

The 3rd World BioEconomy Forum streamed live from Ruka!
Finland 10th September 2020

THE BIOECONOMY CELEBRATES NATURE



WORLD
bioeconomy
FORUM

The World BioEconomy Forum Advisory Board is chaired by **Jukka Kantola**, and includes several accomplished bioeconomy experts.

Anna Nikkilä

Executive Director
anna.nikkila@wcbef.com

Jukka Kantola

Chairman, Founder
jukka.kantola@wcbef.com
+358 40 552 8880

Aida Greenbury

Co-founder, Advisory Board
aida.greenbury@wcbef.com

Mark Rushton

Co-founder, Director
mark.rushton@wcbef.com

Hailiang Jin

Business Development Director
hailiang.jin@wcbef.com



Aida Greenbury
*Global Sustainability
Advisor*



Tjama Tjivikua
*Founding Vice-
Chancellor of the
Namibia University of
Science and Technology*



Matthias Zscheile
*BCM BioEconomy
Cluster Management*



Ludo Diels
*Research Manager,
VITO, Vice-chair of
the Public-private-
partnership SPIRE*



Christian Patermann
*"Father" of European
bioeconomy
Former Director
EU Commission and
Advisor to the German
Government on
bioeconomy matters*



Michael Carus
*Founder and
Managing Director
nova-Institute*



Jim Philp
*Policy Analyst
Directorate for Science,
Technology and
Innovation, OECD*



Marcello Brito
*President
Brazilian Agribusiness
Association (ABAG)*

**REGIONAL
REPRESENTATIVES TEAM**

Praveen Gupta

Regional Representative for
Asia, Australia, Oceania
praveen.gupta@wcbef.com
+91 99675 38339

Oswaldo da Costa e Silva

Regional Representative for
Europe (Iberia and German
speaking countries),
USA, Canada, Latin America
oswaldo.costaesilva@wcbef.com
+49 176 260 48955

Daniel Paul Dima

Regional Representative
for Europe (other than Iberia
and German speaking countries),
Russian Federation,
Middle East, Arabian Gulf, Africa
danielpaul.dima@wcbef.com
+358 504 354 749

Ana Maria Dima

Regional Representative
Team Coordinator
ana.dima@wcbef.com
+358 503 559 299



Mark Rudnicki, Ph.D.
*Professor of Practice,
Forest Biomaterials
Michigan Technological
University*



Jukka Kantola
*CEO of NC Partnering
Chairman of the
Advisory Board*



Mark Rushton
*Media Consultant
and Senior Editor*



Teresa Presas
*Board Member
The Navigator Company*



Mika Aalto
*Director General
Chemical Industry
Federation of Finland*



Mario Bonaccorso
*Founder and
Editor in Chief
Il Bioeconomista*

Dear FOLLOWERS OF THE WORLD BIOECONOMY Forum,

THE YEAR 2020 has been exceptional. We have all faced unprecedented threat and disruption to our everyday living and working conditions with the onset of the COVID-19 pandemic. None of the attendees to last year's forum in Ruka would have had any idea what was in store for us as we said our farewells.

THE WORLD BIOECONOMY FORUM has followed the development of the pandemic very carefully, and on April 16th we decided to forego arranging our usual traditional Forum, and instead we decided to initiate the World BioEconomy Forum goes virtual – live from Ruka! By having an on-line event we can ensure safe and easy access for all our followers across the globe. We feel that this was absolutely the right decision.

HARD TALK. We have an excellent programme lined up for you this year, featuring high-profile speakers from all over the world, enabling us to get a clear, global perspective on the progress of the circular bioeconomy. We have dedicated sessions for Regulators and Climate change, Global leaders and Financial world, Bioproducts around Us and finally Looking to the Future. Thanks to all speakers, panelists and moderators; you are what makes this Forum a success.

EASY ACCESS. As we are online, it is our responsibility at the Forum to ensure that participants have an effortless and comfortable experience while following the programme. The format will consist of a live broadcast so all participants can log in from wherever you may be in the world – whether you are at home or in your place of work. As we cannot meet face-to-face we have provided a platform from which you can arrange one-to-one meetings in parallel the program. All this can be done from your computer, iPad, or mobile – whichever device is your preference. A big thanks goes to our Forum partners who have made this possible.

RELAXED ENVIRONMENT. As we could not get you to Ruka this year, we will still endeavor to provide you with a flavour of northern Finland by bringing you some scenes of the local pristine environment –



in the middle of the forests. The studio team will lead you through the day, and at the end of the event we will be announcing a new location for our next event to be held in October 2021. Also, we have some exciting entertainment for you on the programme, here you will witness the very first public performance coming live from the World BioEconomy Forum. We guarantee the entertainment is worth waiting for!

I would personally like to thank the World BioEconomy Forum team, including our highly esteemed Advisory Board – with your spirit and professionalism, this event would not have taken place.

We are already putting together our vision for 2021. Next year you will see even more from the World Bioeconomy Forum as we continue our momentum and provide more opportunities to engage on important issues within the global circular bioeconomy. Look out for more of our online events, including dedicated webinars on specific subjects affecting the global bioeconomy where you are.

On behalf of the Advisory Board and WCBEF team – I'd like to warmly welcome you to the 3rd World BioEconomy Forum goes virtual – live from Ruka, Finland. We are looking forward to your active participation in the program.

A stylized, handwritten signature in black ink, appearing to be 'JK' or similar initials, positioned above the printed name.

Jukka Kantola

Chairman of the Advisory Board

GREETINGS FROM THE FINNISH GOVERNMENT

Distinguished participants of
the Bioeconomy Forum,

It is a real pleasure for me to greet you on behalf of the Finnish Government. For Finland and the Finnish people, bioeconomy is an important source of wellbeing and a cornerstone of our economy. The link between the bioeconomy and the circular economy is close, because bioeconomy products are mainly recyclable.

The forest sector is the most important sector of the bioeconomy in Finland. Finnish forestry is based on the sustainable use and management of forests. We have more than half a million private forest owners, whose different values, objectives and work in forests give a concrete boost to the bioeconomy.

In addition to forests, the food system plays a key role in building a sustainable society. In the future, a transparent, responsible and sustainable food system will take better account of the wellbeing of the environment, human health and the economic viability of activities. We are facing a transition aiming at a food system that is resource-friendly, nutrient and energy self-sufficient, carbon neutral and based on circular economy.

Other growing sectors of the bioeconomy include wood-based construction, bioeconomy services, blue bioeconomy and renewable energy production.

Bioeconomy offers ways to reduce dependence on fossil resources, prevent depletion of ecosystems, promote economic growth and create new jobs that follow the principles of sustainable development. Many things happen naturally in forests and fields at the same time. They bind carbon and their products replace fossil raw materials. At the same time, care will be taken to ensure biodiversity and recreational values.



We are now updating our national bioeconomy strategy. The importance of this work has increased further. It emphasises even more than before the resilience of society and the economy, in other words, the ability to recover and to prepare for emergencies.

The promotion of research and product development is especially important. With the economy falling into recession, we must be able to further develop new products and services for the market. New products and services based on the bioeconomy and circular economy, together with a diverse market, are key to competitiveness.

Bioeconomy is a global trend that is being made locally. The main strengths of the bioeconomy vary from one region to another. This is the key strength and significance of the bioeconomy and also important when we rebuild the economy and society after the coronavirus epidemic.

Jari Leppä

Minister of Agriculture and Forestry
Government of Finland

OULU REGION

- TOWARDS a SUSTAINABLE FUTURE

In crisis there are always possibilities. In these recent exceptional months the importance of surrounding nature has been emphasised. People are part of nature and sustainability should always be the first priority. 'We don't own the land, we just borrow it from the next generations.' Latest innovations and knowledge combined to long-term investments are key to successful future and fair transition.

