



**BOOSTING RURAL BIOECONOMY
NETWORKS FOLLOWING
MULTI-ACTOR APPROACHES**

**BRANCHES HANKKEEN
LOPPUSEMINAARI**

29.11.2023

Parhaita biotalouden käytänteitä Euroopasta

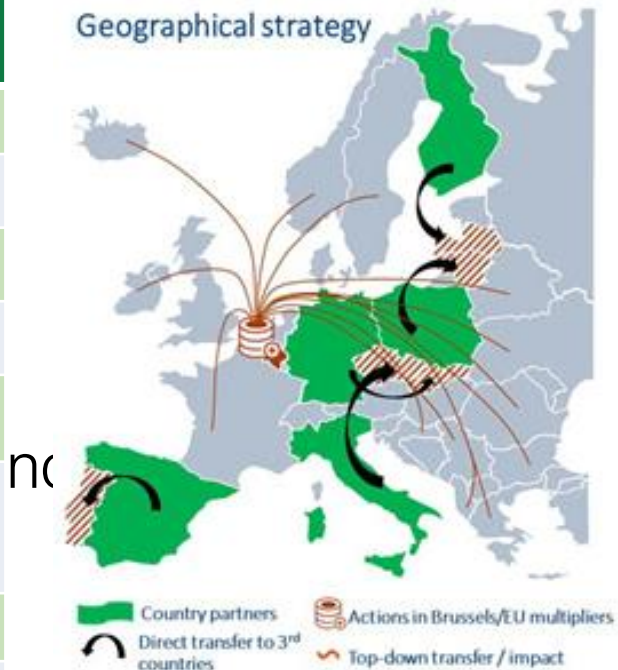
*Branches hankkeen koordinaattori
Tutkimuspäällikkö Johanna Routa, Luke*



