



# **D.T2.2.1**

## **Webinars**

### **1<sup>st</sup> Webinar**

**ERDF PP3 -CLUSTERO**  
**01/2022**

### Project Information

Project Title: GoDanuBio - 'Participative Ecosystems for fostering the revitalization of rural-urban cooperation through governing Danube Circular Bioeconomy'

Project code: DTP3-471-4.1

Lead partner: BIOPRO Baden-Württemberg GmbH

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<http://www.interreg-danube.eu/approved-projects/godanubio>

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2	14/01/2022	Webinar	Ana Dulgheru (CLUSTERO)	

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## 1 Introduction

A series of three webinars is to be organized within activity A.T2.2 (Enabling regional specificities and excellencies to take part in participative governance). The webinars are held as a half-day event, respectively, with participation of project partners and regional stakeholders.

The objective of the webinars is to enable interregional learning and to discuss the development of the Integration Plan (Output T2.1).

The 1st webinar was dedicated to the discussions of regional best practices to develop the Best Practice Brochure (D.T2.1.2). It was a half-day event with the participation of only project partners.

This webinar was organized online in two separate days as follows:

- November 18<sup>th</sup>, 2021 (with all the partners, except Croatian partners)
- December 10<sup>th</sup>, 2021 (with Croatian partners since they have not been able to participate on November 18<sup>th</sup>, due to a national holiday in Croatia).

## 2 Methodology and progress

Prior to the webinar, a PowerPoint template has been elaborated and previously filled-out by CLUSTERO with the Romanian pre-identified best practices to be used as a model in order to achieve a uniform presentation approach and to allow comparison between best practices.

Information on the best practices was summarized in one slide as follows:

- Description: an overview of the best practice
- Beneficiaries
- Output and results
- Transferability

Following best practices have been identified in the participating GoDanuBio countries:

- **Baden-Württemberg**
  - On Research, Education, and Communication.
    - Education: e.g., Master's Degree Programme Bioeconomy at the University of Hohenheim
    - Research: Many institutions (e.g., Fraunhofer) working on bioeconomy-related topics)
    - Promoting the Start-up Culture: e.g., Spootainable GmbH, Alpha Protein, OutNature GmbH
    - Bioeconomy Network Events: e.g., Bioeconomy Day (Ministry of Food, Rural Affairs and Consumer Protection), Bioeconomy congress, Food.net:z, Packaging Valley)



- On local level: Energiepark Hahnnest
- Green start-up ecosystem Baden-Württemberg
- Best practice examples currently under construction: Competence centres and BMWi (Federal Ministry for Economic Affairs and Climate Action) “Bioeconomy example regions” (Beispielregionen)
- **Bulgaria**
  - Atlas Agro<sup>1</sup>, Stara Zagora, Bulgaria
  - Food for the Earth<sup>2</sup>, Our Neighbourhood Association Sofia, Bulgaria
  - Nasekomo<sup>3</sup> Lozen, Bulgaria
  - Biomyc<sup>4</sup> Sofia, Bulgaria
  -
- **Republic of Croatia**
  - Eko -Kotor<sup>5</sup>
  - Network Wool<sup>6</sup>
  - MIRET - biobased and sustainable sneakers<sup>7</sup>
  - Agroproteinka Ltd<sup>8</sup>
- **Czech Republic**
  - South Bohemian Association for Bioeconomy<sup>9</sup>, České Budějovice, Czech Republic
  - Bioeconomy Platform of the Czech Republic<sup>10</sup>, Prague, Czech Republic
  - INCEN - The Institute of Circular Economy<sup>11</sup>, Prague, Czech Republic
  - NAFIGATE Corporation a.s.<sup>12</sup>, Prague, Czech Republic
- **Hungary**
  - Sugar Factory as a great example of a circular bioeconomy solution
  - Green National Champions Programme; Bio-based waste to secondary raw material
  - Hungarian Circular Economy Platform<sup>13</sup>
  - Circularity check as a service provided for companies
- **Republic of Serbia**
  - Serbian Biogas Association<sup>14</sup>
  - Panona net<sup>15</sup>– The Subotica Palić Microregion Cluster
  - Rural HUB<sup>16</sup>
  - Environmental Engineering Group<sup>17</sup>

<sup>1</sup> <https://atlasagro.eu/>

<sup>2</sup> <https://foodfortheearth.eu/>

<sup>3</sup> <https://nasekomo.life/>

<sup>4</sup> <https://biomyc.eu/>

<sup>5</sup> <https://www.consultare.hr/hr/projekti/bpp-eko-kotor>

<sup>6</sup> <https://ruta-cres.hr/rutin-projekt-umrezena-vuna-prosao-na-natjecaju-ine/>

<sup>7</sup> <https://www.miret.co>

<sup>8</sup> <https://www.agroproteinka.hr/en/about-us>

<sup>9</sup> <https://bei.jcu.cz>

<sup>10</sup> <https://bioeconomy.czu.cz/en>

<sup>11</sup> <https://incien.org>

<sup>12</sup> <https://www.nafigate.com>

<sup>13</sup> [Circular Economy Platform](#)

<sup>14</sup> <https://biogas.org.rs/>

<sup>15</sup> [http://ftksp.org.rs/projects.php?lang=eng&project\\_name=panoma](http://ftksp.org.rs/projects.php?lang=eng&project_name=panoma)

<sup>16</sup> <https://ruralhub.rs/en/>

- Sustainable Land, Livelihoods, and Energy Initiative-Serbia (SLLES)<sup>18</sup>
- **Romania**
  - 1 village, 1 MW<sup>19</sup>, Covasna
  - Clean Team Project<sup>20</sup>, Social Innovation Enterprise, Ghelinta, Covasna
  - Business Incubator<sup>21</sup>, Sf. Gheorghe, Covasna
  - Circular Bioeconomy in Transylvania Textile & Fashion Cluster<sup>22</sup>, Sf. Gheorghe, Covasna
  - CVoUCHER Scheme<sup>23</sup>, Cluj
- **Slovakia**
  - Community supported agriculture – DreamFarm<sup>24</sup>
  - Agro ring<sup>25</sup>
  - Water council plan of Landscape Recovery Programme of Košice Region
  - AjnFach - Library of things
  - Slovak start-up sobi.eco<sup>26</sup>
  - Plastic paths from Viakorp
  - Tesco's first machine for returning PET bottles and cans in Slovakia
  - Trash is Gold!
  - Circular cup
- **Slovenia**
  - Houses for young families and couples in rural areas of Slovenia<sup>27</sup>
  - Innovative Young Farmer<sup>28</sup>
  - Youth-led entrepreneurship in agriculture (example of youth-centered rural transformation: Hiška v Biljah / Tiny House; Hiša Mandrova /Mandrova house
  - Living Lab InnoRenew<sup>29</sup>: User-Centered Innovation and Development
- **Upper Austria**
  - Regional funding scheme related to Upper Austrian S3 strategy: Cluster Cooperation Project on Dry fermentation reactor<sup>30</sup>, coordinated by the Cleantech-Cluster
  - Regional funding schemes related to Upper Austrian S3 strategy: "From fly to fish<sup>31</sup>", coordinated by Food Cluster
  - BioBASE<sup>32</sup> - Innovation platform for bioeconomy and circular economy

<sup>17</sup> <https://www.activity4sustainability.org/about-us/>

<sup>18</sup> <https://sustainablebalkans.org/>

<sup>19</sup> <https://www.greencluster.ro/english/one-village-1-mw-concept.html>

<sup>20</sup> <https://www.cleanteamproiect.ro/ro>

<sup>21</sup> <https://www.asimcov.org/activities/business-incubator>

<sup>22</sup> <http://transylvaniatextile.eu>

<sup>23</sup> <https://c-voucher.com/>

<sup>24</sup> [www.dreamfarm.sk](http://www.dreamfarm.sk)

<sup>25</sup> <https://www.youtube.com/watch?v=kVMATRjN9ws&t=1s>

<sup>26</sup> <https://sobi.eco/>

<sup>27</sup> <https://backtothevillage-family.si/>

<sup>28</sup> <https://www.kgzs.si/imk>

<sup>29</sup> <https://innorenew.eu/living-lab/>

<sup>30</sup> <https://www.cleantech-cluster.at/kooperationen/cluster-kooperationsprojekte/detail/cooperation/trockenfermentationsreaktor/>

<sup>31</sup> [Von der Fliege zum Fisch \(Lebensmittel-cluster.at\)](https://www.von-der-fliege-zum-fisch-lebensmittel-cluster.at/)

<sup>32</sup> <https://biobase.at/>

- Project: IEA Bioenergy Task 42<sup>33</sup> " Biorefineries in the bioeconomy of the future"
- ÖKOLOG<sup>34</sup> – Programme
- Model region for biobased circular economy in MELK & SCHEIBBS<sup>35</sup>

### 3 Selection of the best practices and next steps

The selection criteria of the relevant best practices to be included in the brochure were discussed and decided upon as follows:

- Keep a geographical balance concerning the number of best practices from each participating region
- Not to duplicate the same type of best practice (as it was the case for bioeconomy platforms or enterprises which business models focus on bioeconomy).

