



POWER4BIO
REGIONS FOR
BIOECONOMY



The role of Bioenergy TWG in the BIOEAST Initiative

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TWG leader, H2020 BIOEASTsUP project



FOR BOOSTING THE REGIONAL BIOECONOMY IN CEEC

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Coordinators of the TWG

Croatian Ministry of Agriculture (MPS)

- Tugomir Majdak, General Secretary (Tugomir.Majdak@mps.hr)
- Andreja Martonja Hitrec, Head of Service for Harmonization with EU Strategies and International Obligations (Andreja.Martonja@mps.hr)
- Doris Komerički, NCP BIOEAST (doris.fejer@mps.hr)
- Role: overall coordination and support

Energy Institute Hrvoje Požar (EIHP)

- Biljana Kulišić, lead expert (bkulisic@eihp.hr)
- Matko Perović, secretary (mperovic@eihp.hr)
- Role: expert support

Time line

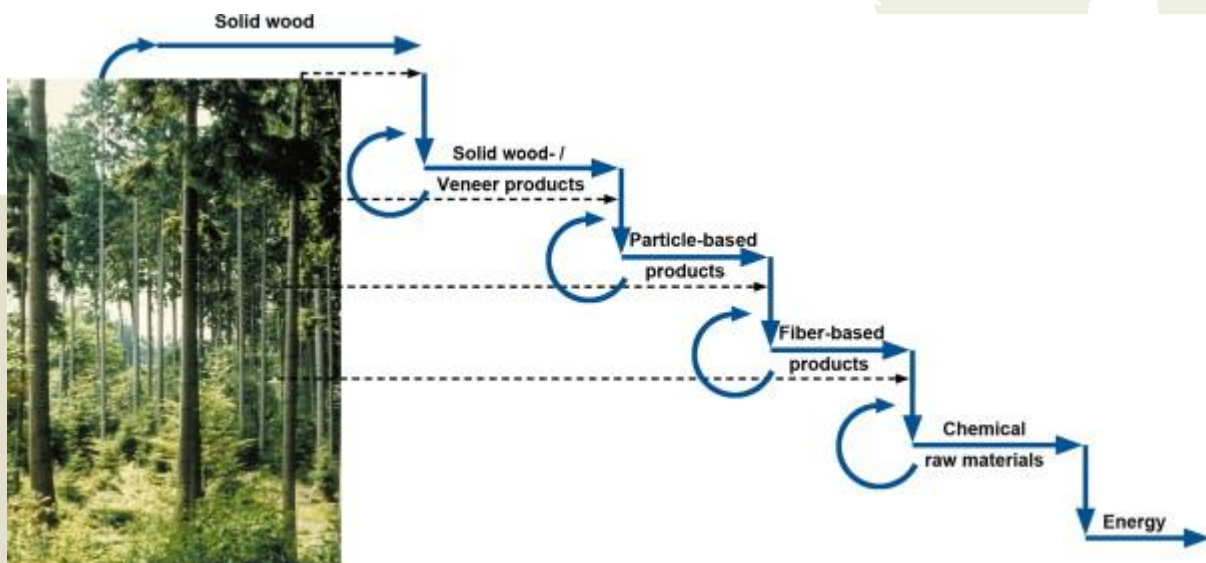
- HR has expressed its ambition to lead the TWG in February 2019
 - Ministry of Agriculture (member) + Energy Institute Hrvoje Požar (expertise)
- By 10/2019:
 - 7/11 countries expressed their interest: BG, CZ, EE, HR, HU, LT, LV
 - 9/11 countries send their delegates to the kick-off: CZ, EE, HR, HU, RO, SI, SK, LT, LV
- **Kick-off 10/10/2019 Sopron, HU**
- Structure, 2 on-line meetings, ToR and action plant draft
- all 11 MS have delegated a member or representative