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101000375

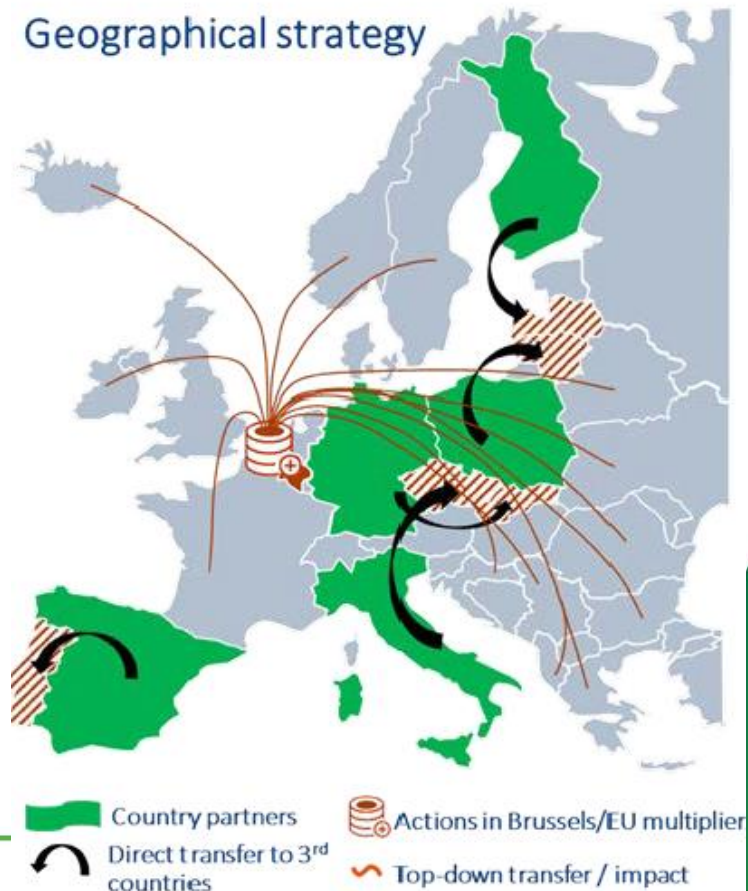


	Participant organisation name	Country
1	LUONNONVARAKESKUS (Luke)	FI
2	CONSIGLIO NAZIONALE DELLE RICERCHE (CNR IBE) <i>The Institute of BioEconomy of the National Research Council</i>	IT
3	TEKNOLOGIAN TUTKIMUSKESKUS VTT OY (VTT) <i>VTT Technical Research Centre of Finland Ltd.</i>	FI
4	UNIwersytet WARMINSKO MAZURSKI W OLSZTYNIE (UWM) <i>University of Warmia and Mazury in Olsztyn</i>	PL
5	DBFZ DEUTSCHES BIOMASSEFORSCHUNGSZENTRUM GEMEINNUETZIGE GMBH (DBFZ) <i>German Biomass Research Centre</i>	DE
6	FUNDACION CIRCE CENTRO DE INVESTIGATION DE RECURSOS Y CONSUMOS ENERGETICOS (CIRCE) <i>Research centre for energy resources and consumption</i>	ES
7	Itabia - Italian Biomass Association	IT
8	Maa- ja metsätaloustuottajain keskusliitto (MTK) <i>The Central Union of Agricultural Producers and Forest Owners</i>	FI
9	Asociacion Espanola de valorizacion enegetica de la biomasa (AVEBIOM) <i>Spanish Bioenergy Association</i>	ES
10	Helmholtz Centre for Environmental Research (UFZ)	DE
11	Warminsko-Mazurski Osrodek Doradztwa Rolniczego z siedziba w Olsztynie (WMODR) <i>The Warmia and Mazury Agricultural Advisory Center Located in Olsztyn</i>	PL
12	BCM BioEconomy Cluster Management GMBH	DE



Yhteistyö naapurimaiden kanssa:

- Naapurimaa yhteistyö
- Contacts with Portugal, Lithuania, Latvia, Czech and Slovenia



Abstraktit:

- Yli 60 Practice Abstraktia (PA) tuotettu ja julkaistu
- Abstraktien aiheet on valittu yhteistyössä temaattisten verkostojen kanssa

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1 PRACTICE ABSTRACT

FIJUS S.R.L. - A complete pruning residue value chain for Southern Italy

Olive groves cover about 380.000 hectares in the Southern Italian Puglia region and they produce excellent olive oil, exported all across the Country and abroad. Olive trees are pruned on regular interval and the pruning of Apulian olive groves yields over 800.000 t of wood biomass per year.

KEY WORDS
energy, rural areas, waste, prunings, olive tree, circular bioeconomy, management, technological innovations, environmental benefits

COUNTRY/REGION
Italy/Apulia

AUTHORS
Matteo Monni (ITABIA), Raffaele Spinelli (CNR IBIE)

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4 PRACTICE ABSTRACT

Risupeto – a novel felling head for efficient harvesting of small diameter wood biomass both in forests and edge zones of infrastructure

Thinning of young stands improves the value of the growing stock and its durability against pests and diseases. The main problem with the utilisation of unattended stands is that small-diameter trees are expensive to harvest for energy use and, on the other hand, not all forest owners can afford to tend their sprawling stands into production condition. Tree volume governs the productivity in small tree harvesting and for each situation must identify the minimum tree volume that makes harvesting economic. Below such a size, productivity does not reach the required

Photo: Reformat Oy

KEY WORDS
Energy wood, continuous felling-bunching, logging, excavator, cutting device

COUNTRY
Finland

AUTHORS
Juha Laibila (Luke), Kari Väätäinen (Luke)

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46 PRACTICE ABSTRACT

Drones detect local variations and provide tools for agriculture

Drone technologies provide tools for improving processes in agriculture and horticulture. Drones are utilized to gain knowledge for precision farming actions, document interesting phenomenon and to get general information from the fields. Drones can contribute the farming firstly by providing relative information amount, secondly studied phenomena, and thirdly accomplished examples. Drones provide tools developed for the drone imaging data studied and converted are like any map, vegetation relative information machine learning. Additional information detected in nitrogen networks are being tens vegetation pollination plant protection. Drones will be under

KEY WORDS
Milk residues, fibres

COUNTRY
Germany

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19 PRACTICE ABSTRACT

Biogal – The green biogas plant in Boleszyn

Biogal was founded in 2012 and currently employs over 40 people. The company obtains raw materials such as manure

KEY WORDS
Energy wood, continuous felling-bunching, logging, excavator, cutting device

COUNTRY
Finland

AUTHORS
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24 PRACTICE ABSTRACT

Biochar from lignocellulosic and agriculture residues

Biochar is the solid product which, together with gas and a liquid component (Bio-oil), is obtained from the thermochemical conversion of lignocellulosic and agricultural biomass.

KEY WORDS
Rural areas, biomass, by-product, circular bioeconomy, management, practices, technological innovations, agriculture, carbon credits

COUNTRY/REGION
Italy/Tuscany

AUTHORS
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32 PRACTICE ABSTRACT

New value chains from milk residues

The company Omilux uses a new technology producing synthetic fibres, microbeads, biopolymers, and thousands of other materials that are biodegradable made of the milk protein called casein. The casein, which is the main resource of the products, is produced from raw milk that is not tradable and in accordance to legal regulations not be used as food. Although the milk is not suitable for consumption, the milk still contains valuable ingredients like casein, which offers a big potential for technical purposes. Furthermore, it is a raw material, which is inevitably accrued and thus only extend its product life cycle is used.