Here in Oulu Region we are luckily near the rich nature. Northern Ostrobothnia stretches across the whole of Finland from east to west - nature showing its diversity from Rukatunturi in Kuusamo via forest and swamp rich areas to the river valley in Kalajoki down to the shores of the Baltic Sea.

The bioeconomy forms a significant part of Oulu Region business and the lifestyle. Production and processing of renewable natural resources into energy, food, and wood-products accounts for almost 20% of the private sector's turnover in the area. Including tourism, recreational use and ecosystem services with their intangible benefits the role of bioeconomy is even more important.

Our forests growth is faster than is logged, thanks to the successful forestry. It is noteworthy that Oulu Region has the greatest sustainable logging opportunities in Finland. I can proudly mention that we are the number one province in the wood construction industry. Pudasjärvi shows an example of public wood construction throughout Finland.

Bioeconomy has enabled vitality in the entire province and will also do that in the future. The sector has new promising investments and research activities in the area. The majority of new industry investment projects in Finland are in northern Finland. The investment costs of the projects are over 7 billion euros and the employment effects are significant. With the realisation of these investments Northern Finland will have large companies that can boost smaller ones.

In our region the new investments will increase demand for wood. These include NordFuel project in Haapavesi where Kanteleen Voima is planning



a plant for processing bioethanol from wood biomass, and Oulun Energia investments to the new multi-fuel power plant, as well Stora Enso's production change investments in Oulu.

Peat has played an important role in our energy production for decades. As energy-intensive and supply-security raw material it has offered a domestic alternative for fossil-based fuels. Now the new regulations towards the climate neutrality will force the energy sector to find new solutions. We are facing the transition from peat to more sustainable energy but as fair also getting funding to this. Already today our region is 100% self-sufficient in the production of electricity, and 80% of this is based on renewable energy. In our region 42% of the windpower in Finland is produced that makes us leading in this sector.

The regulations will bring restrictions but also new markets for more sustainable products. There is a growing demand for wood in the construction, interior design and living markets, including wood houses. There is also wood-based textile fibres, energy and other added value products.

In transitions there are always possibilities that should be exploited.

The World Bioeconomy Forum is a great platform to meet, discuss and learn from each other. I wish you all successful conference and new partnerships, even the Forum is virtually this year!

Pauli Harju
Region Mayor
Council of Oulu Region

INFO on PRACTICALITIES

EVENT STREAM

You can access the event via the personal stream link sent to you by email. Please note that the link is personal!

CHAT CHANNEL

During the event you can use the Chat channel feature on the stream platform to send questions and other comments during the sessions. You can also participate in real time polls during the sessions.

MOBILE APP

In the EventApp you can find more information about the speakers, sessions, other participants, materials, and the theme of the Circular Bioeconomy. You will also get the chance to network with other attendees before, during, and after the Event!

You can download the Event App at <https://get.eventos.fi/> or use the QR codes below.



After the download is complete, please use the **PIN code 6803 and your Email address** to log in to the World BioEconomy Forum 2020 EventApp!

NETWORKING

At the heart of the World BioEconomy Forum is networking with other attendees, and this time it will be done online. You have the possibility to exchange messages with other attendees inside the EventApp and on the streaming platform. If you find a common ground in your chat, you can continue discussion face-to-face by having a one-on-one video meeting with the other attendee during the Event. Video meetings can be proposed, rescheduled, and accepted between the attendees in the virtual platform.

Activate the Networking feature on the Event App by filling in your First name, Last name and Email address and order the activation link.

Once active, you can set up your profile, meeting availability and interests. You can book meetings with other participants that have activated their networking feature, starting with 9 AM EEST till 10 PM EEST on 10th September 2020. Based on the selected preferences, the eMatchmaking will sort the participants list and bring forward the most relevant attendees for you.

FEEDBACK AND EVENT REVIEW

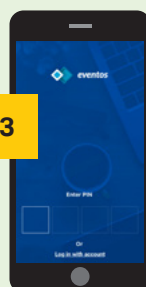
We welcome you to give feedback on the presentations and panels, select your favourites, as well as rate the event at the end by using the App.

1 Download the Eventos Mobile App



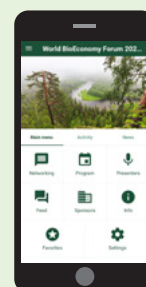
2 Use the PIN code and your email address to log into the App

PIN code 6803



3 Enjoy the Event App!

- Activate the networking feature
- Set up your profile and interests
- Send messages
- Organize meetings
- Check the event program and other details



Program

11:00 AM – 11:45 PM
EEST

Welcome and introduction to the program
Greetings from the studio team in Ruka!
Greetings, interviews
Opening words *Jukka Kantola and Mark Rushton*

11:45 PM – 1:15 PM
EEST



Regulators and Climate Change

Interval Spotlight 1
Back to our studio in Ruka

1:30 PM – 3:20 PM
EEST



Global Leaders and Financial World

Interval Spotlight 2
Back to our studio in Ruka

3:30 PM - 5:10 PM
EEST



Bioproducts around us

Interval Spotlight 3
Back to our studio in Ruka

5:20 PM – 6:30 PM
EEST



Looking to the Future

6:30 PM – 7:15 PM
EEST

Award selection and closing remarks
Declaration 2020
Announcing World BioEconomy Forum 2021 dates and the location



Regulators and Climate Change

Session 1 11:45 PM - 1:15 PM EEST / Co-hosted by FSC



Keynote speech

Mariya Gabriel, Commissioner for Innovation, Research, Culture, Education, European Commission

Greetings from the Finnish government

Jari Leppä, Minister of Agriculture and Forestry, Finnish Government

Session moderated by Dr Christian Patermann

National Bioeconomy Strategy of Germany

Andrea Noske, Head of Division "Sustainable Economy; Bio-Economy",
German Federal Ministry of Education and Research

Climate change and the bioeconomy

Petteri Taalas, Secretary General, World Meteorological Organization (WMO)

Global forest resources – FRA2020

Mette Wilkie, Director of the Forestry Policy and Resources Division,
Food and Agriculture Organization of the United Nations (FAO)

A sustainable forest-based bioeconomy

Giovanni De Santi, Director, Directorate for Sustainable Resources, European Commission's Joint
Research Centre

SPEAKERS / MODERATORS



Mariya Gabriel



Jari Leppä



*Dr Christian
Patermann*



Andrea Noske



Petteri Taalas



Mette Wilkie



Giovanni De Santi

INTERVIEWS

**Mariya Gabriel,
Commissioner for Innovation,
Research, Culture, Education,
European Commission**

What are your thoughts on the importance of a sound circular bioeconomy strategy at government level in relation to climate change?

Let me start by underlining that Horizon Europe, the European R&I programme for 2021–2027 has the bioeconomy as one of the key areas, together with related domains addressing Food, Natural Resources, Agriculture and Environment.

If European and National strategies are aligned, setting out the strategic orientations for the implementation of a sustainable and circular bioeconomy, these policy areas will have a real impact. From a European perspective, a sustainable and circular bioeconomy is key to achieving the Green Deal's ambition of making Europe the first climate-neutral continent by 2050.

I think we need to put emphasis on innovation to foster virtuous approaches in such relevant areas of our economy. Many domains will certainly benefit from bio-inspired innovations, the use of new materials and products with low ecological footprint preventing and mitigating pollution.

The bioeconomy is already a reality, with an annual turnover of 2.1 trillion euro, as well as providing 18.3 million jobs in Europe. The bioeconomy is the biological driver of the circular economy as it brings the renewability aspect into the cycle, puts carbon 'back in the loop', and brings additional dimensions to the circular economy discussion, moving beyond waste. The bioeconomy should offer solutions for decarbonising the economy through fossil-free materials, resource efficient circular processes and sustainable energy. It can also play a pivotal role in transforming our primary production and food systems towards sustainability and reducing pressures on ecosystems to a level that respects planetary boundaries. Sound governance, infrastructure, finance and capacity building are critical to ensuring that the necessary resources and actors are mobilised and policies aligned.