Accordingly, the best practices have been structured on following topics as shown in the following table:

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<sup>33</sup> <https://biobase.at/>

<sup>34</sup> <https://www.oekolog.at/regionalteams/>

<sup>35</sup> <https://modellregion-melk-scheibbs.at/>

	Baden-Württemberg	Bulgaria	Republic of Croatia	Czech Republic	Hungary	Republic of Serbia	Romania	Slovakia	Slovenia	Upper Austria	Republic of Moldova
Initiatives/ projects				Bioeconomy Platform CZ	Sugar Factory Kaposvar	Sustainable Land, Livelihoods, and Energy Initiative- Serbia (SLLES)	Circular Bioeconom y in Transylvani a Textile & Fashion Cluster	Water council plan of Landscape Recovery Program of Košice Region;/  Tesco's first machine for returning PET bottles and cans in Slovakia;/  Circular cup;/  AjnFach - Library of things.	Houses for Young families;/  Hiša Mandrova.	Model region for biobased circular economy in MELK & SCHEIBBS;  From Fly to Fish	
Rural approaches	EnergiePark Hahnnest		Eco Kotor				1 village 1 MW			Dry fermentatio n reactor, coordinated by the Cleantech- Cluster (Biogas Plant)	

Support structures	Green Start Up Ecosystem			South Bohemian Association	Hungarian Circular Bioeconomy Platform	Panona net - The Subotica Palić Microregion Cluster;/ Rural Hub/ Biogas Association	Business Incubator		Living Lab Innorenew: User-Centered Innovation and Development	BioBASE - Innovation platform for bioeconomy and circular economy	
Entrepreneurship		AtlasAgro/  Nasekomo/ Biomyc	MIRET - biobased and sustainable sneakers  - Agroproteinka	NAFIGATE Corporation			Clean Tech	Community supported agriculture – DreamFarm/  The Slovak start-up (SOBI);/ Plastic paths from Viakorp	Zavod Obilije		
Education	On Research/Communication and Education	Food for Earth	Network Wool	INCIEN - Institute for Circular Economy		Environmental Engineering Group		Agro Ring		ÖKOLOG – Programme	
Financial/Non-financial direct support					Green National Champions Program Bio-based waste to secondary raw material/ Circularity Check		CVoUCHER Scheme		Innovative Young Farmers	Biorefineries in the bioeconomy of the future (Biorefinery Factsheets")	Greening Self-Assessment Tool

- Initiatives marked in red have been eliminated as not corresponding to the selection criteria mentioned above
- Where several initiatives of the same type exist in one country, it is up to the related partner to point out which is the most interesting

**NB:** Although not formally member of the consortium and not having participated in the webinar, it was decided to include as best practice in the brochure the *Green Self-Assessment Tool* by the SME Development Agency of the Republic of Moldova (ODIMM). This was presented with the occasion of the interregional event which took place in Chisinau (online) on 7-8/12/2021.

The presentations of the best practices lie in Annex 2 of this deliverable.



## 4 Annexes

Annex 1: Agendas of the webinar and pictures

Annex 2: Presentations of best practices country by country

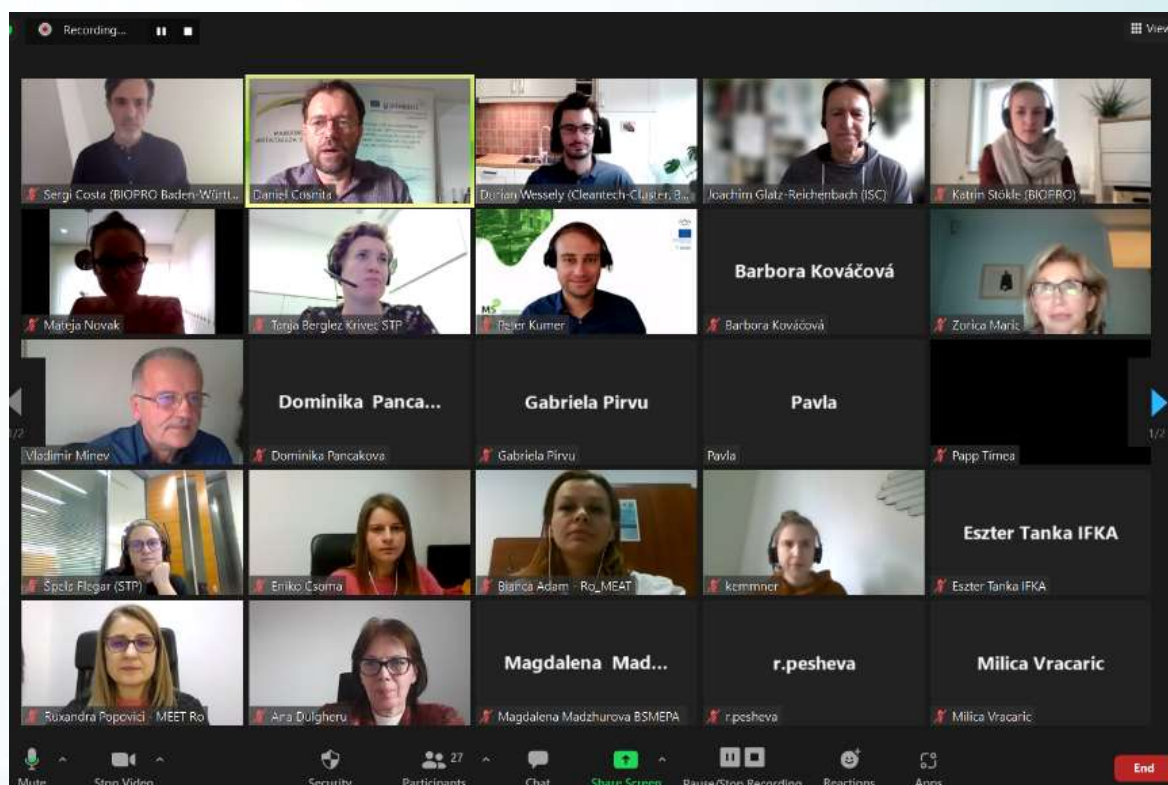
### Annex 1: Agendas of the webinar and pictures

Agenda of the webinar organized on 18/11/2021

Host: Clustero

Programme		
09:45 CET	Zoom open	Responsible
10:00	Welcome address Status Quo WP T2	Sergi Costa Daniel Cosnita
Presentation of Best Practices		
10:15	Romania	Daniel Cosnita
10:30	Upper Austria	Dorian Wessely
10:45	Baden Württemberg	Dr. Katrin Stökle Gisela Kemmner Dr. Joachim Glatz-Reichenbach
11:00	Bulgaria	Vladimir Minev
11:15	Czech Republic	Pavla Bruskova
11:30	Coffee Break	
11:45	Hungary	Eszter Tanka
12:00	Serbia	Zorica Marić
12:15	Slovakia	Dominika Pančáková
12:30	Slovenia	Tanja Berglez & Špela Flegar Dr. Peter Kumer Mateja Novak
12:45	Croatia	It will be set a bilateral meeting
13:00	Discussions	All participants
13:30	End of webinar	





- Agenda of the webinar organized on 10/12/2021  
Host: CLUSTERO

Programme		
13:00 CET	Zoom open	Responsible
13:00	Welcome address Status Quo WP T2	Dr Katrin Stökle, BIOPRO Daniel Cosnita, CLUSTERO
Presentation of Best Practices		
13:15	Republic of Croatia	Ana Dijan, CWC
13:30	Discussions	Participants
14:00	End of webinar	