Bioenergy in bioeconomy

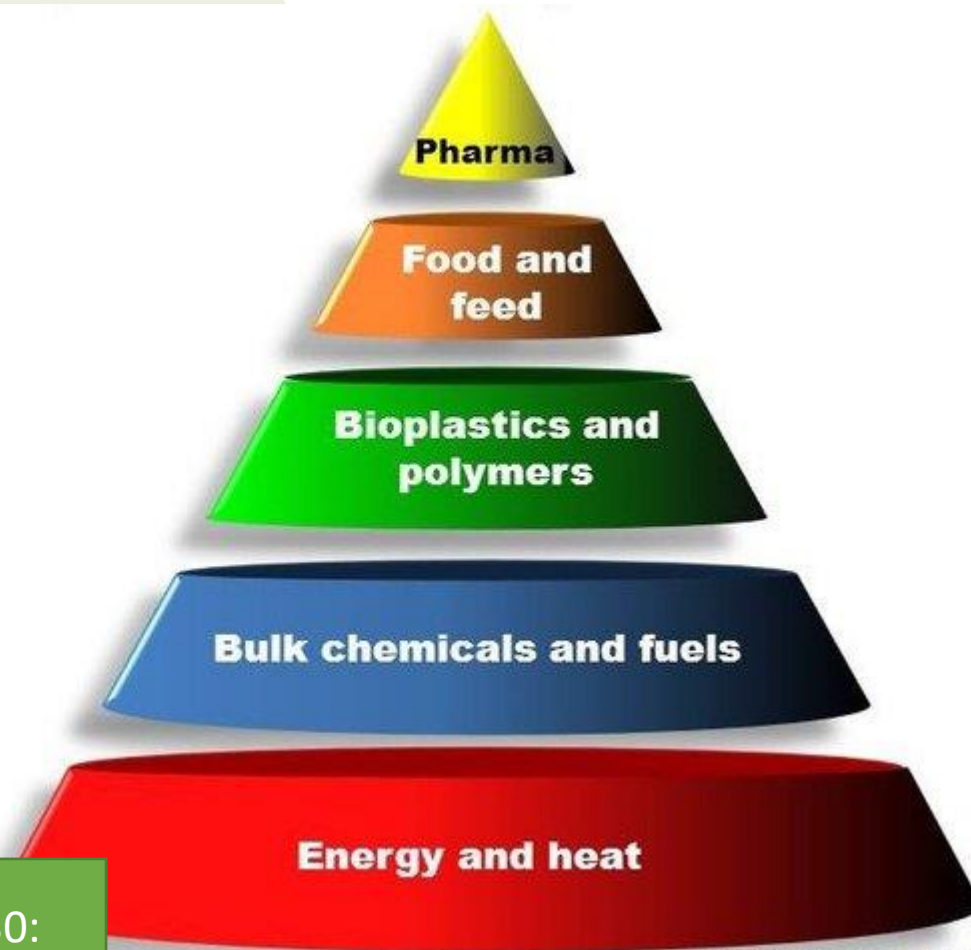
- Cascading use of biomass: end of

High value



MULTI-stage cascading use