Bioeconomy strategies have already been developed in 11 European countries and more than 50 EU regions, for example under the BIOEAST initiative. However, a vision and a strategy are not enough. The long-term success of the circular and sustainable bioeconomy will also depend on the ideas from all stakeholders, including from this Forum.

Do you see the circular bioeconomy as having an important role in the post Covid-19 world?

This pandemic has opened our eyes to two striking realities. We realise that we need more investment to deepen our understanding about human-environment

interactions. We acknowledge the potentially devastating repercussions of climate change and ecosystem disturbances. They can hit very hard our societies and economies.

A sustainable bioeconomy is in itself a paradigm shift that should favour a just transition for people in the economy of the future.

It will be critical in the recovery period, and in fact, an opportunity for smart investments in bioeconomy that can improve the position of many workers in the rural and agricultural sectors.

This pandemic, with all of its tragic consequences, is offering us an opportunity. We can repeat what we did before and invest our money into the "old" economy, or we can be smart and combine this recovery with the necessary move to a green economy.

A sustainable circular bioeconomy is a concrete tool within our reach, and it can be deployed at all levels: from our own households to industrial proportions. Research and innovation from these past years is now offering us hope to recover our economies, maintain the equilibrium between humans and the planet and enhance our resilience.

The Horizon Europe programme will launch a Mission addressing directly the innovation we need for caring of our soil. The objectives are very ambitious to ensure 75% of soils are healthy by 2030 for healthy food, people, nature and climate. The Mission actions will benefit Member States if they grasp the opportunity to align their recovery plans to increase the impact across Europe.

Innovation will help on tackling the four issues raised by the "Sustainable Agriculture, Forestry and Fisheries in the Bioeconomy – A Challenge for Europe" (Standing Committee on Agricultural Research (SCAR) Expert Group) that will impact the implementation of the bioeconomy so that it plays a pivotal role of post-covid Europe. Firstly, research should help develop a framework aimed at fostering the bioeconomy with policies that are coherent, create a level playing field, avoid overexploitation and foster a diversity of practices.

Secondly, there is need for innovative new business models adapted to circularity that require new ways of designing and manufacturing products, new relationships between economic actors, and new ways of recycling components and waste.

Thirdly, research on the socio-cultural dimensions stressing that knowledge on impacts and mechanisms of social change should co-evolve with technology stressing also full stakeholder involvement. Science may change food production and consumption patterns, which may break established routines and create resistance, which need to be better understood. Approaches have legal implications that need to be addressed by research. Education will play an essential role to tackle the final problem related to the need to push circularity down to the consumer level, which is where the largest share of waste is found with no end-of-life valorisation of food.

The World Bioeconomy Forum has a diverse range of high-level speakers and panelists, what are you hoping to achieve by taking part in the event, and what are your hopes for the future of the circular bioeconomy?

Research and innovation are key to understand, monitor and tackle direct and indirect drivers for a sustainable, green economy, caring for our land, soil, water and air, seas and oceans.

I have big hopes that Europe can engage all relevant stakeholders to make a difference in the coming decade. We have all the instruments and world-leading knowledge to find solutions to reach our objectives.

I hope that this forum will enable a better access for many countries with different economic conditions to the practical solutions that research and innovation can bring to their transition challenges. This is an occasion for the EU to share our vision of a sustainable and circular bioeconomy with our partners in the rest of the world, and also an occasion to establish channels for knowledge exchange.

I also hope that my participation in the Forum will allow the participants to learn about the excellent research that is being funded by H2020. For instance, the RESIDUE2HEAT project has developed a novel FPBO-fuelled boiler with confirmed positive impacts on environment of FPBO heating compared to fossil alternatives, especially when it comes to reducing greenhouse gas emissions (80-94%). The LIBBIO projects offers a new crop to provide bio-based products from poorest soils. These amazing

results can have a positive impact not only on Europe but on the whole world if they are properly known.

This includes knowledge on innovative technologies, and also an understanding of the economic, social and environmental footprints of products and materials imported into the EU from other countries and vice versa. It allows us to deepen our global knowledge and monitoring of a sustainable bioeconomy that protects our natural resources, restores ecosystems, enhances biodiversity and ultimately contributes to a clean planet for all.

A circular and sustainable bioeconomy must deliver concrete benefits to all of our citizens, e.g. through circular food waste collection or new and more sustainable packaging materials which are produced with sustainably sourced biomass.

This will be crucial to develop more favourable conditions for bioeconomy growth in regions which have untapped potential, such as Central and Eastern Europe. I hope that we can inspire the younger generations through education initiatives to become our sustainable bioeconomy drivers for the future.

Other actions, such as the Farm to Fork Strategy, Biodiversity Strategy for 2030, Industrial Strategy and Circular Economy Action Plan and associated investments will allow the European Union to set a new direction for global public goods such as ecosystems services, and to disseminating knowledge, technologies and solutions to stimulate transformation and systemic change.



**Andrea Noske, Head of Division
"Sustainable Economy; Bio-Economy",
German Federal Ministry of Education and
Research**

What are your thoughts on the importance of a sound circular bioeconomy strategy at government level in relation to climate change?

In spite of what is happening with Covid-19, climate change is the defining crisis of our time. Huge efforts are needed to combat global warming and to adapt to and mitigate the changes that we are already seeing. I am convinced that the bioeconomy plays a crucial role in this and that it offers pivotal solutions. National circular bioeconomy strategies have to be in line with the relevant supranational policies and strategies – such as the Paris Agreement and the 2030 Agenda of the United Nations. In the new German National Bioeconomy Strategy sustainability and climate protection are defined as the two main issues of this century. Only through specification in national strategies can the overarching goals then be transferred to action plans that take the individual situations in different countries into account. Ultimately, we need sound bioeconomy strategies but also corresponding action in other policy fields.

Do you see the circular bioeconomy as having an important role in the post Covid-19 world?

The last months have been dominated by the Coronavirus crisis. This global crisis illustrates the vulnerabilities of our current economic system, for example, outsourcing of important production steps, the vulnerabilities associated with global dependencies on feedstock, food and goods. More resilient, sustainable and regional food systems and value chains are a way to address these issues. Again, a circular bioeconomy can contribute solutions here: on the one hand to supplying society and the economy with food, materials and goods, and on the other hand to creating jobs and safeguarding economic viability and long-term sustainability. Apart from food and resource security, other hallmarks of the bioeconomy – preservation of the environment and biodiversity, climate protection – are becoming ever more important. I think that regional and circular value chains in the bioeconomy are effective instruments with which to strengthen the stability of the economic system as a whole, and in a sustainable way.

The World Bioeconomy Forum has a diverse range of high-level speakers and panelists, what are you hoping to achieve by taking part in the event, and what are your hopes for the future of the circular bioeconomy?

Meeting experts and professionals from different fields and countries is always inspiring. We have made enormous progress in generating new and novel products and processes in the different areas of the bioeconomy. The German National Bioeconomy Strategy emphasises the need to take the next step: to bring together all of

Petteri Taalas, Secretary General, World Meteorological Organization (WMO)

As the Secretary General of the World Meteorological Organization, you are in a prime position to witness the challenges being encountered due to climate change. In your opinion, do you think that enough is being done to counteract what we are seeing happening to our weather systems, and what are your thoughts on what more could be being done?