## Annex 2: Presentations of best practices country by country

## D.T2.1.2 Best Practice examples from Baden-Württemberg

BIOPRO - CABW - ISC

1<sup>st</sup> Webinar

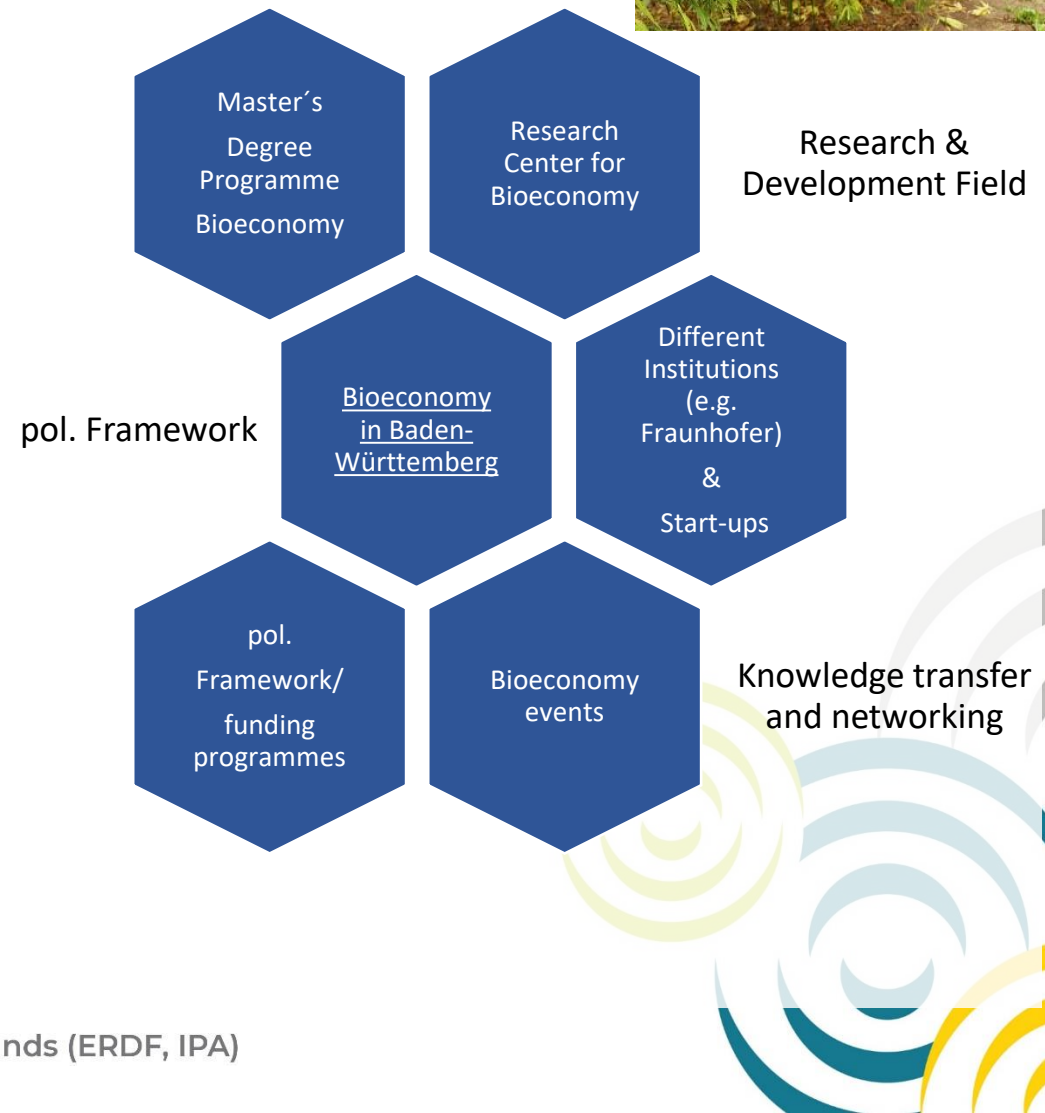
November 18, 2021



## On Research, Education, and Communication

**Cooperation in various disciplines** (agricultural-, natural-, business-, economic-, social science and engineering)  
**between different universities, research institutions and SMEs**

- **Education: e.g. Master's Degree Programme Bioeconomy at the University of Hohenheim:** interdisciplinary programme, ecological, social, and economic dimensions of the bioeconomy on a micro and macro-level, requirements for innovations, corresponding politic framework
- **Research:** Many institutions (e.g. Fraunhofer) working on bioeconomy-related topics
- Promoting the **Start-up Culture / Practical examples:** e.g. Spootainable GmbH, Alpha Protein, OutNature GmbH
- **Bioeconomy Network Events:** e.g. Bioeconomy Day (Ministry of Food, Rural Affairs and Consumer Protection), Bioeconomy congress, Food.net:z, Packaging Valley





## On local level: Energiepark Hahnnest

- Founded by four farmer families in 2010
- Joint operation of a biogas plant
- Feedstock: cup-plant („**Danube Silphie**“) – fibres are used for paper production, residual material for biogas production
- Aim of the project: formation of closed cycles
- Gas, electricity, and heat are marketed through **Silphienergie GmbH**



<https://www.energiepark-hahnnest.de/Hahnnest>



## Green start-up ecosystem Baden-Württemberg

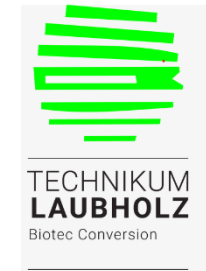
- **Orientation and planning phase:** initial advice via start-up and innovation vouchers (EXI start-up voucher from BIOPRO / Steinbeis Consulting; Start-up BW)
- **Start-up, build-up and growth phase:** accelerators like BadenCampus GmbH, offering network, intensive mentoring, access to investors and funding
- **Market positioning, development and maturity phase:** events and awards, such as „Kick-Start Green Innovations – KIGI“ – coaching, pitching to industry representatives, prizes
- **Further development:** e.g. the initiative „Start-ups in the Bioeconomy“ (LP BIOPRO), focal point for the targeted further development of the start-up and SME ecosystem





## Best practice examples currently under construction

- **Competence centres**
  - Centre for technology transfer on industrial bioeconomy (Biberach a.d. Riß), pooling of local actors related to bioeconomy, applied sciences, and society
  - Technikum Laubholz, established in spring 2020, aims to accelerate the development of innovative applications for hardwood
- **BMW Bioeconomy example regions**
  - “Industrial Bioeconomy” dialog platform from the BMWi
  - Example regions of industrial bioeconomy to support companies in bringing products from conception phase to industrial production
  - Mapping of all elements of the value chain
  - Awareness events already started



Federal Ministry  
for Economic Affairs  
and Energy



# ***Thank you!***

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# Best Practice Examples

1<sup>st</sup> Webinar  
November 18, 2021



# Atlas Agro Stara Zagora, Bulgaria

<https://atlasagro.eu/>

## Description

Innovative solution for conversion of anaerobically degraded sludge from wastewater treatment plants in landscaping.

**Beneficiaries:** Institutions, private companies and end-users.

## Output and results:

1<sup>st</sup> place and Audience Prize of RIS Innovation Prizes 2020 organized by EIT Food;

"Agroinnovator of the Year" award at the  
"Agribusinessman of Bulgaria" awards ceremony;

**Transferability:** wastewater treatment plants from different geographies



## Description

Creating, adapting, transferring knowledge and raising awareness among citizens and municipalities about soil's health in urban and peri-urban areas.

**Beneficiaries:** citizens and municipalities

## Output and results:

Multiple compost zones in Bulgaria and Romania

**Transferability:** all urban and peri-urban areas



**FOOD FOR EARTH**

• Composting communities for climate •



### Description

Production of premium sustainable insect products for the feed and agriculture industries.

### Beneficiaries:

Industries: Biotechnology, Waste management, Agriculture;

Consumers of alternative protein products;

### Output and results:

The first insect-rearing farm in the South-East European region, starting in 2017;

1M EUR raised from private investors in 2018;

4M EUR raised in 2020 from investment funds and private investors

Among the 5 insect producers in Europe to secure needed permits for sale of insect protein;

Fully functional factory;

**Transferability:** in all value chains where alternative proteins can be applied



**For a more efficient and sustainable world**

Nasekomo produces premium sustainable insect products for the feed and agriculture industries



## Description

An eco-design company that specializes in innovative materials and sustainable product design. Its main expertise is in mushroom technology, additive manufacturing and simulation and sustainable product design and production of packaging from sustainable sources

**Beneficiaries:** Companies that work with Packaging, with an interest in Biomaterials and Circular Economy

## Output and results:

Best European start-up in the Green Category at the Startup Europe Awards;

Winner at The Sustainable Future Forum;

Nominated as TOP 30 cleantech start-ups by the EIT;

Joint project with the R&D department at Mercedes Benz, Germany;

Gold Winner in the luxury packaging category at the IAA Muse Design Awards;

**Transferability:** in regions with available bio-mass from agri-food



**biomyc**  
innovation. design. sustainability

## Bulgarian Small and Medium-Sized Enterprises Promotion Agency

*Vladimir Minev*

*Director of “Internationalization of SMEs” Directorate  
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[www.sme.government.bg](http://www.sme.government.bg)*





# Best Practice Examples

Croatia

December 10th, 2021



## Agroproteinka Ltd.

<https://www.agroproteinka.hr/en/about-us>

- **Description**

Agroproteinka is a modern Croatian company and a market leader in the ecological disposal of by-products of animal origin and biodegradable waste. In three separate plants, the company processes animal and plant by-products, biodegradable and cooking oil waste.