With over 3000 recipes, the company offers a wide range of modifications of thermoplastic elastomeric, but also properties of thermosets for different purposes. By customizable cross-linking the material leads to a good mechanical strength and chemical resistance for various technical areas

Photo: Omilux

KEY WORDS
Milk residues, fibres

COUNTRY
Germany

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60 PRACTICE ABSTRACT

Kelluu – an airship that collects extensive accurate information about forests and the environment

Kelluu is an artificial intelligence-controlled airship solution that involves very precise and continuous remote mapping and artificial intelligence-based data analysis. It is particularly well suited for extensive forest surveys, where information about forests and the terrain can be collected simultaneously with several measuring devices.

KEY WORDS
Airship, artificial intelligence, remote sensing, and is by trident cycle, for the g the

COUNTRY/REGION
Italy/Tuscany

AUTHORS
Sofia Mammelli, Matteo Monni, Raffaele Spinelli (ITABIA - CNR)

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Kansalliset verkostot

- Kansalliset temaattiset verkostot Suomessa, Puolassa, Italiassa, Espanjassa ja Saksassa on perustettu ja niissä on yhteensä 661 jäsentä

Liittymällä verkostoomme saat uusimman tiedon käyttöösi ja työpajojen sekä erilaisten tapahtumien kautta voit saada uutta virtaa kehittämiseen ja käytännön toimintaan.

Verkosto parantaa ja vahvistaa yhteyksiä käytännön toimijoiden ja tutkijoiden välillä.

VOIT LIITTYÄ VERKOSTOON TÄSTÄ

Eurooppalaiset verkostot

Branches - hankkeella on kansalliset verkostot jokaisessa hankemaassa. Voit tutustua muiden hankemaiden verkostoihin alla olevista linkeistä.



ITABIA
Italian Biomass Association



BIODIVERSITÀ SITO

OBIETTIVI

BRANCHES è un progetto del Programma EU Horizon 2020 che riunisce 12 partners di 5 Paesi diversi: Finlandia, Germania, Italia, Polonia, Spagna.



BRANCHES SI OCCUPERÀ

- Attivare e gestire 5 Reti Tematiche Nazionali per orientare le imprese del settore verso scelte sostenibili
- Selezionare e diffondere almeno 50 schede di Buone Pratiche utili al futuro della bioeconomia
- Organizzare 20 workshops per ascoltare necessità e proposte degli operatori
- Trasferire le conoscenze attraverso 5 seminari nazionali.

Red de INTERCAMBIO de prácticas innovadoras con BIOMASA

¿D?



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IntercamBIOM es una de las redes temáticas nacionales creadas por el proyecto H2020 BRANCHES

+ INFO

¿QUIERES UNIRTE A LA RED?

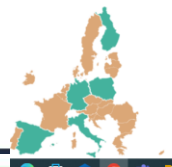
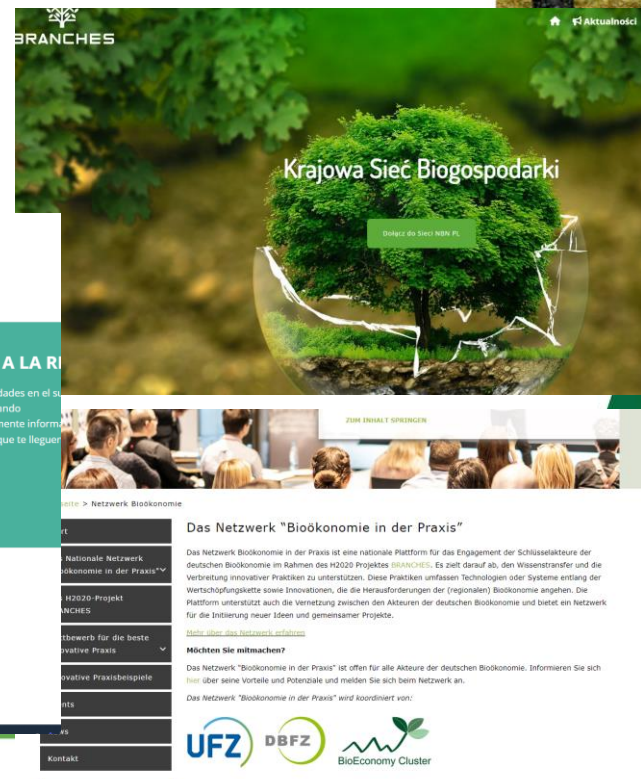
- ✓ Puedes estar al tanto de novedades en el sector y otras empresas ya están utilizando
- ✓ IntercamBIOM te envía únicamente información relevante
- ✓ Elige la forma en que quieres que te lleguen las noticias

Una red de redes Europeas

La red IntercamBIOM es una herramienta del proyecto H2020 BRANCHES.