*OTHERS MAY HAVE USES AS RAW MATERIALS AND ENERGY FOR THE PRODUCTION OF ALL KINDS OF GOODS

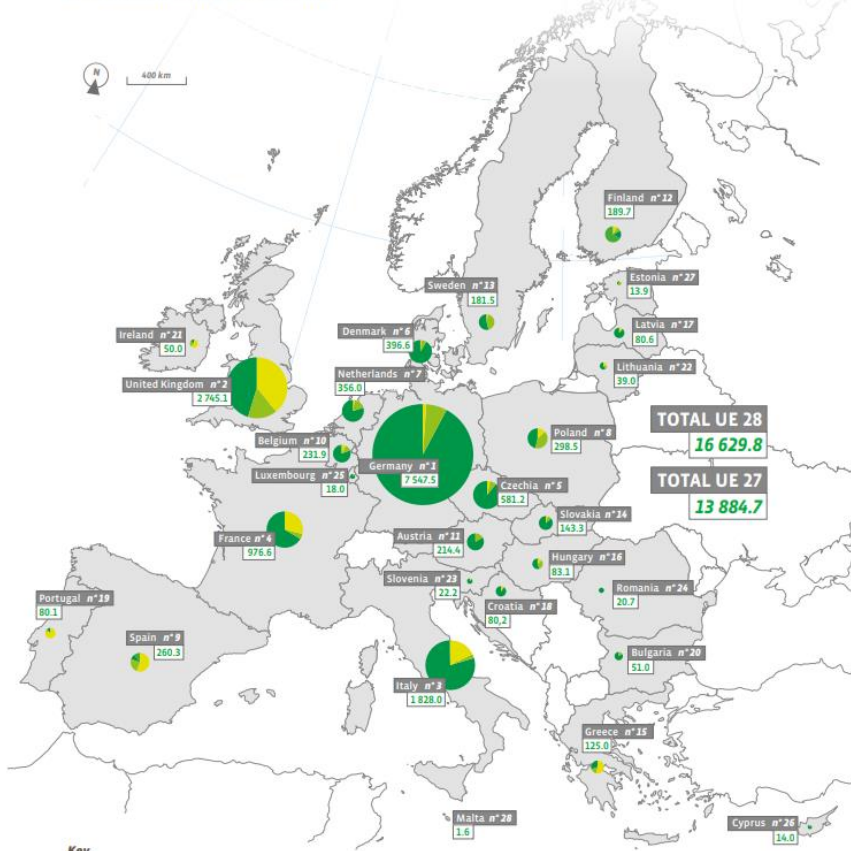


The only mandated use of biomass by 2030:
biofuels in transport!

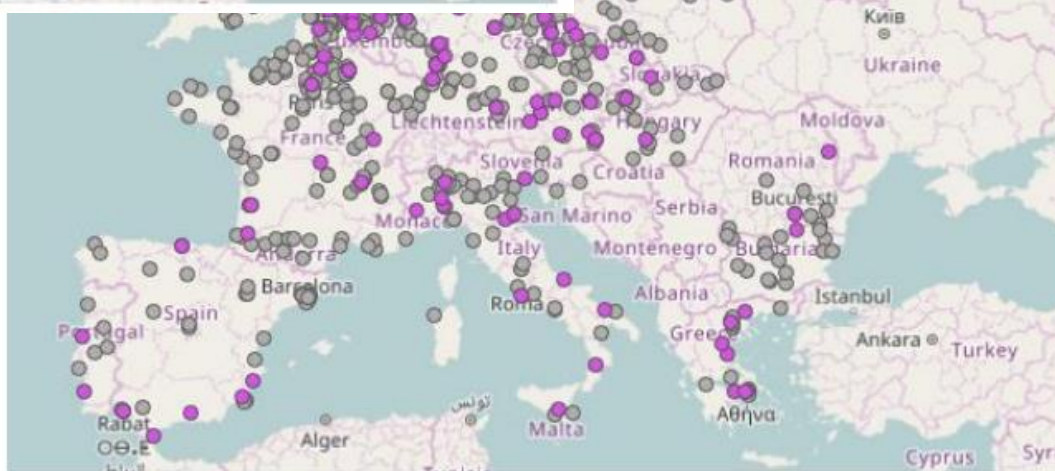
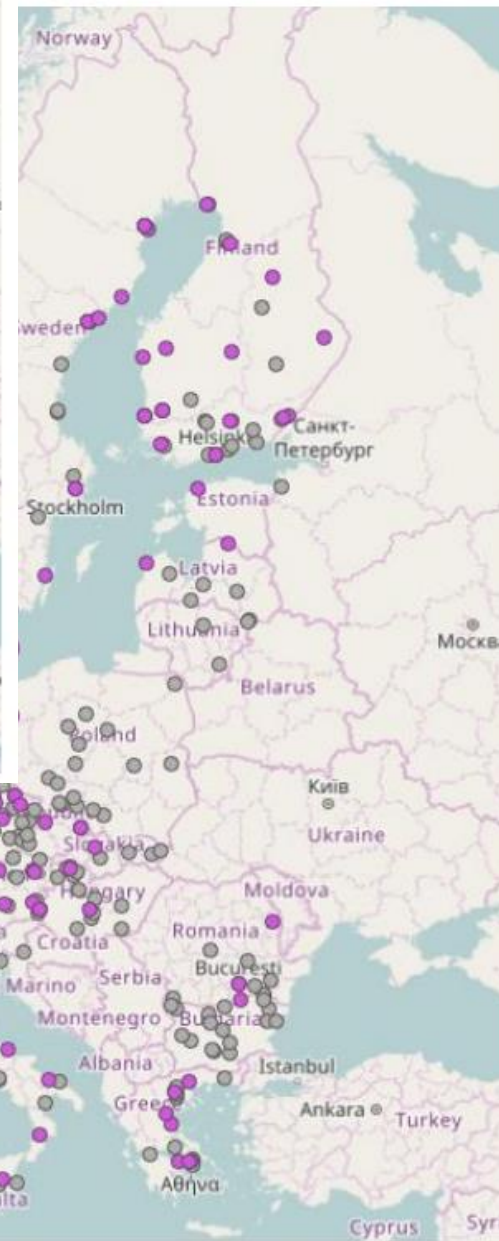
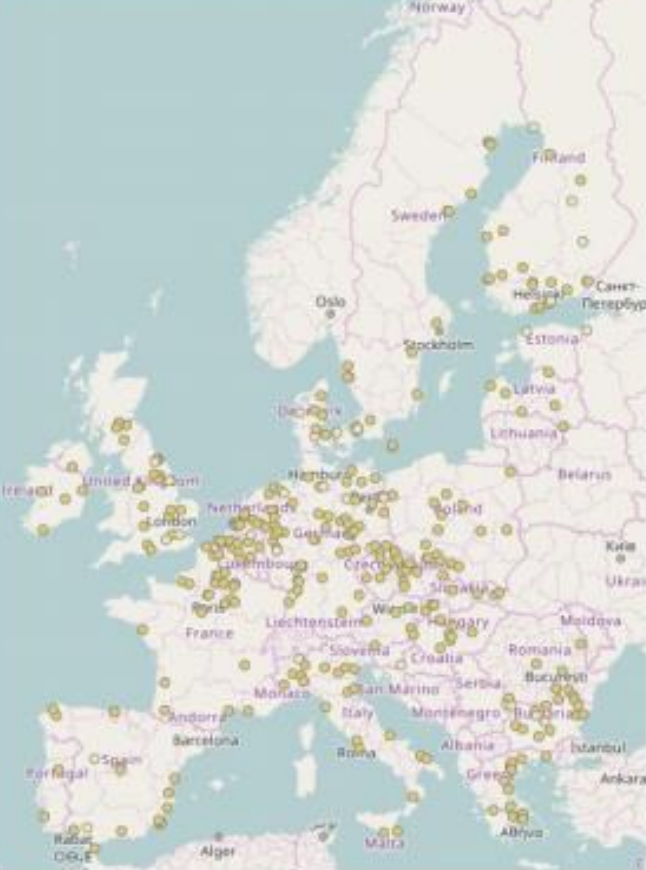
Source: Peter Westermann