- **Beneficiaries:**

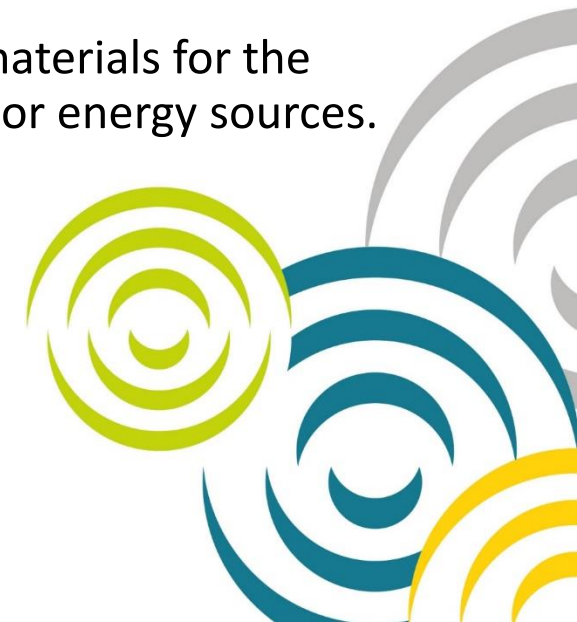
veterinarians, farmers, butchers, retail chains, restaurants

- **Output and results:**

By processing by-products, the company obtains raw materials for the production of pet food and raw materials for biodiesel or energy sources.

- **Transferability:**

all rural areas with similar biomass resources



# Project “Networked wool”

<https://ruta-cres.hr/rutin-projekt-umrezena-vuna-prosao-na-natjecaju-ine/>

- **Description**

Wool is a valuable and neglected raw material. On the island of Cres, about 10 tons of wool are cut and thrown away every year, thus becoming an environmental problem. Therefore, the goal of the project "Networked wool" is education on the issue of throwing wool and processing methods through creative workshops on the topic of wool recycling. The project is co-financed by INA-medium-sized European oil company.

- **Beneficiaries**

Children and young people who are educated by the Ruta Group through creative workshops

- **Output and results:**

Raised awareness among children and young people on the problem of throwing wool, its value, the technique of processing wool by felting, recycling old nets and the traditional story of sheep and fishing.

- **Transferability:**

All rural/island areas with similar biomass resources

Project co-funded by European Union funds (ERDF, IPA)





## Eko Kotor Ltd.

<https://www.consultare.hr/hr/projekti/bpp-eko-kotor>

- **Description**

The EKO Kotor biogas plant was put into operation in 2018 and produces one megawatt of electricity. Until now, manure was used for the production of biogas, which was delivered to EKO Kotor by Međimurje farmers with whom it has a contract, and soon the company will also use those from its poultry houses. In addition, the use of this raw material in biogas production significantly reduces CO2 emissions into the environment. During these processes a high-quality mineral fertilizer is produced that is used to treat crops and contains less nitrates than conventional fertilizers, which makes it less polluting.

- **Beneficiaries:**

Farmers from Međimurje region

- **Output and results:**

EKO Kotor is a unique system in which the entire production is environmentally friendly: manure is converted into biogas, energy is sold on the market, and the heat developed during engine cooling is used to heat poultry houses

- **Transferability:**

All areas with similar biomass resources

Project co-funded by European Union funds (ERDF, IPA)



## Miret Ltd.

<https://www.miret.co>

- **Description**

Miret is a family company that used to be responsible for crafting high-end footwear for some of the most famous brands on the market. As time passed, 2 brothers inherited the business, and with the time their expertise grew as well as awareness that footwear is a toxic and harmful industry, but often hides under the radar. Most sneakers are mass produced using harmful materials like synthetic textiles, synthetic rubber and other plastics. These are the source of micro-plastics that pollute our earth. Also leather, which is generally considered a "natural" material, is actually packed with toxic chemicals.

- **Beneficiaries:**

At the moment, the materials are purchased worldwide but some of them could be purchased in the Croatian rural areas, from the farmers.

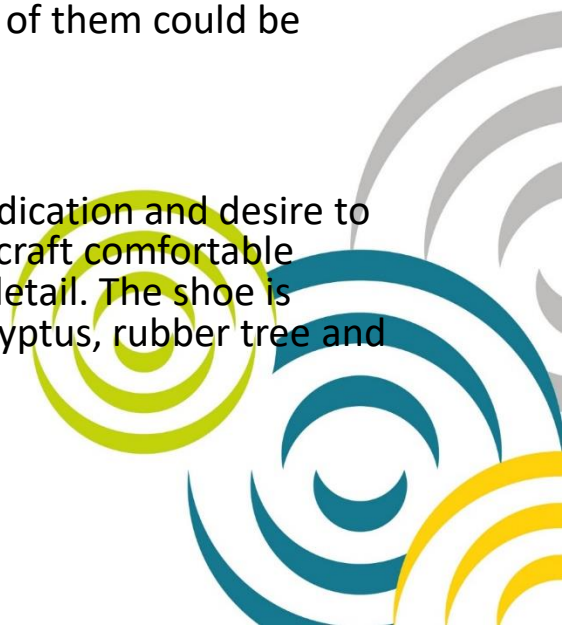
- **Output and results:**

With all this in mind, MIRET sneakers were born. Driven by the dedication and desire to make things right, Miret combined the strongest natural fibres to craft comfortable sneakers ensuring minimal environmental impact in each tiniest detail. The shoe is crafted with 7 amazing plants: hemp, kenaf, cork, corn, jute, eucalyptus, rubber tree and New Zealand wool.

- **Transferability:**

All areas with similar biomass resources

Project co-funded by European Union funds (ERDF, IPA)



***Thank you!***

***ERDF PP11 Croatian Wood Cluster***

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***ERDF PP12 Ministry of Economy, and Sustainable  
Development of the Republic of Croatia***

***(Helia.KovacevicGrcic@mingor.hr)***



# Best Practice Examples

1<sup>st</sup> Webinar

November 18, 2021

**NCA, Czech Republic**





## Description

The Platform for Bioeconomy of the Czech Republic has been created in cooperation of the Czech University of Life Sciences Prague and the University of South Bohemia in České Budějovice in reaction to social challenges in the field of sustainable development, the related need for industrial modernization and for the increasing of global competitiveness of the Czech Republic.

The Platform acts as an informal initiative associating prominent institutions from the field of research and education as well as organizations from operational practice, focusing its activities on raising civil society awareness and systemic application of bioeconomic approach in the Czech Republic.

**Beneficiaries:** The Platform develops relations with foreign universities and organizations dealing with bioeconomy. Its members take part in international research projects as well as in other activities to gain the latest relevant findings and to seek ways for their possible use in practice.

**Output and results:** 25 corporate and 6 individual members and number of activities and events

**Transferability:** circular bio-economy clusters, all regions without knowledge

## Description

The SBAB was established in 2020 as an institutional outcome of the POWER4BIO project (the University of South Bohemia in České Budějovice being the Czech partner) with the support of regional and local institutions and stakeholders. It is the first bioeconomy-focused body within the Czech regions. Its mission is to become a regional platform for bioeconomy and the circular economy in the region of South Bohemia as regards creation of strategy and implementing bioeconomy in practice. The aim is to build on local traditional resources and sectors and connect them with new technologies with high added value ensuring the sustainability of the region's development.

**Beneficiaries:** The South Bohemian Regional Authority included the smart specialisation domain of bioeconomy in its RIS3 and entrusted SBAB with the function of the Regional Innovation Platform for Bioeconomy. The SBAB is the best-practice example of the participative governance implemented in bioeconomy on the regional and local levels.

**Output and results:**

**Transferability:** all regions





## Description

This company is one of the Czech leading innovative SMEs. It was founded in 2011, now having 35 employees. It focuses on biotechnology and nanotechnology. Its flagship is the Hydral biotechnology, which uses various types of oil waste to produce biopolymers (a technology based on microorganisms and the ability of their metabolism to convert a feedstock into a product). NAFIGATE Corporation has also been involved in the concept of circular economy/bioeconomy for a long time.

The company is known mainly for the first technology in the world, namely a biopolymer from a used cooking oil.

**Beneficiaries:** The biopolymer can be used in cosmetics, sustainable packaging, agriculture and in biomedicine as a biocompatible and fully biodegradable circular material. They can utilize waste streams to produce novel materials with new benefits.

**Output and results:** patented biotechnology know-how for biopolymer production, P3HB Biopolymer which offers EU Green Deal solutions

**Transferability:** all companies having biomass resources



## Description

The Institute of Circular Economics (INCIEN) was established in 2015 with the aim of raising awareness of the concept of circular economics and demonstrating it in practice. They promote the circular economy as a priority for the Czech Republic. They work as a think-tank, whose activities move on the border of state administration, academia and business.

