+ programs between 2015-2020.
 - World Bank's new African Climate Business Plan, with \$1.6 bn for forests and resilient landscapes.



How Can the Forest Sector Help Battle Climate Change?

- Provide critical life support services (eg., clean air & water, resilient biodiversity)
- Serve as carbon sink
- Replace fossil fuel-based electricity (eg., coal)
- Replace fossil fuel-based transportation fuels & chemicals.
- Replace fossil fuel intensive building materials (eg., steel, cement).

....the last three require that the biomass supply be managed on a sustainable basis, with new growth off-setting harvests over time.



Carbon Sink vs Food Security

- Given the difficulty in eliminating the use of fossil fuels, Negative Emissions are expected to play some role in trying to keep global warming to 2 degrees C.
 - If not managed properly, there is concern that a focus on large scale sequestration by carbon sinks could threaten food security, land rights and livelihoods.
 - Human rights, including the rights of indigenous peoples and local communities are included in the preamble to both the Agreement and the decision text.

- Bioenergy production and food security need not be in competition and could be complementary. The Brazilian experience suggests that broadly distributed social benefits and large-scale efficient bioenergy production need not be mutually exclusive.

- Which question is most relevant?
 - How much bioenergy could be produced once food needs are provided for?, or
 - How much more food security and other social benefits could be realized with bioenergy than without it?



Role of Energy

- Energy is central to not only climate change, but also sustainable development and poverty reduction efforts.
- When looking at end-use, focus on priority social needs in developing countries, like electricity, cooking fuel, and fuel for agricultural (and forestry) machinery.
- A necessary condition for development of a rural economy is a stable and relatively inexpensive source of electricity.



Challenges for Bioenergy?

Bio-energy is seldom the preferred choice for investors in energy projects. Why?

- Historically, it has not been the lowest cost source of energy.
- Cost and risk associated with the supply of feedstock.
 - Biomass typically 50-75% of the variable cost of producing bio-energy, and the price can be volatile.
 - Sun and wind are intermittent, but there is no variable cost.
 - Fossil fuels may (or may not) be expensive, but their supply chains are generally well established.
- Uncertainty regarding the market for renewable energy
 - We are fighting inertia.



What Can Be Done?

In the absence of legally enforced mandates, investment will only occur in bio-energy projects if they offer a sufficiently attractive financial return to compensate for the risk.

- To lift financial returns, the first challenge is to reduce costs.
 - **Operating costs** can be reduced by adopting the most efficient technologies – there have been big improvements in recent years.
 - **Finance costs** can be reduced by educating local banks and investors to overcome perceived technology risk and build confidence – partnerships may be effective.
 - **Capital costs** can be reduced by supporting continued development of supply chains for new technologies;
 - Make use of reverse auctions or other competitive tendering to ensure efficient price discovery and market development.



What Can Be Done?

Private sector participation is important at an early stage. In addition to contributing capital, companies have the expertise in operations and marketing.

- International lenders are looking for a consortium approach to projects – including: suppliers of biomass, operator with good technology, off-take agreements to buy the energy.
- To align incentives and reduce opportunistic behavior, try to structure projects so that the suppliers of the biomass participate in the profits of the bio-energy plant.
 - Investors want comfort regarding both the volume of supply and delivered cost of the biomass over time.



What Can Be Done?

- There is abundant capital available at the global level, but it is quite averse to risk.
- The key challenge is reducing the perceived risk associated with investments in bio-energy. These risks exist throughout the value-chain, and are associated with feedstock, technology, markets and regulations.
- Potential steps **Governments** can take to mitigate risk:
 - Support fiber supply agreements;
 - Sponsor off-take contracts for the energy
 - Implement attractive (and predictable) hosting conditions. Eg.,
 - ✓ Price on Carbon
 - ✓ State/National Low-Carbon Fuel Standard
 - ✓ Exemption of cellulosic biofuels from motor fuel taxes.



What Can Be Done?

If **Forestry Agencies** are to play a meaningful role, we likely need to think (and act) beyond our traditional institutional silos

- Forestry, Agriculture, Environment and Energy departments rarely work together to design and implement bioenergy strategies and harmonized policies & regulations.
 - Since a whole supply-chain is involved, co-ordination is critical.

- Given you are not explicitly forbidden by mandate, act less like a “forest manager” and more like a “land manager”.
 - Focus not only on carbon sequestration and bio-energy, but also on solar and wind energy.



**APPENDIX 1:
NAWITKA CAPITAL ADVISORS**



Nawitka Capital/Don Roberts

Mr. Roberts is CEO of Nawitka Capital Advisors Ltd, a firm which provides advice on strategic direction and raising capital for companies in the Renewable Energy, Clean Technology & Forest Products Industries.

In 2012, Mr. Roberts was chosen by Corporate Knights Magazine as the individual in the Financial Services sector who contributed the most to sustainable development in Canada.

Prior to starting Nawitka in 2013, Mr. Roberts was a Vice-Chair of Wholesale Banking, and Managing Director in Investment Banking with CIBC World Markets Inc. In this position he founded and led the Bank's cross-functional Renewable Energy & Clean Technology Team. He also provided senior coverage for companies in the global forest products industry.

Mr. Roberts was recognized in 2006 by Forbes Magazine as one of the Best Brokerage Analysts in North America. From 1995-2009, investor surveys consistently ranked him among the top equity research analysts covering the North American forest products industry. Prior to joining the financial sector, Mr. Roberts was Chief Economist for the Canadian Forest Service.

Mr. Roberts is a certified Board Director with the Institute of Corporate Directors, and sits on the boards of four organizations.

Mr. Roberts has a Bachelor's degree in Agricultural Economics from the University of British Columbia, a Master's degree in Forestry Economics from the University of California at Berkeley, and both an MBA and doctoral studies in International Finance and Economics from the University of Chicago.