So far the implementation of the pledges of the Paris Agreement have been too modest to reach the Paris targets of 2.0–1.5 °C. The pledges made by the countries would lead to a warming of the order of 3 °C, and so far only a small fraction of those pledges have been fulfilled. If no progress is made, there is a risk for 3–5 °C warming by the end of this century. If all of the known fossil fuel resources will be burned, our planet would warm by 8 °C by the end of next century. The largest impacts of climate change are felt through changes in precipitation patterns, sea level rise, availability of water in rivers and through tropical storms.

Both economic and technical means to reach the Paris targets exist. The fossil fuels should be replaced with nuclear, hydro and renewable energy. Transport systems should be converted to be more based on electricity,

Mette Wilkie, Director of the Forestry Policy and Resources Division, Food and Agriculture Organization of the United Nations (FAO)

What are your thoughts on the importance of a sound circular bioeconomy strategy at government level in relation to climate change?

In order to limit the average global warming to 1.5°C, we need to halve emissions by 2030 and reach zero net emissions by 2050. This requires an urgent move to a circular economy based on sustainable production

these policies, sectors and disciplines in order to develop holistic approaches. This means taking into account all of the relevant factors and then finding the best possible way forward. Conferences like the World Bioeconomy Forum, and not to forget the Global Bioeconomy Summit in November, are wonderful opportunities to launch such activities. I am convinced these events will provide ways for us to exchange many good ideas and best practices. My personal belief, and my hope is that by sharing new ideas and best practices, we will help to further develop and implement a circular bioeconomy worldwide.

public and light transportation as well as biofuels. Wood materials should be used at the expense of concrete and steel. Heat pump means could be used for heating and cooling purposes. Deforestation should be stopped and deforested areas should be forested again. Vegetarian diets would allow more rational use of agricultural land.

Do you see the circular bioeconomy concept as playing a role in the mitigation of climate change?

A set of means in energy, transport, industry, accommodation, forestry and agriculture is needed for successful climate mitigation. The Bioeconomy offers means for construction, use of biomaterials, slight increase of carbon sink and for food economy.

Can you summarize some of the key points will you be making at the World BioEconomy Forum in Ruka?

I will summarize the observation and climate modelling based facts on past and future climate change, talk about emissions and how to mitigate climate change. The relative importance of various factors is sometimes lost. WMO favours fact based communication. Sometimes media and small amount of scientists are exaggerating the climate facts, which has led to anxiety and even panic especially among young people.

and consumption patterns and on a more efficient and effective use of our natural resources. This is what a sound circular bioeconomy is all about. Currently agriculture, forestry and other types of land use account for almost a quarter of human greenhouse gas emissions globally. At the same time natural land processes absorb carbon dioxide equivalent to almost a third of the emissions from fossil fuels and industry. So the way in which we manage our natural resources is absolutely critical in relation to climate change. A national circular bioeconomy strategy can help define pathways towards more sustainable and efficient uses of natural resources and the harnessing of nature-based solutions to climate change.

Do you see the circular bioeconomy as having an important role in the post COVID-19 world?

Absolutely. We currently stand at a crossroads where the traditional development pathways are being questioned and ideas abound on how to “build back better” in the aftermaths of COVID-19 and the economic recession that is upon us. This is a great opportunity to promote innovative solutions that jointly tackle the three main crises that we are facing: the climate crisis, the biodiversity loss and the economic crisis. The development and implementation of sustainable, circular bioeconomy strategies is one such solution.

FAO has recently developed a comprehensive and holistic COVID-19 Response and Recovery Programme designed to proactively and sustainably address the socio-economic impacts of the pandemic, while at the same time tackling climate change; addressing the issue of biodiversity loss and strengthening the long-term resilience of communities and agriculture and food systems. The key areas of action identified are fully aligned with the principles underlying a circular bioeconomy.

The World Bioeconomy Forum has a diverse range of high-level speakers and panelists, what are you hoping to achieve by taking part in the event, and what are your hopes for the future of the circular bioeconomy?

This will be the first time I participate in the World Bioeconomy Forum, so I hope to learn a lot by listening to the presentations and opinions by the impressive list of high-level speakers.

I’m also convinced that FAO has a key role to play in sharing information and knowledge on the practical application of the bioeconomy given that the Global Forum for Food and Agriculture held in Berlin 2015, tasked FAO with coordinating the international work on the bioeconomy going forward.

My hopes for the circular bioeconomy are that we have reached a tipping point where there is enough awareness and support to transform our current national and global economies into sustainable, circular bioeconomies and that this will make a significant contribution to the achievement of the 17 SDGs and to “building back better” in response to COVID-19 and the economic recession following in its wake.

The infographic features a central text "We all need chemistry" surrounded by seven circular icons: a sun for Climate, a globe with a plug for Energy, two leaves for Natural resources, a water drop for Clean water, a wheat stalk for Nutriion, a heart for Health and well-being, and a bus for Traffic. The text "KEMIAN TEOLLISUUS" is prominently displayed at the bottom, followed by the organization's name and contact information.

KEMIAN TEOLLISUUS
Kemianteollisuus ry
Eteläranta 10, PL 4, 00131 Helsinki
kemianteollisuus.fi / @kemianteollisuu



AFRY

ÅF PÖYRY

New Brand. We are AFRY.

ÅF and Pöyry come together as AFRY. We are 17 000 brave and devoted experts within the fields of infrastructure, industry and energy, transforming industries and creating sustainable value for clients and societies.

We have strong global presence across continents, delivering projects in more than 100 countries.

Making Future



Global Leaders and Financial World

Session 2 1:30 PM - 3:20 PM EEST / Hosted by Valmet



CEO discussion –

Interview by Teresa Presas, Senior Advisor, World BioEconomy Forum

Walter Schalka, CEO, Suzano

Annica Bresky, CEO, Stora Enso

Pasi Laine, CEO, Valmet

Dr. Lars Börger, Vice President Renewable Polymers & Chemicals,
Brand Owner Management, Neste Germany GmbH

Global economy review

Andrea Boltho, Emeritus Fellow, Magdalen College, Oxford University

Sustainable financing panel

Moderated by Michael Nettersheim, European Circular Bioeconomy Fund

Felipe Ortega Schlingmann, Deputy Advisor, Agribusiness and
Rural Development Division, European Investment Bank (EIB)

Joško Bobanović, Partner at Sofinnova Partners,
manager of the Sofinnova Industrial Biotechnology Fund

Courtney Lowrance, Head of EMEA Sustainability &
Corporate Transitions Group (SCT) Citi

David Brand, CEO New Forests Asset Management PTY Limited

SPEAKERS / MODERATORS



Teresa Presas



Walter Schalka



Annica Bresky



Pasi Laine



*Dr.
Lars Börger*



*Andrea
Boltho*



*Michael
Nettersheim*



*Felipe Ortega
Schlingmann*



*Joško
Bobanović*



*Courtney
Lowrance*



*David
Brand*

INTERVIEWS

Teresa Presas, Senior Advisor, World BioEconomy Forum

As you are moderating the CEO panel at the World Bioeconomy Forum in Ruka this year, what are your thoughts on how companies can succeed when it comes to their approach to the circular bioeconomy?

The 18th Century French chemist Lavoisier said that in nature nothing is lost, nothing is created, everything is transformed. This is a strong foundation for the circular bioeconomy, and, in our times, it makes a lot of sense. Companies should adopt and adapt this principle. The circular bioeconomy cuts across different areas, sectors, services, policies, knowledge, geographies. Therefore one key factor to move forward is collaboration across the value chains. Companies must come out of their silos.

Innovation is another key factor for success. Through innovation companies discover new uses for forest products and services. But those new uses must give consumers the experience they expect. For that, companies have to communicate, they should join forces

with others to educate and communicate the benefits the circular bioeconomy brings to society.