**Beneficiaries:** They organize lectures, workshops and webinars to inspire and educate. They also develop education in the form of specialised courses for the wider public or practitioners. They seek to clarify the ways in which materials are handled in the Czech Republic, with the aim of finding a way to use them as efficiently as possible. They formulate recommendations for implementing changes and improvements to the government, regions, cities or other players. They provide supervision for putting the principles of circularity into practice.

**Output and results:** over 70 analysis for municipalities, over 500 held lectures, oversees more than 20 working groups, 1 award for production of BIO CNG from wastewater

**Transferability:** regions without bioeconomy strategy





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# Best Practice Examples

1<sup>st</sup> Webinar  
November 18, 2021

IFKA-Hungary



# SUGAR FACTORY IN KAPOSVÁR

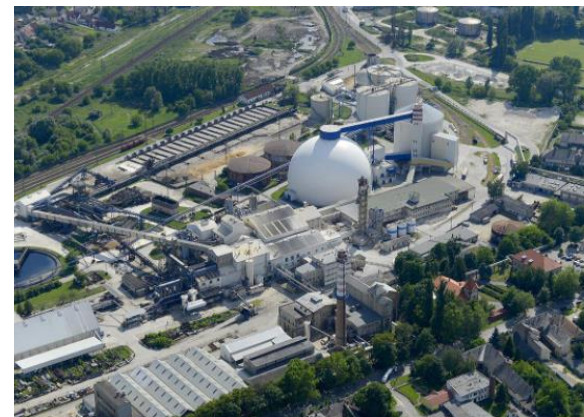
## Ideal example to close the loop

- During the „campaign period” large amount of heat and energy are needed which was used to be provided with natural gas
- As a result of effective research and development activities: **production of biogas from the beet residues through a fermentation process (2007)**
  - Generate bioenergy from renewable sources – **zero carbon emission**
- **Beneficiaries:** Inhabitants, municipality, local farmers, company itself
- **Output and results:**
  - During the campaign (Sept-Jan): the fermentation liquid is sent to a sewage treatment plant to increase the efficiency of the water cleaning process
  - Outside the campaign period (February – August): the plant accepts other bio residues produced by the nearby farmers and the generated fermentation liquid is used in agricultural areas as a great bio fertiliser → decreasing the need for chemicals.
  - The biogas covers the factory’s energy supply and fuels the bus fleet of the city – even the city’s swimming pool is heated with it
  - **The most recent innovation:** the biogas produced outside the campaign period is cleaned with a membrane gas cleaner to produce natural gas and it is fed back-firstly in Hungary - into the natural gas grid.

**Transferability:** all rural localities having biomass resources and similar plants

1/10/2022

Project co-funded by European Union funds (ERDF, IPA)



# Green National Champions Program

## Bio-based waste to secondary raw material

- **Aim:** Targeted and comprehensive development of the domestic green industry - financing scheme
- **Beneficiaries:** Hungarian SMEs with high growth potential operating in an environmental-conscious way and producing products related to the green industry.
- **Most popular topic:**
  - Companies using/producing secondary raw materials (IS relations)  
including SMEs processing bio-based waste to produce secondary raw material or valuable products from it
- **Output and results:**



# Hungarian Circular Economy Platform

- On 29 November, 2018 **the Circular Economy Platform** was officially established in Hungary as an initiative of the:
  - Business Council for Sustainable Development in Hungary (BCSDH)
  - Embassy of the Kingdom of the Netherlands
  - Ministry of Innovation and Technology
- **Beneficiaries:** any organisation can join (by 2021 October **it has 93 members**).
- **Output:** Members meet more times a year through workshops and a yearly organized summit to demonstrate good practices and discussing how to urge the circular transition in Hungary.
- Amongst the members bioeconomy-related companies, association could also be found creating a great platform to promote the development of that segment, as well.
- **Transferability:** easily adaptable to all regions



# Circularity Check

## As a service provided for companies

### Aim:

- CircularRegions 'Cross-border capacity building for developing circular regions' project between December 2020-March 2022
- Increase expert capacities in the circular economy by developing a train the trainers program for experts and upskilling future trainers
- Develop a service available for SMEs

**Beneficiaries:** SMEs in selected sectors - tourism, food and packaging, construction, plastics industry

**Output:** the service prepared for SMEs (15 trained experts, pilot tests, 12 scanned companies)

- Overview of the benefits that SMEs can gain from circular business models.
- Sector-specific best practices spanning the circularity of design, manufacturing, procurement, delivery, service, product use, and sustainability.
- Circularity analysis specialized for the given company – using the Circularity Check online tool - to examine the circularity performance of companies and evaluate their results.
- Determining strategic directions how to develop further

**Transferability:** the methodology could be adapted easily, but region specific aspects should be included





***Thank you!***  
***Eszter Tanka***  
***[tanka@ifka.hu](mailto:tanka@ifka.hu)***



# Best Practice Examples

1st Webinar  
November 18, 2021  
Alma Mons Serbia



## Description

Representative association 30 members: biogas power plants, related institutions and companies

Works on professional development, advocacy and promotion

Small-scale bioenergy systems are plants of up to 1 MW of energy generating capacity.

**Beneficiaries:** companies, local authorities

## Output and results:

Installed capacity: over 14.4 MW

No. of biomass systems: 14

No. of localities: 20



**Transferability:** all rural localities having biomass waste



## Panona net – The Subotica Palić Microregion Cluster

[http://ftksp.org.rs/projects.php?lang=eng&project\\_name=panoma](http://ftksp.org.rs/projects.php?lang=eng&project_name=panoma)

### Description

Established in 2008; over the years became a major regional actor in sustainable tourism. Works on tourist valorization of microregion resources –ecological products and protected natural asset

**Beneficiaries:** regional enterprises and clusters; Subotica and Palić municipality North Backa County

### Output and results:

40 tourist service providers and producers, 20 cultural, hiking clubs getting new markets

Numerous projects from Interreg IPA cross-border programme, regional government funds

**Transferability:** Microregions







## Rural HUB

<https://ruralhub.rs/en/>

### Description

Established in 2010; support rurbanism by caring about local community in a sustainable fashion. Rurban is created when urban experience is connected with the wisdom from nature and rural; implemented sustainably in Vrmdza village, Eastern Serbia.

**Beneficiaries:** regional enterprises, agricultural households, manifestations, local community

### Output and results:

numerous incubated companies in various fields

from 30 to 70 households

diversification of activities

**Transferability:** remoted rural areas and villages





## Environmental Engineering Group

<https://www.activity4sustainability.org/about-us/>

### Description

Established in 2005; a hub for launching initiatives, spreading awareness and knowledge about the concept of sustainable development

**Beneficiaries:** NGOs and citizens, local communities

### Output and results:

Numerous projects and initiatives, e.g.: Green Incubator, EuroChangeMakers, Turn on the brain - to circular, Eco-dinar, Responsible waste management

publications aimed at strengthening the capacity of NHOs and citizens, local communities on the principles of circular economy

