

# Bioeconomy Beyond Bioenergy

This time we would like to elaborate on the impact political decisions have on the bioeconomy. In recent years the bio-focus has to a great degree been on energy solutions aimed at reducing greenhouse effects. Some of these are based on international agreements, and thus driven by political consensus. As bioenergy solutions are generally subsidised, investors run the risk that political moods change and subsidies are reduced or cancelled. Recently there has been lot of debate around the criteria for bioenergy sustainability.

The original intent behind the RES directive was to reduce greenhouse gas emissions.

The Renewable Energy Directive (**RES 2009**) establishes an overall policy for the production and promotion of energy from renewable sources in the EU. It requires the EU to fulfill at least 20% of its total energy needs with renewables by 2020 – to be achieved through the attainment of individual national targets. **All EU countries must also ensure that at least 10% of their transport fuels come from renewable sources by 2020.**

Biofuels and bio-liquids are instrumental in helping EU countries meet their 10% renewables target in transport fuels. The Renewable Energy Directive sets out **biofuel sustainability criteria** for all biofuels produced or consumed in the EU to ensure that they are produced in a sustainable and environmentally friendly manner.

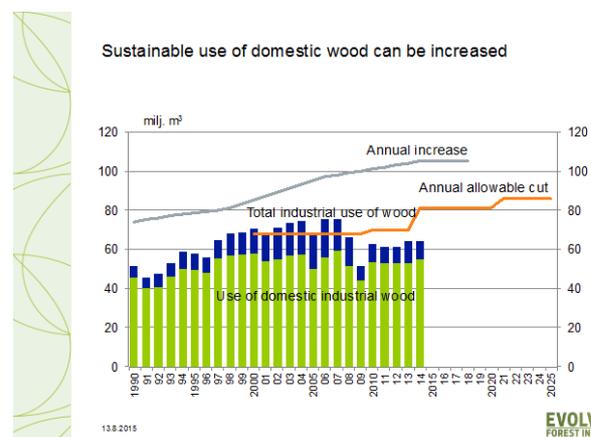
The EU has defined a set of sustainability criteria to ensure that the use of biofuels (used in transport) and bio-liquids (used for electricity and heating) are done in a way that **guarantees real carbon savings and protects biodiversity**. Only biofuels and bio-liquids that comply with the criteria can receive government support or count towards national renewable energy targets. The EU-criteria contain e.g. the following

- To be considered sustainable, biofuels must achieve **greenhouse gas savings of at least 35% in comparison to fossil fuels**. This requirement rises to 50% in 2017. In 2018, it rises again to 60% but only for new production plants. All life cycle emissions are taken into account when calculating greenhouse gas savings. This includes emissions from cultivation, processing and transport.
- Biofuels **cannot** be produced from raw materials obtained from land **with high biodiversity** such as primary forests or highly biodiverse grasslands.

The above is the officially stated position of the EU Commission, but does it provide a level playing field across all sectors?

As wood is a renewing raw material, it acts as carbon storage. Forests are at their most effective as carbon binders while in **their main growth stages**. However, in the terminal phase (old-growth or primeval forests), the decaying process means that the forest emits rather than stores carbon. This is why forests need to be managed in such a way that there is constant growth. Northern European countries have been excellent in this respect, as evidenced by Finland in Table I. Finland can easily increase utilisation of its forests by 15 M m<sup>3</sup>! This has been achieved through savvy forest management and cultivation.

**Table I.** Forests growth in Finland.



At the same time we need to expand the current narrow focus on decarbonising to encompass carbonising as well. This will mean finding more ways to capture and store carbon, such as using more wood or wood related materials in construction. By directing the valorising process of wood mainly towards high-end products, and only cascading into energy solutions, we could achieve lower GHG-emissions and higher levels of trapped and stored carbon.

Of course it is important that this is not left as empty discussion. We have been proposing that such an impact assessment should to be urgently conducted all through the EU. The powers that be need to come together and make it happen!

## Partner introduction – Tuomo Niemi



To start a new section of our Newsletter, we shall present our key team members one at a time, and we start with one of our founding partners, Tuomo Niemi, Director of Chemical Forest Industry. Tuomo has an exceptionally broad background as forest industry consultant with practical experience from major mill projects on five continents.

He holds a M.Sc. degree in chemical pulping technologies from Åbo Akademi, Finland and he did post-graduate studies at the Institute of Paper Chemistry, Appleton, Wisconsin, USA. He speaks fluent Finnish, English, Swedish and is conversant in German.

Tuomo made his corporate career first at experience from Oulu Oy/Veitsiluoto Oy and then at Pöyry Industry Oy. He

has been in charge of research, projects, mill management, sales and customer service for several industry operations. As a consultant, he managed over 50 and participated in more than 100 projects worldwide. One might say that he knows the industry and industry knows him.

Tuomo was among the founders of our former company NISCluster and most recently he joined Jukka Kantola, Olli Dahl, Martin Doktor and Antti Kivimaa in setting up NC Partnering, our current corporate vehicle.

In addition to chemical forest industry processes, he specializes in international contacts, combining industry and investor relations.

He is an active contributor to several professional bodies like the Finnish Paper Engineer's Association and Technical Association of Pulp and Paper Industry (TAPPI)

With Tuomo and Tuomo's network, NC Partnering can offer a holistic chemical forest industry view on a global basis.

## Latest news

NC Partnering Ltd was officially launched at the CLIB2021 seminar in Cologne on January 20th, where Jukka Kantola gave a speech on Finland's latest bio-economy trends.



**Fig 2.** Partner Martin Doktor (right) with Mr. Anindya Mukherjee, CEO of i2i at CLIB2021.



**Fig 1.** Partner, CEO Jukka Kantola with Dr. Christian Patermann and Dr. Manfred Kircher at CLIB2021.

Several news items have mentioned NC Partnering, e.g. January 27<sup>th</sup> Bioeconomista "Bioeconomy need to be communicated and actualized for the citizens of EU", and RISI February 5<sup>th</sup> "Bio-strategy firm NC Partnering launches operation".

We also welcomed several new associated partners to the NC Partnering network:

- *Media partners: Il Bioeconomista and Sam Rowe, Caro Consulting*
- *Forestry partner: FMP services*

NC Partnering's sister company *NC Capital Partners* has taken a ownership position in KaiCell Fibers Ltd, a Finnish company set on building a biorefinery in the Kainuu region. More on: [www.kaicellfibers.com](http://www.kaicellfibers.com).

Several bioactivities are under way. We'd be happy to meet at

- Cologne on April 5<sup>th</sup>/6<sup>th</sup> – where we have a stand, and Jukka Kantola/Martin Doktor to deliver a speech <http://biowerkstoff-kongress.de/programme>
- Suomen Sahat (Finnish Sawmills) - stakeholder meeting on April 12<sup>th</sup>. You may talk with partners Antti Kivimaa and Jukka Kantola. <http://www.suomensahat.fi/Sidos2016>
- Kokkola bio-event on April 13<sup>th</sup>, where Jukka Kantola will evaluate new bio-start-up companies <http://www.kosek.fi/tapahtumat/18983/luonnosta-liiketoimintaa-idealeipomo-kokkolassa-12-1442016/>
- Kainuu Bio-event, April 25<sup>th</sup>. Jukka Kantola and Olli Dahl delivering a speeches <http://kuisointaa.fi/kainuun-biotalous-tulevaisuusfoorumi-25-4-2016/>

To find out more please follow us on twitter @NCPartnering.