The circular bioeconomy aligns with the challenges society is facing today, be it climate change, resource scarcity, energy security, globalisation, migration, among others. But if this has to be communicated, companies should join forces and put across a narrative that resonates with stakeholders. After all, I am profoundly convinced that it is industry and business that will together bring the concrete solutions to address these challenges. They will be the main actor.

If they want to succeed, companies must bring the circular bioeconomy mainstream, or at least integrate the concept in their business model

Last but not least, is the business case, securing competitiveness and profitability.

What are the challenges companies are facing when it comes to operating in the circular bioeconomy, and what can they do to better engage?

I think many of the answers to this question are embedded in the comments above.

Companies will be operating – some already are – in a somehow new context, new conditions. Everything includes the word “new”: new business models, new value chains, new cross-sector interconnections, new technologies, new consumer needs. This is a major challenge that companies have to recognise and address. So the first challenge comes from inside. Most sectors are known for being rather conservative and coming out of “business as usual” is not in their DNA.

In operating in the circular bioeconomy, companies face much the same challenges they are used to: financing innovation and scaling up, supply and cost of raw materials, availability, reliability and costs of new technologies, ensuring sustainability and meeting environmental rules, education and training of skilled employees, support from governments.

Leadership is crucial. Companies must work with governments to ensure a reliable and long-term regulatory framework and investment framework to incentivise the transition from traditional fossil-based sectors to champions of the circular bioeconomy.



Walter Schalka, CEO, Suzano

How important is the circular bioeconomy to your business and the industries you serve, and do you have a specific, inclusive, bioeconomy strategy for the future for the company you lead?

Suzano’s traditional business already has many attributes that support the circular bioeconomy. Our forestry practices rely entirely on a plantation model, essentially tree farming, where the trees are replanted every 6-7 years. Our traditional line of products includes market pulp, paper, fluff and tissue products. Beyond that, we have developed a “biostrategy” which aims to diversify our business through the greater use of our forest resources to make new materials that will displace fossil-carbon-based products. These include lignin and cellulose derivatives, which will be incorporated in formulations dominated today by synthetic materials.

Over the coming years, we will transform into a more diverse business where biomaterials will be contributing to the well-being of society. At Suzano we want to be protagonists in this journey, following one of our key drivers: “it’s only good for us if it’s good for the world”.

Do you see the circular bioeconomy as having an important role in the post Covid-19 world?

COVID-19 has had a radical effect on our lives in a very short time. We have changed the way we live and we work in order to save lives. As we emerge from COVID-19, there will be a legacy created which will be a demonstration of energy and capacity to change.

The event at Ruka is now in its third year, what do you think attending the forum has to offer stakeholders from the business community engaged the circular bioeconomy?

In the previous editions, the World Bioeconomy Forum brought together people from a variety of business sectors, many different areas of activity, from across continents. This is a fertile ground for a major factor to move forward the circular bioeconomy; cooperation. The event at Ruka offers just that; paths for cooperation, learning from experiences, cross fertilisation, the birth of new ideas, discovering opportunities, opening up minds, stimulating consensus in principles and values for this new area of business, generating mutual support, tearing down barriers among competing sectors. Those are returns for business and industry stakeholders attending the forum in Ruka.

The circular bioeconomy is developing, but still below the necessary pace. To accelerate, as it needs to do, it will require society to adapt and to change our habits and, perhaps, to accept a less comfortable life for the greater good. I think that in the post COVID-19 world people will be more receptive to these challenges. Suzano wants to be part of this process, accelerating the development and production of products which will support the circular bioeconomy.

The World Bioeconomy Forum has a diverse range of high-level speakers and panelists, what are you hoping to achieve by taking part in the event, and what are your hopes for the future of the circular bioeconomy?

Diversity is key to the value and success of the World Bioeconomy Forum. No one has a monopoly on good ideas – no single company, institute, government or NGO has that. I am looking forward to learning from others and to finding and forming partnerships with entities through which we can move further and faster by working together.

My hope is that the circular bioeconomy will begin to dominate the global discourse in the way that COVID-19 has done over these past few months. The climate crisis is as critical to the human race as a pandemic – the pace of the crisis is very different, the impacts are more long term, but the danger is real and palpable. The circular bioeconomy is one of the most important ways in which we can slow and eventually reverse the climate crisis.

Annica Bresky, CEO, Stora Enso

How important is the circular bioeconomy to your business and the industries you serve, and do you have a specific, inclusive, bioeconomy strategy for the future for the company you lead?

Stora Enso is in a unique position to lead a transition from a linear to a circular economy.

The world needs materials that are both renewable, re-usable, recyclable and fossil free – a circular bioeconomy – to combat global warming and to minimise waste.

We operate at the core of the circular bioeconomy. For us the overall business strategy is our bioeconomy strategy. It is not a separate process, but the essence of our business.

Do you see the circular bioeconomy as having an important role in the post Covid-19 world?

Indeed. As the global economy recovers, the world has an opportunity to speed up the transition away from fossil energy and material dependency. Here, our renewable materials are a key solution as they store carbon and replace fossil-based materials.



Andrea Boltho, Emeritus Fellow, Magdalen College, Oxford University

What are the major issues you see going on in the global economy as we hit 2020? And what should we be looking out for over the next decade?

2020 will be a year of slow growth across the world, even if Middle East tensions do not escalate. The United States and China are both decelerating, Europe is stuck in semi-stagnation and a number of emerging markets are struggling. Increased protectionist pressures would worsen this picture further. Some relaxation in Europe's austere fiscal policies would improve it.

The next decade is unlikely to see a return to much more rapid growth. The labour force is shrinking and ageing in the advanced countries and in China, while productivity growth remains sluggish. Emerging markets will do better, but the relatively sluggish American, European and Chinese economies will affect them negatively. Prospects would improve for everyone if the world were to move back to freer trade and more international cooperation.

What are your thoughts on the impact of climate related issues when it comes to the global economy?

So far the impact has been limited – e.g. slow changes in energy-mix, the (paradoxical) decommissioning of some nuclear plants, a pick up in the production of electrical

A direct impact from the coronavirus outbreak is the increased awareness about personal hygiene, food safety and safety of packaging and materials. Also here, renewable materials is instrumental as they are naturally suited to protect products in a safe, hygienic and sustainable way.

The World Bioeconomy Forum has a diverse range of high-level speakers and panellists, what are you hoping to achieve by taking part in the event, and what are your hopes for the future of the circular bioeconomy?

I look forward to sharing my experiences of how Stora Enso contributes to a circular bioeconomy. I also expect to be inspired from other sectors and companies work in this field.

In the future circular bioeconomy, there are many opportunities, for instance, the next generation of textiles, packaging materials, chemicals and wood construction to name a few.

To realize all the opportunities, it is instrumental that there is clarity from policy makers in the Nordics and the EU on the importance of the circular bioeconomy. Here I hope policy makers will step forward even further than today. We are ready to deliver.

vehicles, etc. None of these have had significant macroeconomic effects. Expect further slow movement in the same direction. The incentives for policy-makers to take action are weak: beneficial effects are slow to come through while resistance from affected groups (miners, oil companies, polluting industries, etc.) is fierce. In addition, governments may legitimately argue that, in the absence of binding international agreements, action by any (small or medium-sized) country in isolation is ineffective. Public opinion is moving in the right direction and "green" parties may well join governments, at least in Europe. But even greater efforts at curbing emissions are unlikely to have more than a small impact on GDP growth.

What are your impressions on the bioeconomy as a whole? Do you see it becoming a force in the global economy as we go forward?

Most people would agree that stimulating the bioeconomy is an important step in the right direction. Having less wasteful, less polluting and more sustainable production is obviously desirable. It would also stimulate technological progress and create jobs, possibly on a net basis. At the global level, however, effects are unlikely to be dramatic.