**Transferability:** “green” NGOs



# Sustainable Land, Livelihoods, and Energy Initiative--Serbia (SLLES)

<https://sustainablebalkans.org/>

## Description

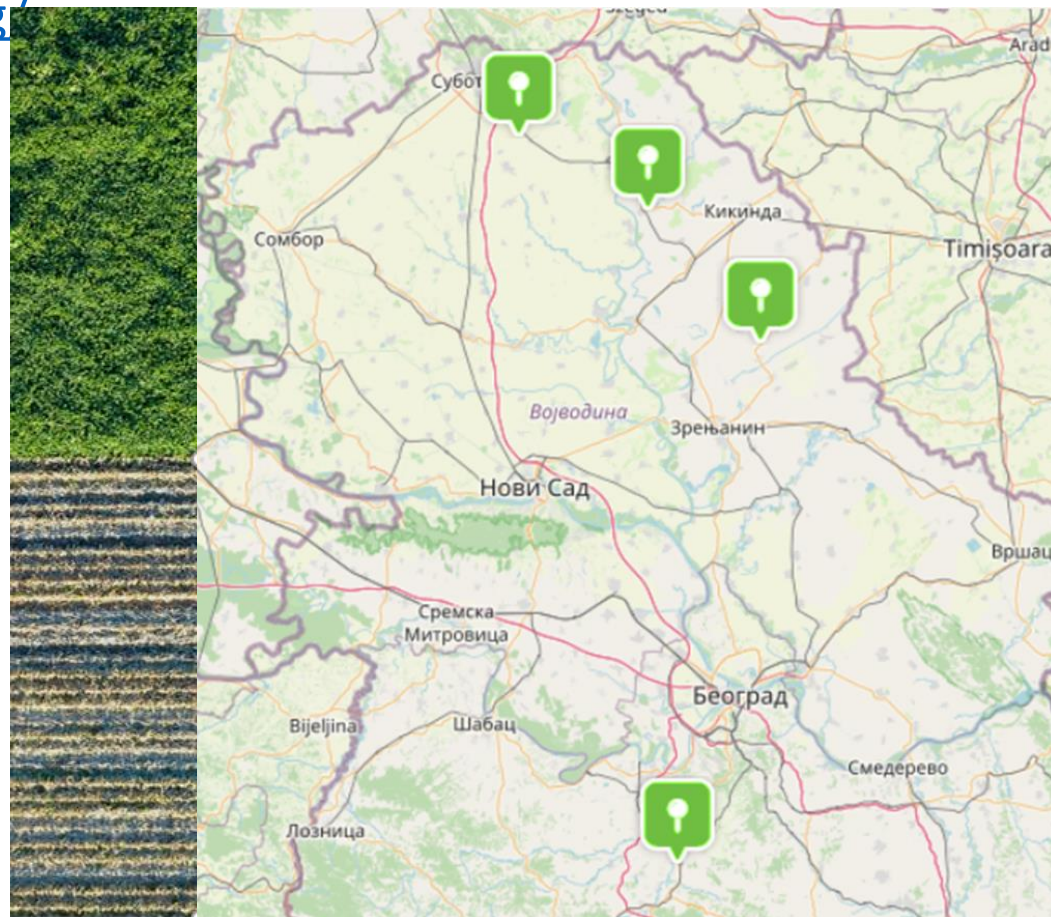
About 70% of national energy production in Serbia relies on low-energy lignite, leading to massive greenhouse gas emissions, air pollution, and land degradation through open-pit mining. SLLES works on Bioeconomy solutions: 1) short rotation coppices or plantations (SRPs) of fast-growing tree and reed species for the production of woody biomass and biogas; 2) agroforestry borders around as biodiverse and economically beneficial buffers; 3) long-term conservation of tree areas

**Beneficiaries:** Region of vojvodina, Republic of Serbia

## Output and results:

piloted on four different sites

**Transferability:** scalable elsewhere in the Western Balkans and beyond. It could include co-locatable renewable energy technologies, such as solar PV, wind, and geothermal



***Thank you***  
***ALMA MONS - Milica Vracaric, Zorica Maric***  
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# Best Practice Examples

1<sup>st</sup> Webinar  
November 18, 2021





# 1 village, 1 MW, Covasna, Romania

<https://www.greencluster.ro/english/one-village-1-mw-concept.html>

## Description

Due to Growth of energy demand, biomass is a renewable energy option that can be practical and safe, can strengthen the economy, and can help ease the urgent strain on our planet's ecosystem.

Small-scale bioenergy systems are plants of up to 1 MW of energy generating capacity.

**Beneficiaries:** I

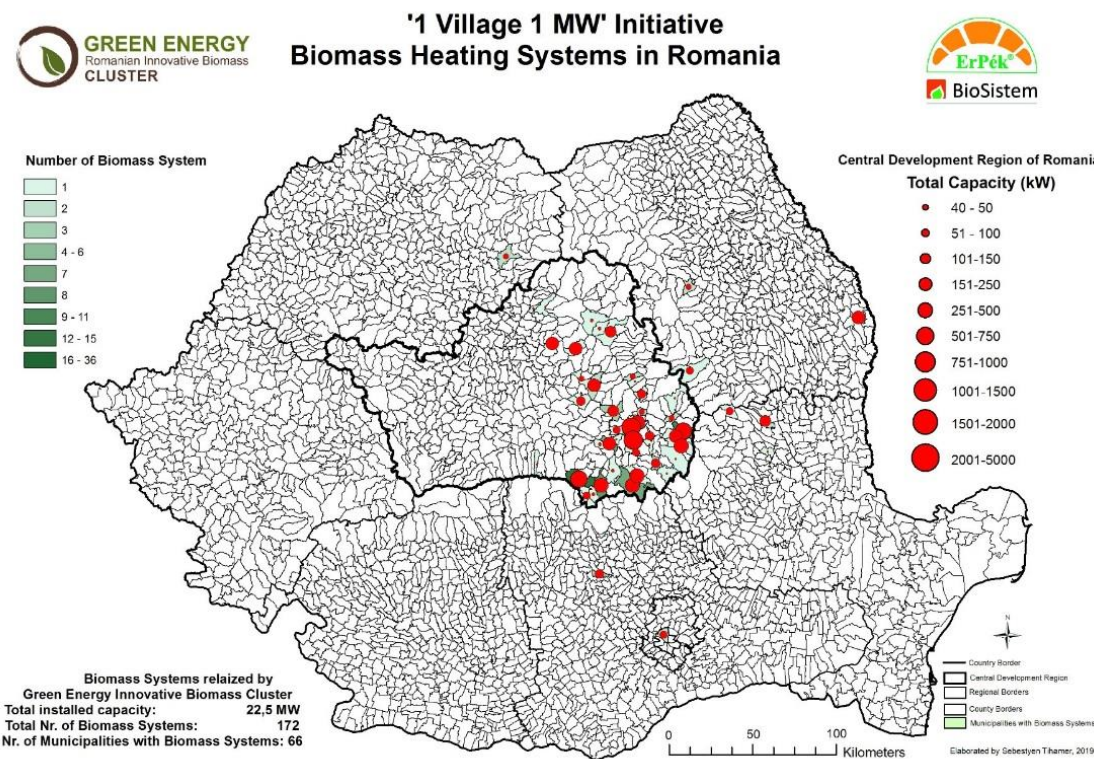
## Output and results:

Installed capacity: 22,5 MW

No. of biomass systems: 172

No, of localities: 66

**Transferability:** all rural localities having biomass resources





# Clean Team Proiect, Social Innovation Enterprise Ghelinta, Covasna, Romania [cleanteamproiect.ro](http://cleanteamproiect.ro)

## Description

Social economy enterprise founded by ESF Funds, started in 2020 in the field of gardening, urban cleaning services, landscape, and land planning services. Started activity in April 2021

**Beneficiaries:** 3 employees from vulnerable groups; aims to provide 20 tablets to institutionalised children; helps 5 single mothers and 5 blind people with necessary fire wood

## Output and results:

Turnover of 20.000 EUR already;

Clients: Ghelinta commune, around 20 physical persons

**Transferability:** projects ideas under ESF interventions; other rural localities



## Description

Established in 2006; over the years it has established itself as a major regional (eco)innovation actor.

**Beneficiaries:** regional enterprises and clusters; Sf Gheorghe municipality and Covasna County

## Output and results:

49 incubated companies in various fields

5 clusters; Innohub; Digital Innovation Hub

Numerous Horizon 2020, COSME, INTERREG Europe, DTP Projects, e.g Biovill, BiRural, DanuBioValNet, GoDanuBio, Foresda, Rosewood

**Transferability:** small and medium-sized towns





# Circular Bioeconomy in Transylvania Textile & Fashion Cluster

Sf. Gheorghe, Covasna, Romania  
<http://transylvaniatextile.eu>

## Description

Transylvania Textile & Fashion Cluster has taken up the issue of textile waste, a very eager problem in the textile sector and the cluster members are working daily on creative solutions to reintroduce the textile waste in the value chain, to extend the time interval that a piece of textile is used.

Invitees of Circular Economy Club London (2019)

Participation to the Global Sustainable Fashion Week Budapest (2019); Refashion starts in school; Start ups in sustainable fashion

Sustainable fashion and textile (2021)