Bioenergy in BIOEAST macro region

Primary energy production from biogas in the European Union countries at the end of 2019* (in ktoe), with the respective shares of each sub-sector.



ls, liquid biofuels and composites and fibr

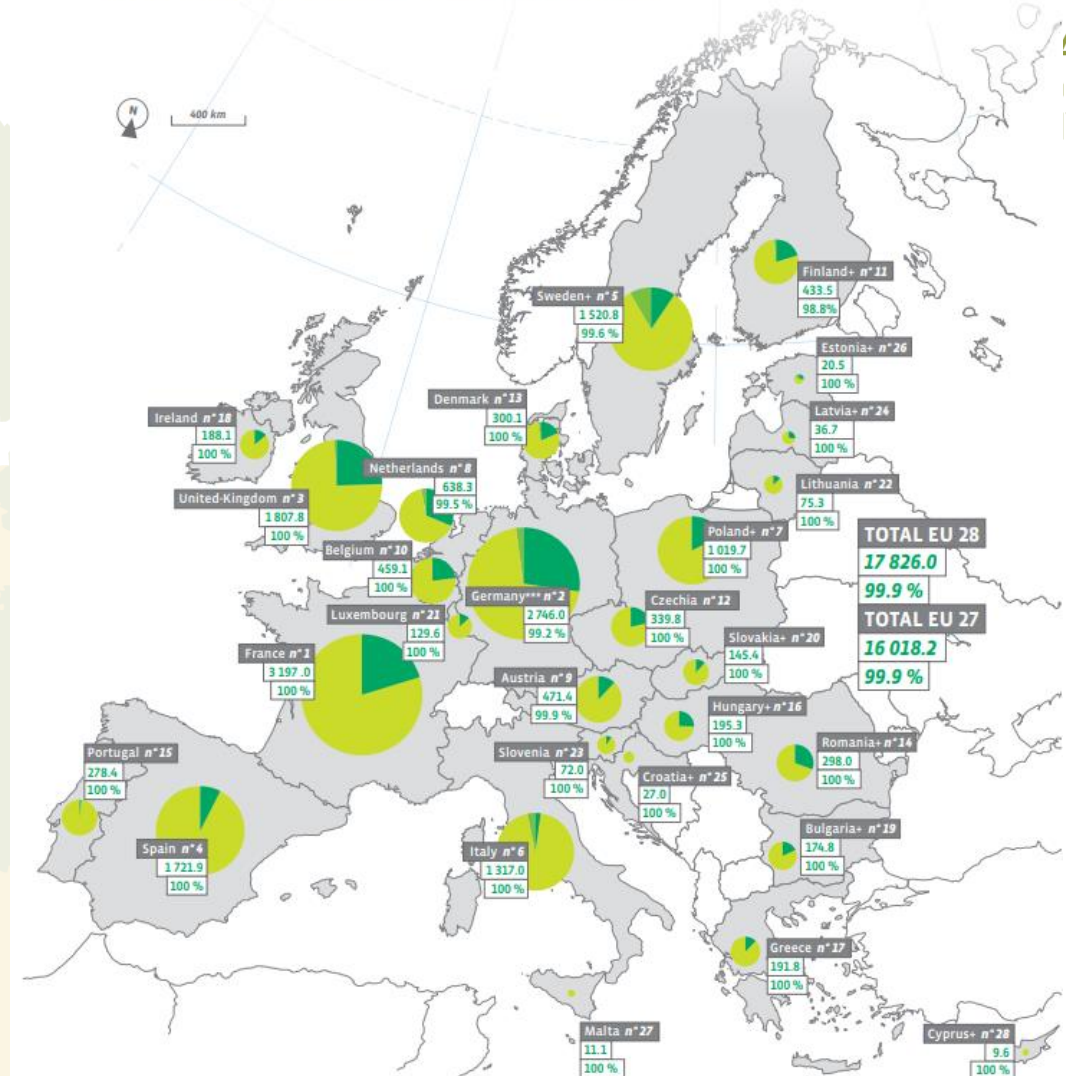


Integrated biorefineries (bio-based products and energy)



Non-integrated biorefineries

Biofuels consumption for transport in the European Union in 2019* (in ktoe)



Perspective of bioenergy in bioeconomy:



- Bioelectricity is needed to reduce the cost of grid balancing due to the intermittent renewable electricity sources.
- Bioheat with locally available, low value biomass is the least cost option to reduce fossil fuel dependency.
- Biofuels for transport are the at-hand part of the solution to reduce the GHG emissions from transport sector.
- Modern bioenergy is mostly not competitive with the alternatives
- Already existing bioenergy plants provide the most affordable base renewable energy – keep them operating!

(...)

+ Lessons learned...

Lessons learned from biomass use for bioenergy:

1. If it is b
2. A bio-b
3. Biomas
4. Biomas
- ...

inable or circular
network

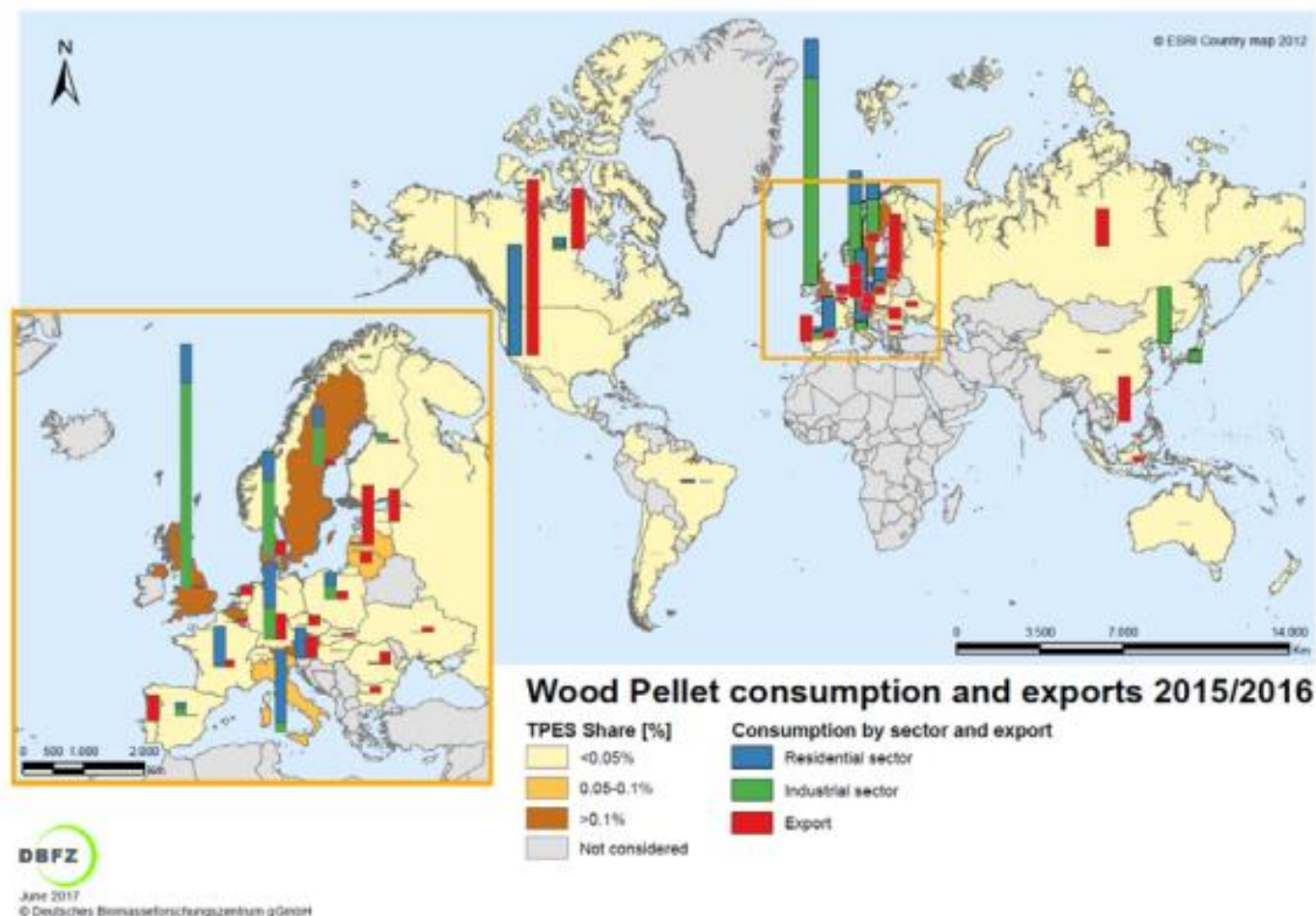


Figure 0.2 - Countries with relevant wood pellet consumption and/or export in 2015

Transition pathways of bioenergy within the bioeconomy



- Embed existing bioenergy players into bioeconomy by:
 - producing new value-added materials from bioenergy by-products (waste energy, ash, digestate, CO2, sulphur)
 - create industrial symbiosis (e.g. freshwater pike farming & digestate; food storage/cooling with CHP plants)
- Raise awareness on the local bioheat solutions in agro-industry: short supply chains
- Developing biomass logistic/collection/storage spots: bio-hubs
- Biorefineries for advanced liquid biofuels for transport
- Aligning bioenergy with the EU Green Deal policy areas and initiatives (e.g. Clean Energy, Methane Strategy, defossilisation in agriculture and food sector...)

Terms of reference

Develop bioenergy business models that serve decarbonisation and increase competitiveness of BioEast bioeconomy stakeholders.

- Embed the existing and future bioenergy players into bioeconomy by:
 - finding new value added materials from bioenergy by-products (waste energy, ash, digestate, CO₂, sulphur)
 - create industrial symbiosis (e.g. freshwater pike farming & digestate, detergent & ash, CO₂ and food preservation...)
- Identify research topics that are distinctive for BioEast macro-region
- Coordinate with Ministries and BioEast Initiative
- Apply for research funds on specific topics to *deliver knowledge-based, evidence-based concerted policy on bioenergy within bioeconomy*

Thank you for your attention!



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