De manera colaborativa las redes BRANCHES se están lanzando en 5 países Europeos, y se extenderán a otros nuevos 5 países.

VISITAR WEB BRANCHES

Krajowa Sieć Biogospodarki
Dział: Sieć MBN PL

Das Netzwerk "Bioökonomie in der Praxis"
Das Netzwerk "Bioökonomie in der Praxis" ist eine nationale Plattform für das Engagement der Schlüsselakteure der deutschen Bioökonomie im Rahmen des H2020 Projektes BRANCHES. Es zielt darauf ab, den Wissenstransfer und die Verbreitung innovativer Praktiken zu unterstützen. Diese Praktiken umfassen Technologien oder Systeme entlang der Wertschöpfungskette sowie Innovationen, die die Herausforderungen der (regionalen) Bioökonomie angehen. Die Plattform unterstützt auch die Vernetzung zwischen den Akteuren der deutschen Bioökonomie und bietet ein Netzwerk für die Initiierung neuer Ideen und gemeinsamer Projekte.

Möchten Sie mitmachen?
Das Netzwerk "Bioökonomie in der Praxis" ist offen für alle Akteure der deutschen Bioökonomie. Informieren Sie sich hier über seine Vorteile und Potenziale und melden Sie sich beim Netzwerk an.

Das Netzwerk "Bioökonomie in der Praxis" wird koordiniert von:

UFZ DBFZ BioEconomy Cluster



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Työpajat:

- 40 työpajaa järjestetty partnerimaissa, yhteensä 1600 osallistujaa



REDMI NOTE 12
AI QUAD CAMERA



Showcase päivät:

- 10 Showcase päivää järjestetty
- (yhteensä 2500 osallistujaa)



Videot:

- 25videota hankkeen nettisivulla, joista 10 showcase päivistä



Sosiaalinen media:

- Hankkeen twitter/x, LinkedIn ja Facebook postauksia on katsottu ja jaettu yli 100 000 kertaa!

Johanna Routa @JohannaRouta · Sep 21
In FORMEC conference #BRANCHES Project presented the selection of Practical abstracts in poster session



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Johanna Routa @JohannaRouta · Sep 21
FORMEC konferenssissa Firenzessä Hanna Bränström @LukeFinland kertoo korkean lisäarvon yhdisteiden hävikistä biomassan toimitusketjussa!



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement

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Johanna Routa · You
Research Manager, Profitable and responsible primary production at Natura...
8mo · 🌐

Tervetuloa Energiapuun-työnäytökseen Sonkajärven Mansikkavirrälle torstaina 13.4.2023 klo 11-14!
Tutustu Risupetoon, joka on uudenlainen hakkuulaite, joka on tarkoitettu karsimattoman energiapuun tehokkaaseen tuottamiseen. Lisätietoja www.branches.fi

Johanna Routa
Research Manager, Profitable and responsible primary production at Natural Resources Institute Finland (Luke) / Luonnonvarakeskus (Luke)

[View full profile](#)



KUTSU ENERGIAPUUN-TYÖNÄYTÖKSEEN

Tervetuloa tutustumaan RISUPETO -hakkuulaitteen ja haketuksen työnäytökseen Sonkajärven Mansikkavirrälle torstaina 13.4.2023 klo 11-14.

Hakkuunäytöksen ohjelmassa RISUPETO -hakkuulaite työssä & energiapuun haketuksista. Tarjolla myös nokipannukahvit ja makkarat!

Lisätietoja: www.branches.fi



👤 Kalle Karttunen and 2 others

Reactions



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📊 255 impressions

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Nora Berglund @NoraBerglund3 · Nov 16
Hieno reissu @H2020Project hankkeen seminaarissa FAO:lla Roomassa. Biotalous keskiössä, erityisesti tutkimustiedon ja innovaatioiden jalkauttaminen. Paljon on tehty 3 vuoden aikana, tule kuulemaan lisää tuotoksista @MTKry seminaariin 29.11. klo 9-11.30!
👉 lyyti.fi/reg/branches_s...