Courtney Lowrance,
Head of EMEA Sustainability & Corporate
Transitions Group (SCT), Citibank

What is the appetite of the financial community to invest in new ventures taking place in the circular bioeconomy, particularly in the wake of Covid-19 and its impact on the global financial situation?

While COVID-19 has disrupted the global economy, recent studies indicate that investor interest in ESG themes, including the circular bioeconomy, remains strong and has even increased. This is supported by the renewed commitment from the European Commission to a Green Deal, providing the financial community more certainty that future policy and regulation will support the circular bioeconomy. Additionally, the pandemic reminds us that financial markets are not isolated from environmental and social challenges. As we move into the recovery phase of the pandemic, the most attractive businesses will be those that play a role in transitioning the economy to a more circular, sustainable, and resource efficient one.

In a nutshell, what type of enterprises are you looking at when it comes to circular bioeconomy investment opportunities?

The businesses that are most exciting are those that have the potential to scale through growth in new markets. For example, the demand for bio-plastics is expected to grow



David Brand,
CEO, New Forests Asset Management

What is the appetite of the financial community to invest in new ventures taking place in the circular bioeconomy, particularly in the wake of Covid-19 and its impact on the global financial situation?

New Forests manages institutional investment in the forestry sector across Australia, New Zealand, South East Asia and the United States. We see a rising opportunity for the forestry sector to provide the feedstock for a whole range of new engineered wood construction materials, fiber-based packaging, cellulosic fabrics, bio-based materials, energy and fuels. We believe that there is a need to expand sustainably managed productive forestry plantations to increase the scale of consistent feedstocks for a rising bioeconomy-based demand. The Covid-19 has severely impacted many sectors of the economy, but in these economic disruptions, transitions are often accelerated. Climate change mitigation will emerge as a central driver of the forestry sector going forward, both via the concept of natural climate solutions and in the rising opportunities from the circular bioeconomy.

as governments enact policies to curb pollution and GHG emissions. Innovative construction and building materials are particularly promising because of the recycling potential and ability to retain value. Finally, enterprises which can demonstrate efficient, synergistic resource use with strong cooperation across the value chain will have a competitive advantage.

The World Bioeconomy Forum has a diverse range of high-level speakers and panellists, what are you hoping to achieve by taking part in the event, and what are your hopes for the future of the circular bioeconomy?

The circular bioeconomy offers solutions to multiple environmental and social challenges, providing an opportunity to reorient consumption and production patterns within the limits of the planet. Sustainable business models are key enablers of this transition, and the Forum provides a perfect platform to discuss innovation in products, processes, and partnerships across the value chain.

In a nutshell, what type of enterprises are you looking at when it comes to circular bioeconomy investment opportunities?

In our investment programs the forestry assets are the primary objective. However, we will invest in processing and infrastructure where it will support the returns from the forestry assets. We currently invest in conventional sawmilling operations, but are actively developing cross laminated timber and glue laminated timber facilities associated with our forestry assets. We are also exploring a composite decking product using plastic waste and sawmill waste as the feedstock. As a feedstock supplier we are also willing to enter into long term contracts with new innovative businesses whether that be for timber, wood fiber or woody biomass. As we expand our business in emerging markets, processing will become increasingly important in the investment strategy, to ensure we can deliver reliable investment returns. Our view is that processing hubs that can produce solid wood, wood fibre and biomass products together may well generate the best returns to the investor.

The World Bioeconomy Forum has a diverse range of high-level speakers and panellists, what are you hoping to achieve by taking part in the event, and what are your hopes for the future of the circular bioeconomy?

The shifts in building systems, materials, and energy are happening very quickly. We are looking to understand the status of various technologies, explore partnerships as a feedstock supplier, and potentially co-invest in processing technologies that can support our investment programs. The World Bioeconomy Forum is a great opportunity to learn about government policy, business and investment strategies, and the technologies that will underpin the circular bio-economy transition. There are a number of CEOs from businesses that have been leading the implementation of these products and markets. There are also government and inter-governmental organizations that can bring the 'big picture' thinking to this opportunity. While it is a virtual conference this year, I hope to continue to engage going forward as the forum returns to in person meetings. My view is that for a circular bioeconomy to really take hold we may need to increase the scale of the forestry sector 4-fold by 2050, and that will take substantial effort and investment flows.





Bioproducts around us

Session 3 3:30 PM - 5:10 PM EEST / Hosted by AFRY



Evolving biomaterials

Michael Carus, Founder and Managing Director, nova-Institute

Novel biorefinery in Germany

Christian Hübsch, Director, UPM Biochemicals Lignin

Biobased value chains panel

**Moderated by research leader Ludo Diels,
Flemish Institute for Technological Research**

Niklas von Weymarn, CEO, Metsä Spring

Alois Kindler, Principal Scientist, BASF

Alex Michine, Founder and CEO, Metgen

Eddie Peace, Leader, Bioproduct Development, West Fraser

Bruno Gorrini, Principal Researcher in Bioforest, Arauco

SPEAKERS / MODERATORS



Michael Carus



Christian Hübsch



Ludo Diels



*Niklas von
Weymarn*



Alois Kindler



Alex Michine



Eddie Peace



Bruno Gorrini

INTERVIEWS

**Niklas von Weymarn,
CEO, Metsä Spring**

How well are your particular industries doing when it comes to creating new bioproducts, and what could be done to help or enhance your progress further? (for example, government policy, or private investment)

The forest industry, especially the large companies within the sector, tend to be focused on high-volume products. This, in turn, is typically very capital-intensive and thus, significant changes happen slowly. Moreover, to launch new products our industry would also need better predictability of the future business environment, typically reaching at least 10-15 years into the future. This is, however, seldom the case. My colleagues also often refer to the need of a 'level playing field', when comparing the EU, as a region for business, to other countries and regions. I believe we can improve in all these attributes. To find new products and markets, the forest industry must also broaden its conventional network. When entering, for instance, the textile market, achieving success in the entry is, in general, more likely, if the forest industry company is working on this mission together with a company from the textile market. In other words, becoming an expert of another market, "overnight", is quite unlikely, even for large and resource-strong companies.

Do you see the circular bioeconomy as having an important role in the post Covid-19 world?

The circular bioeconomy is known for some strong features. Firstly, when implementing the essence of the term (circular bioeconomy), the economic output achieved is always based on the use of truly renewable raw materials, or even biomass "waste". Secondly, a typical value chain

of the circular bioeconomy has its roots on the countryside. In other words, the circular bioeconomy creates jobs and prosperity in rural areas. This, in turn, when such value chains are on place in a certain region, improves the self-sufficiency of that region. A fourth strong feature arises from the fact that circular bioeconomy inherently aims at using the biomass as wisely as possible. For example, a so-called biorefinery typically produces one main product, but simultaneously several side-streams, which become the raw material for several other companies. These four features were societally meaningful already before the COVID-19 pandemic and I believe that the implication of such features, in a post-COVID-19 world, will be even more prominent. In fact, we should accelerate the R&D&I activities in circular bioeconomy to support the bounce-back of the societies.

The World Bioeconomy Forum has a diverse range of high-level speakers and panelists, what are you hoping to achieve by taking part in the event, and what are your hopes for the future of the circular bioeconomy?

The World Bioeconomy Forum has become a leading meeting place for various stakeholders within the bioeconomy. By attending the event I expect to take home some fresh ideas and new ways of thinking. I am also hoping to make new acquaintances with key persons and organisations. Especially this year, with the remote event, I hope to see persons attending who would typically not travel to physical events. All viewpoints are important. In regard to the future of the circular bioeconomy, I wish to see continued strong support by the public stakeholders, especially for R&D&I activities, and consequently, a full utilisation of the potential that the circular bioeconomy embody. Naturally, remembering to withhold a good balance between the three pillars of sustainability.