**Beneficiaries:** cluster members, vocational highschoools, fashion entrepreneurs, local innovation ecosystem

**Output and results:** 5 start ups; 4 sustainable fashion shows, 5 sustainable fashion exhibitions.

**Transferability:** circular bio-economy clusters



### Description

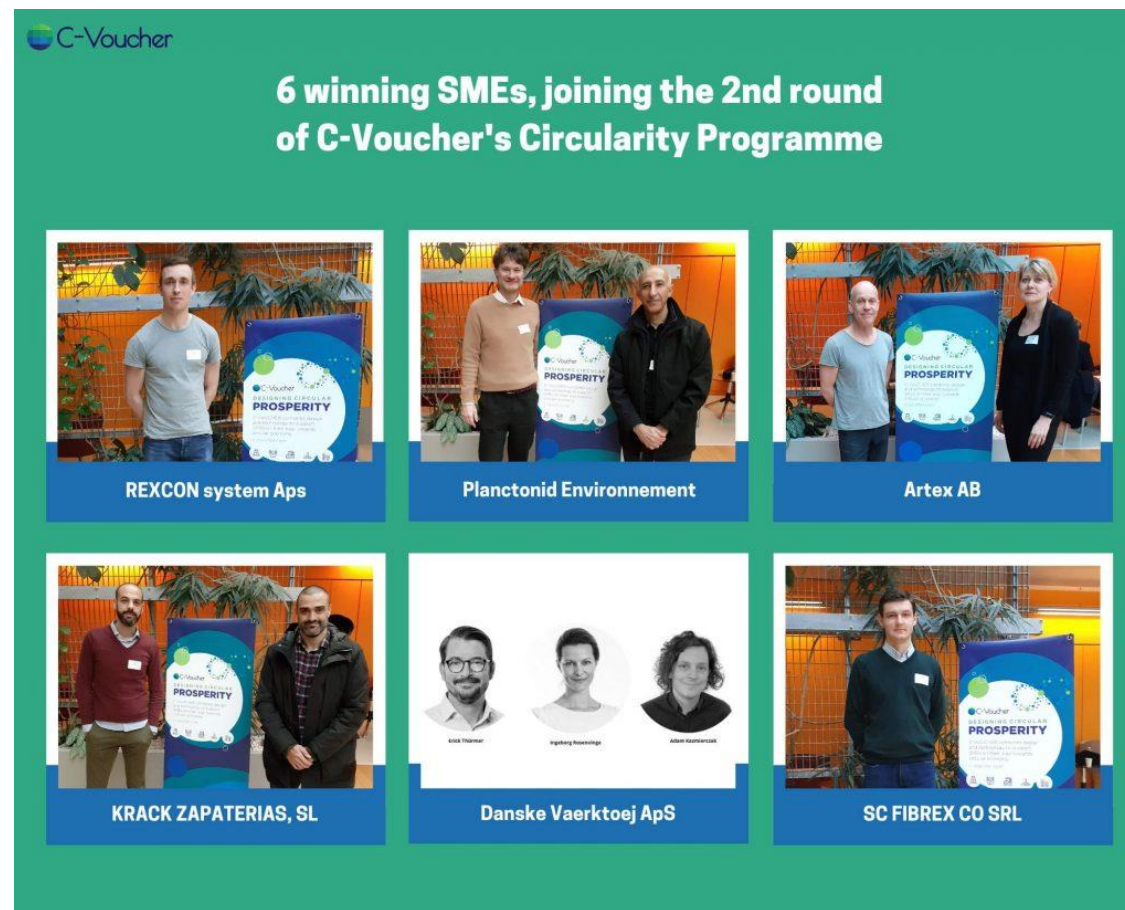
Romanian Development Agency of North-West implemented C- VoUCHER project financed by Horizon 2020, between March 2016- April2021. The C-VoUCHER consortium was led by FundingBox Accelerator and was composed of 13 partners from 6 European countries (Denmark, Romania, France, Poland, Spain, and Sweden). C-VoUCHER aims at generating new cross-sectoral and cross-border value chains with a circular economy approach, by combining industrial value chains (agro-food, health, sea industries, textile & manufacturing) with enabling technologies (digital, hybrid & engineering), through design thinking concepts

**Beneficiaries:** 24 SMEs (out of which in circular programme) selected in the 1<sup>st</sup> phase, vouchers up to 58k EUR per SMEs

42 adopter SMEs, 15k EUR per adopter

**Output and results:** 6 winning circularity solutions (1 RO)

**Transferability:** PPP in regional circular bio-economy





***Thank you!***  
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# Best Practice Examples

Slovakia

1<sup>st</sup> Webinar

November 18, 2021



## Community supported agriculture – DreamFarm

[www.dreamfarm.sk](http://www.dreamfarm.sk)

### Description

This best practice involves regenerative production of vegetables with community support sale. Fresh seasonal fast-growing vegetables (3 yields of different sorts of vegetables on one parcel per year) are produced. The diversity of vegetables is large: many original and special varieties (no hybrids) of leaf vegetables, lettuce (selection of leaves of different varieties), radish, cabbage, broccoli, tomatoes, onion, and many others.

### Beneficiaries: DreamFarm Slovakia

**Output and results: Organic produce beign sold directly to customers** - home delivery of boxes of fresh seasonal vegetables once a week (CSA – Community Support Agriculture, “subscription” of healthy food in the amount of 100 EUR per month) as well as direct sale to restaurants and sale of boxes based on order

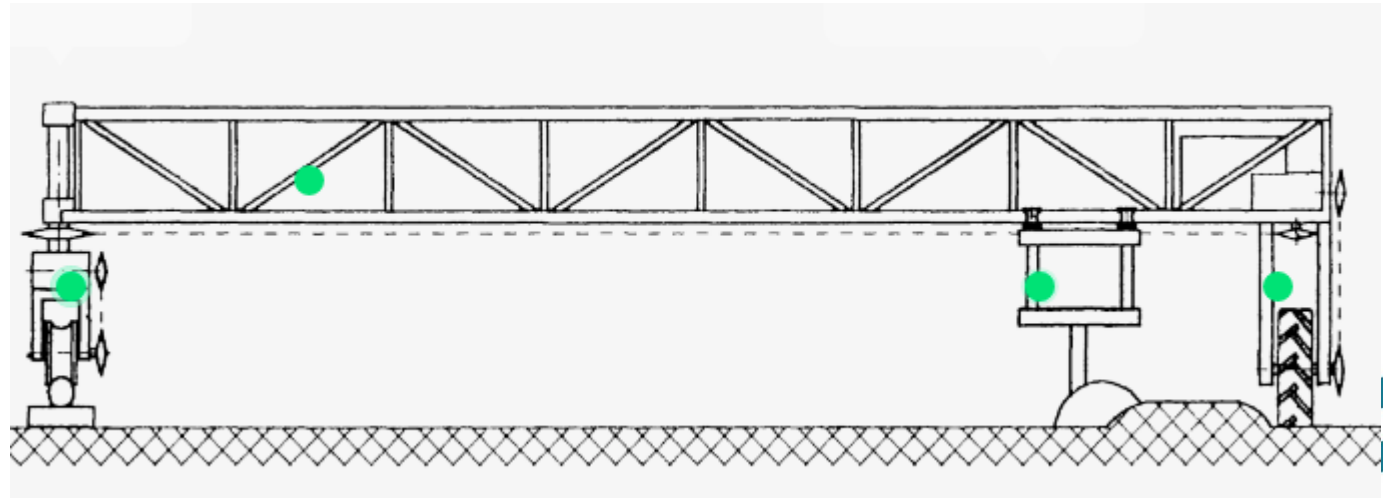
### Transferability: Agriculture farms



# Agro-ring

An ecologically and economically sustainable way of growing vegetables for young growers. The farm model is easily reproducible and is based on the principle of supporting community agriculture. The system of this crop cultivation is beneficial for humans as well as for the soil.

The agro-ring works by creating circular fields with a spiral-shaped row that machines an electrically driven swivel arm. This is a small "revolution" in vegetable growing. Unlike heavy machinery, the agro-circle does not damage the soil and healthy food from domestic production gets on the table. During the year, under suitable climatic conditions, it is possible to grow 52 types of vegetables, various types of herbs or flowers in the fields.



<https://www.youtube.com/watch?v=kvMATRjN9ws&t=1s>



## Outputs and results of Agro-rings:

- It relieves the grower of physical effort without the use of heavy mechanization
- It stops soil degradation and ensures its reclamation
- It is an impuls for the development of organic farming and small farms
- It brings innovation to the teaching of traditional fields of study
- It is easily expandable to other schools throughout the county
- It enables soil cultivation, crop rotation, elimination of soil compaction, reduction of energy consumption and introduction of partial or full automation of agrotechnical operations.





# Water council plan of Landscape Recovery Program of Košice Region

## Description

The plans of the water councils of the Košice Region within the Landscape Recovery Program of the Košice Region 2021-2030 of individual regions open these topics. It is necessary to look for comprehensive solutions for the WEF (water, energy, food) approach, as climate change itself affects water supply, soil fertility, extreme heat, as well as the growth of natural disasters.

**Beneficiaries:** , we divided the Košice Self-Governing Region into 6 separate territories, in which water councils were established, which work on plans in their territories:

Abov (Košice and Košice – okolie)

Gemer (Rožňava)

Spiš (Spišská Nová Ves and Gelnica)

Zemplín I. – Trebišov

Zemplín II. – Poondavie (West-side of Michalovce)

Zemplín III. – Michalovce, Sobrance (Part of Michalovce and Sobrance as whole)

**Output and results:** They aim to connect the links not only between water, energy and food, but also the weather, climate change and biodiversity.

**Transferability:** circular bio-economy



# PLAN OF WATER COUNCILS OF THE KOSICE REGION

## WITHIN THE PROGRAMME OF LANDSCAPE RENEWAL FOR THE KOSICE REGION



## What we learn at school will help us at home – moving region

Glass, metals, plastic, paper and biowaste are the materials we encounter on a daily basis. Waste sorting started in the early 1990s, but nevertheless about 50% of municipal waste still ends up in Slovak landfills.