You and Kalle Karttunen

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sofia mANNELLI @SofiaMannelli · Nov 15
Replying to @JohannaRouta and @FAO
Branches final conference.



Johanna Routa @JohannaRouta · Apr 20
New seedlings are resistant for bacteria. BRANCHES @LukeFinland #Italia #CNRIE



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Johanna Routa @JohannaRouta · Apr 20
Old olive trees killed by xylilla bacteria are taken to rawmaterial of pellets and fuel to heating plants. BRANCHES Project showcase Day @LukeFinland #Italia #CNRIE



Factsheets

1. Bioenergy in a time of crisis
2. Drivers and Barriers (coming soon)



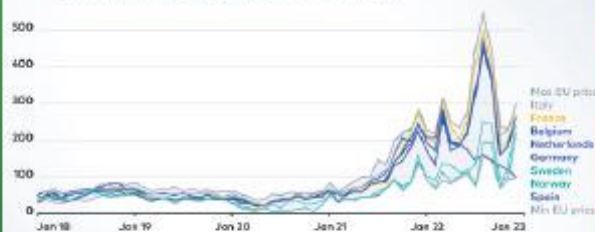
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FACTSHEET

Bioenergy in a time of crisis

In the summer 2022, the post-pandemic rebound and an escalation in the Ukrainian conflict determined a severe energy crisis. Within few months, gas and fuel prices climbed to unprecedented heights, endangering many businesses and causing general civil unrest.

Electricity prices in Europe 2018-2023 in €/MWh



The traded price of natural gas reached 130 €/MWh from 40 €/MWh, which had been its stable price for over a decade. Diesel fuel sold at 2.2 €/litre at the pump, from the original 1.5 €/litre. Energy-demanding industries took the hardest hit and many had to suspend operation. European governments considered pausing or reversing their enlightened green policies and started looking again at coal or nuclear energy. In the meantime, climate change continued to plague the planet, and especially in the poorest countries...

Even if prices have slowly returned near to their pre-crisis levels, the shock suffered by the European economy was brutal. This latest crisis highlighted the role of the bioeconomy in supporting energy independence and mitigating future shocks. That was the time when the financial and strategic benefits of local bioenergy eventually showed their worth. At the end of 2022, LUKE, CNR, ITABIA and the University of Warmia and Mazury conducted a survey among bioenergy businesses. Overall, 16 enterprises were interviewed, selected among those showcased on the BRANCHES project webpage for their exemplary bioeconomy practices. Those 18 enterprises represented Finland, Italy and Poland and covered the wood energy, straw energy and biogas sectors, as well as other non-energy value chains.



KEY WORDS

Energy crisis, biomass, bioenergy, district heating, circular bioeconomy, forest owners, wood pellet, good practices.

COUNTRY/REGION

Finland, Italy, Poland

AUTHORS

Raffaele Spinelli, Matteo Monni, Routa Johanna, Robert Prinz, Janusz Golaszewski

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Paras uusi käytäntö kilpailu:

- **Italiassa:**
 - FIUSIS, 1 MWe biomass thermoelectric plant and the related olive tree pruning supply chain (Fiusis)
- **Saksassa:**
 - The "black soldier fly" - a sustainable alternative to conventional protein sources (madebymade GmbH).
 - Agile Innovation Management for the Bioeconomy (PIC- Pi Innovation Culture GmbH)
- **Espanjassa:**
 - Self-cleaning rotary boiler for solid waste. (by Sugimat) ja
 - Solar drying and gasification of sewage sludge. (by Cederciemat)
 - Bioenergy to preserve local forests and protect visitors in a rural resort area. (By Monteholiday Ecoturismo)
- **Puolassa:**
 - Biogal - A multiproduct biogas plant (Boleszyn) (Biogal Sp. z.o.o.)
 - Acquisition and logistics of biomass from marginal land, including agricultural land overgrown with self-seeding trees and shrubs(Quercus Sp. z.o.o.)



Lopuksi:

- Runsaasti tutkimustuloksia kaikissa partnerimaissa ”käännetty” helposti ymmärrettäväksi tiedoksi abstrakteihin
- Olemme tavoittaneet paljon biotalouden toimijoita työpajoissa, showcasepäivissä, ja myös sosiaalisessa mediassa
- Verkostot ovat ”törmäyttäneet” toimijoita ja saaneet aikaan yhteistyötä





BRANCHES
BOOSTING RURAL BIOECONOMY NETWORKS

Tutkimuksesta potkua biotalouteen – maa- ja metsäbiotalouden
innovaatioverkosto

04/10/2023

Partnerit:



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