Dr. Alois Kindler,
Senior Principal Scientist
- Renewable Resources, BASF

How well are your particular industries doing when it comes to creating new bioproducts, and what could be done to help or enhance your progress further? (for example, government policy, or private investment)

The chemical industry has been offering a variety of biobased and/or biodegradable products for many years. The circularity paradigm offers the opportunity to maintain existing assets and value chains by diligently selecting the right "circular production strategies". For example, BASF is replacing a certain amount of fossil raw materials with renewable feedstock, which is partially derived from waste, as input in chemical processes. This amount can then be allocated to the respective sales products using the biomass balance approach. This structural transformation is not for free, however. Progress will be sped up, if all partners in the value chain help carrying these additional costs.

Do you see the circular bioeconomy as having an important role in the post Covid-19 world?

Yes, definitively. Circularity of product streams will play a key role in reducing both societal carbon footprint and environmental load on water, air and soil quality.

The World Bioeconomy Forum has a diverse range of high-level speakers and panelists, what are you hoping to achieve by taking part in the event, and what are your hopes for the future of the circular bioeconomy?

My hope is to exchange ideas and information to jointly improve understanding of the complex circular bioeconomy topic. Only by clear identification of key topics, for example defining the "optimal" biobased feedstock in terms of availability, cost and transformation efficiency, both sustainable and economically sound circular product flows can be developed.

Every action matters

POPilmasto

- Bio- and Circular Economy
- Energy
- Transport
- Agriculture
- Land Use
- Forestry
- Collaboration

POSSIBILITIES - MITIGATION - ADAPTATION - PLANNING



Steps towards climate neutrality in North Ostrobothnia

www.pohjois-pohjanmaa.fi/popilmasto

 @popilmasto

 popilmasto



Leverage from
the EU
2014-2020

 **POHJOIS-POHJANMAA**
Council of Oulu Region

 Centre for Economic Development,
Transport and the Environment

Christian Hübsch,
Director, UPM Biochemicals Lignin

How well are your particular industries doing when it comes to creating new bioproducts, and what could be done to help or enhance your progress further? (for example, government policy, or private investment)

The forest industry, including UPM, seems to be well underway regarding the creation of new bioproducts. Based on the industry's core competence in sourcing and processing sustainably produced biomass, various companies have established their own programs towards biofuels, biochemicals, and biomaterials. Given the size of the leading players, bioproduct-related initiatives are typically scalable, which will help in the long run in making significant contributions to the bioeconomy.

Covid-19 has shown that fast and far-reaching regulatory measures are possible. The EU should be at the forefront of a global initiative on climate actions. External costs on climate and the environment need to be internalized, a CO2-tax being one possible instrument. Politics needs to steer transformation towards circularity and sufficiency, by incentivizing / mandating the concept of 'reduce, reuse, recycle, and replace'. Renewable carbon is the key to achieving the EU-target of climate-neutrality by 2050.

Do you see the circular bioeconomy as having an important role in the post Covid-19 world?

The Covid-19 crisis has shown the vulnerability of today's global supply chains. The bioeconomy concept is targeting shorter and often regional supply chains, which are more resilient towards potential disruptions. Additional benefits are short transportation distances, reduced lead-time, reduction in inventory, and overall significant reduction of the carbon footprint.

Secondly, Covid-19 has sensitized consumers regarding the importance of healthy and sustainable products. It will be crucial to intensify stakeholder communication and to allow end-consumers to easily differentiate between sustainable and non-sustainable products.

Lastly, the pandemic has shown that fast and extensive regulatory measures are possible, if required. In order to achieve the 2050 EU climate-neutrality target it will be of utmost importance to quickly establish a legislative framework that will allow the phasing out of fossil carbon from today's value chains.

As the bioeconomy can provide solutions to many challenges, it has the potential to emerge from the crisis even stronger than before.

The World Bioeconomy Forum has a diverse range of high-level speakers and panelists, what are you hoping to achieve by taking part in the event, and what are your hopes for the future of the circular bioeconomy?

This year's World Bioeconomy Forum has a remarkable line-up of contributors, from politics, industry, and academia. I am more than confident that there will be plenty of opportunities for getting new insights and inspiration. With more and more renewable solutions becoming available to the market, and new technologies maturing, my hope is that all stakeholders, but especially politics take bold steps in further developing the circular bioeconomy. We should not forget that ultimately consumers will be the key driver. Keeping consumers informed about the benefits of the circular bioeconomy will be critical.



UKI ARKKITEHDIT



Looking to the Future

Session 4 5:20 PM - 6:30 PM EEST / Co-Hosted by UNESCO

 Suomen UNESCO-toimikunta
Finlands UNESCO-kommission
Finnish National Commission for UNESCO



Future of Bioeconomy

Jim Philp, Policy Analyst, Directorate for Science,
Technology and Innovation, OECD

Education panel

Moderated by Professor Mark Rudnicki, Michigan Technological University

Ahmed Fahmi, Chief of the Section of Innovation and
Capacity Building, UNESCO

Jyrki Kangas, Professor of Forest Bioeconomy,
Head of the School of Forest Sciences, University of Eastern Finland

Carol Ibe, PhD, Post Doctoral Research Associate,
Department of Plant Sciences, University of Cambridge, UK

Ricardo Abramovay, Professor in the Department of Economics,
University of São Paulo, Brazil

Takanori Nagano, Associate Professor,
Department of Agricultural Engineering and Socio-Economics, Kobe University

SPEAKERS / MODERATORS



Jim Philp



Mark Rudnicki



Ahmed Fahmi



Jyrki Kangas



Carol Ibe



*Ricardo
Abramovay*



*Takanori
Nagano*

INTERVIEWS

***Jyrki Kangas, Professor of Bioeconomy,
Head of the School of Forest Sciences,
University of Eastern Finland***

How important is the subject of education to the future of the circular bioeconomy, and what can be done to make sure that young, bright people are attracted to the sector?

Of course, this is of utmost importance to the sector. It is one of the key success factors for the circular bioeconomy (as it is for any other sector, too). However, the question of how to attract young, bright people to the sector is not an easy one. We must get them convinced that via the bioeconomy they can give their input for enhancing sustainable development and, thus, for saving mankind. We can advertise and promote our education opportunities, but even more important is what, and which kinds of prospects, we provide for people studying and working in the circular bioeconomy sector. It is important that people who already are in the sector find their studies and jobs interesting and meaningful, and that they let others – especially potential bioeconomy student candidates – know that.

Do you see the circular bioeconomy as having an important role in the post Covid-19 world?

The circular bioeconomy can remarkably contribute to recovering the economy, in particular in rural areas. The



***Takanori Nagano, Associate Professor,
Department of Agricultural Engineering and
Socio-Economics, Kobe University***

How important is the subject of education to the future of the circular bioeconomy, and what can be done to make sure that young, bright people are attracted to the sector?

A circular bioeconomy is about establishing balanced links among different industrial domains in the humanosphere and ecosystem. Therefore the education system needs to be really transdisciplinary. Science and management need to be studied at the same time. A circular bioeconomy is also about creating better livelihood in the rural areas. It would certainly attract young people if we can show opportunities it creates, because it is about sustainability, landscape design and ultimately freedom.

Do you see the circular bioeconomy as having an important role in the post Covid-19 world?

bioeconomy has an important role in providing opportunities to sustainable economic growth and to increased wellbeing. When promoting the economic recovery, it is important to direct efforts to investments in sustainable use of renewable natural resources instead of still increasing the use of fossil resources. The bioeconomy helps in making the change towards more sustainable future now (this a momentum for that), including climate warming mitigation.

The World Bioeconomy Forum has a diverse range of high-level speakers and panelists, what are you hoping to achieve by taking part in the event, and what are your hopes for the future of the circular bioeconomy?

When thinking about just the Forum and my role there, as I currently come from the education sector, I personally expect fruitful conversations and useful conclusions on the role of education in the circular bioeconomy and on how to further develop education in the sector. I hope that people see how our future is in young people coming to study the bioeconomy at different levels from vocational to academic level (including doctoral studies), and that the Forum highlights this point of view. More generally, I hope that the Forum increases the awareness of the bioeconomy providing solutions, not problems, to the challenges of sustainable development and, for example, to achieving the UN's Sustainable Development Goals.

Covid-19 made us aware about physical boundaries, the tradeoff between economy and environment and the risk of living in a densely populated area. The circular bioeconomy certainly has an important role because it creates opportunities for people to live in rural areas where people have more freedom in such situations. I live in the rural area and work in the city and have experienced this drastic contrast of stress.

The World Bioeconomy Forum has a diverse range of high-level speakers and panelists, what are you hoping to achieve by taking part in the event, and what are your hopes for the future of the circular bioeconomy?

This is my first time participating. I want to experience how broad the discussion would extend to. In Japan there are many promising sectors for the future of the circular bioeconomy however, these sectors still lack views on how they could create links with others. I want to convey the latest discussion in the forum to those sectors. We really need similar events to be held in Japan to broaden our views so I am looking forward to learning a lot.

AWARD SESSION

Hosted by VTT



SINCE THE WORLD BIOECONOMY FORUM was founded three years ago we have been immersed in the issues of the circular bioeconomy and we have decided that individuals and companies out there who are doing exceptional work in the sector deserve recognition.

We will be presenting three awards in this session to individuals and companies in three categories:

The Bioproduct of the Year, The Bioperson of the Year and **The Bio Act of the year.**



The Bioproduct of the Year

Most remarkable bio-product during 2020 related to circular bio-economy and climate change. The jury will regard novelty and innovation level of the bioproduct, which can be in commercial use or have a clear path to commercialisation.

The Bioperson of the Year

Most remarkable person during 2020 related to circular bio-economy and climate change. The jury will regard recognised impact of person for the circular bio-economy and climate change.

The Bio Act of the year

Most remarkable contribution during 2020 related to circular bio-economy and climate change. The jury will regard contributions made by organisations, groups or other entities to facilitate circular bio-economy or mitigate climate change.





United Nations
Educational, Scientific and
Cultural Organization



SESSION SPONSORS



AWARD SPONSOR



EVENT SPONSORS



~~~~~  
**Partners**



~~~~~  
PRODUCTION Team



Move forward with a reliable partner in the changing energy markets



Resource efficiency, flexibility and clean solutions are the key for success in changing energy markets. Based on our decades-long experience, we have the know-how to deliver the best solutions based on biomass, waste or on a mixture of different fuels.

Valmet's proven automation solutions help you to optimize your energy production and our network of service professionals is ready to recharge your competitiveness both on-site and remotely.

Explore valmet.com/energy



media PARTNERS

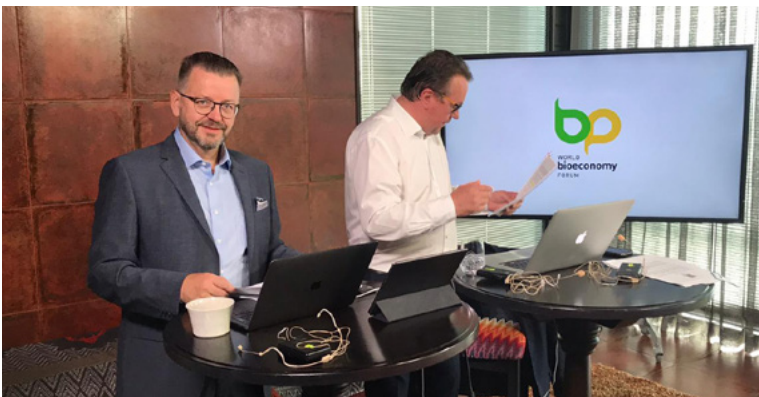


VTT

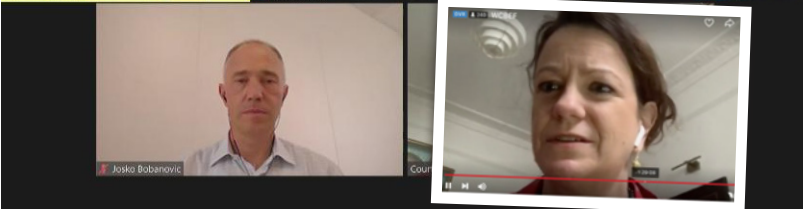
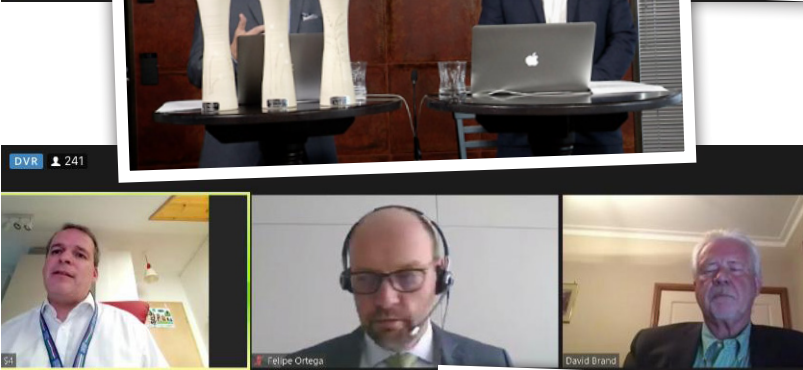
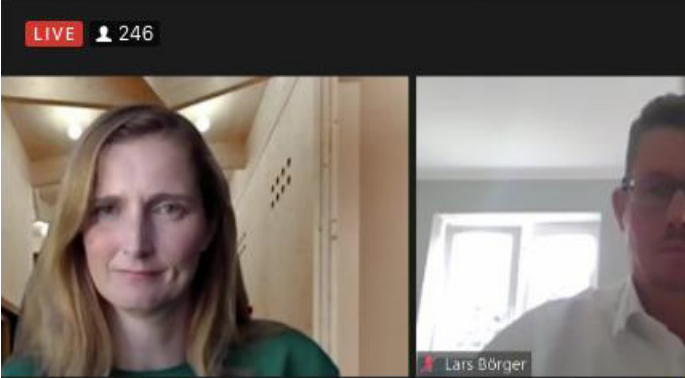
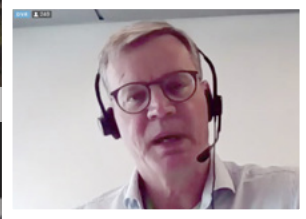
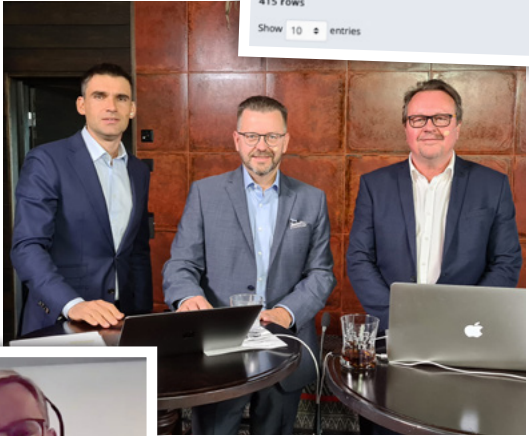


P O N S S E

SNAPSHOTS FROM EVENT 2020



Participants
[Download report](#) | Timezone: Europe/Helsinki
 415 rows
 Show 10 entries





WORLD
bioeconomy
FORUM

www.wcbef.com