The Košice Self-governing region also started teaching students about the circular economy. At the beginning, we therefore supplied bins for separate waste collection to 2 schools in our region. An electric composter also found its home in one of them. The waste from the school kitchen is thus transformed into a source of nutrients for further use.



## AjnFach - Library of things

### Description

This is a project covered by the Goethe Institute, where every member of the institute can borrow things from the invention of the world to the reader's card. The library has a special space for 50 things from 4 different areas.

**Beneficiaries:** Goethe Institute

**Output and results:** Offer people practical things to use in domestic or kitchen work, the factor of free access so that people can borrow items which they are unable to fund.



## The Slovak start-up

<https://sobi.eco/>

### Description

The very idea of the use of waste and ethical production was born in charitable collections of clothing, which is often no longer wearable, or there is a surplus of it. This unnecessary clothing ends up in warehouses that pollute the environment. The team from Startup sobi.eco came up with an idea of how to change this fact. They started to produce organic products from 100% recycled textile waste. Among the offered assortment we can find a laptop case, a case for glasses, or a shoulder bag, but also a number of other practical products.

**Beneficiaries:** Support of socially and medically disadvantaged people and therefore placed production in sheltered workshops, social enterprises or workshops that provide work in areas with high unemployment.

**Output and results:** Less polluted environment.

**Transferability:** circular bio-economy clusters





## Plastic paths from Viakorp

### Description

Viakorp produces special asphalt from recycled PET bottles, sachets and boxes. You can drive along the "plastic road" in the district of Lučenec, where the first such road is located. Roads with a plastic admixture are cheaper, more ecological, of better quality and, according to the words of Viakorp's manager Ján Bohovič, also a necessary solution.

**Beneficiaries:** The Zvolen company Viakorp

**Output and results:** The service life of such a surface is extended by about 3-4 years, which is once as much. About 10-20% of standard asphalt is replaced by plastic waste products. With plastic roads, a considerable amount of money can also be saved on maintenance.

**Transferability:** self-governing regions, municipalities, cities and towns,....



## Tesco's first machine for returning PET bottles and cans in Slovakia

### Description

The Tesco retail chain has launched a pilot project of a collection machine in the hypermarket in Senec, which will enable the collection of used PET bottles and cans. Tesco believes that hundreds of PET bottles and cans will be collected every single day.

**Beneficiaries:** The Tesco retail chain

**Output and results:** The aim of this pilot project of the vending machine is to prepare the public and at the same time facilitate their transition to the system of compulsory collection of beverage packaging from January 2022. From January 1, the customer pays 15 cents for packaging when buying a drink and will receive this amount back after its return

**Transferability:** circular bio-economy clusters

## Trash is Gold!

### Description

The Recycler wants to support the ideas of Zero Waste, at present, Poprad activists want to focus mainly on projects related to waste treatment and distribute original products made by small and large producers. Through the e-shop, they offer, for example, a variety of utility and decorative items or clothing. In addition, the Recycler is dedicated to creating products from waste materials to order and creates a "Recyclopedia" - a waste encyclopedia with a detailed analysis of various products and ideas for recycling and upcycling. They also built their own Creative Recycling Center in Poprad, which is open every Wednesday from 17:00 to 22:00.

**Beneficiaries:** Recycler

**Output and results:** aims to spread the view of waste as a valuable material for various types of products



## Circular cup

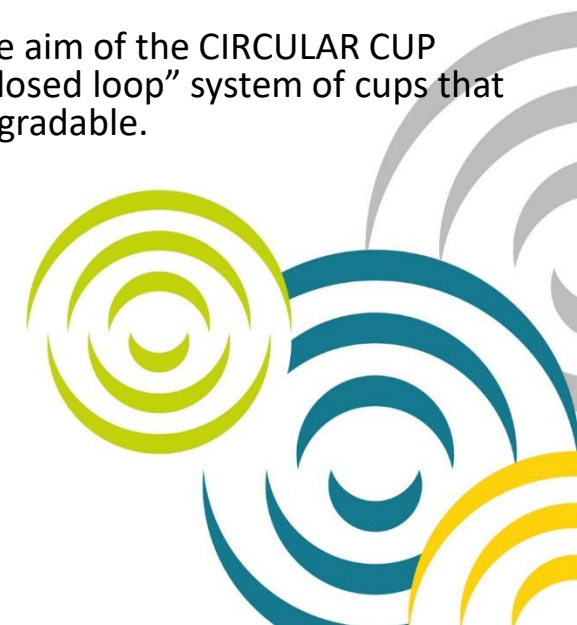
### Description

There were a unique 1000 pieces of reusable cups made of Nonoil material produced, which INCIEN will provide to small and medium-sized events for use during their course. We have created a manual for events to which INCIEN will provide cups Part of the project is the collection of data on the effectiveness of the system and material. Information and data will be further provided to Panara, as the manufacturer as well as STU, Department of Plastics, Rubber and Fibers at ÚPSP FCFT. The project was created with the support of the TESCO Endowment Fund.

**Beneficiaries:** Faculty of Chemical and Food Technology STU in Bratislava , Panara, Department of Plastics, Rubber and Fibers at ÚPSP FCFT, TESCO Endowment Fund

**Output and results:** The aim of the CIRCULAR CUP project is to create a "closed loop" system of cups that are reusable and biodegradable.

**Transferability:**





***Thank you!***  
***Bioeconomy cluster***  
***Košice Self-Governing Region***



# WP2: Best Practice Examples SLOVENIA

1<sup>st</sup> Webinar  
November 18, 2021



# Houses for young families and couples in rural areas of Slovenia

<https://backtothevillage-family.si/>

## Description

Due to the lack of housing and rising real estate prices, Institut Back To The Village had the idea to build villages with 50 prefabricated houses for young families and couples. Homes will have around 65 square meters and will cost about 50.000 €. The first pilot projects will be implemented in the Municipality of Ajdovščina and the Municipality of Lendava. As municipalities are expected to cede building land, this project is of more interest to smaller rural municipalities, where land prices are lower. For example, the Municipality of Ravne na Koroškem and the Municipality of Tišina also expressed their interest. The communal infrastructure will be co-funded with EU funds, donations, tenders and charity events. This project will enable young people to buy real estate in Slovenian rural areas affordably. There would also be a small shop in the settlement, offering local products and thus promoting the local economy.

**Beneficiaries:** young families and couples

**Output and results:** at least two villages with 100 houses in this stage

**Transferability:** other rural localities



# Innovative Young Farmer, Slovenia

<https://www.kgzs.si/imk>

## Description

Each year the Chamber of Agriculture and Forestry of Slovenia and the Association of Slovenian Rural Youth organize the selection of Innovative Young Farmer. Candidates must live and work on a farm and be under 40 years of age. The goal of selection is to promote and disseminate the innovative idea, which makes an important contribution to the preservation and development of agriculture, forestry, and fisheries. Also, at least one indicator must be distinguished. Indicators are:

- The idea brings innovations important for further development.
- The idea brings original approaches to work.
- That the changes introduced are reflected in the positive economic effects on the farm.

The title is awarded to the candidate who receives the highest number of points by the expert commission and online voting. Candidates and their ideas are promoted on different channels (TV shows, Youtube, social media etc.).

**Beneficiaries:** young innovative farmers

**Output and results:** supporting innovation among young people in the field of agriculture, forestry or fisheries and encouraging knowledge transfer and promoting title winners with video presentations, dissemination of their ideas, promotion of agriculture itself, young farmers' courage and innovative farming ideas.

**Transferability:** skill transferability across farming environments





# Youth-led entrepreneurship in agriculture (example of youth-centered rural transformation)

## Hiška v Biljah / Tiny House

- sustainable gardening (that includes ideas of permaculture and biodynamics)
- Arrangement of home so that it produces little garbage and small amount of waste water and consumes little other resources
- They established a firm called Zavod Obilje and manage a website with all resources needed to begin as a sustainable gardener (books and multimedia content). They also organise workshops on their garden.



## Hiša Mandrova

- Moved to remote rural area after successful career in Amsterdam
- They renovated a house which was built as a school in 1953
- The use of wood fiber insulation, locally sourced wood and a combination of lime and clay plasters.
- combining traditional knowledge of regenerative agriculture and woodworking
- With their story they wish to inspire young people to start producing their own food and to teach about local woodworking heritage.
- Website: traditional woodmaking and gardening workshops, artists' installation
- their project was initially sponsored by Ministry for Culture and EU Cohesion Fund through Centre for Creativity.
- Their unusual lifestyle has been presented in different magazines, TV and radio shows → inspiration to many young people from cities



## Description

Living Lab acts as an international science, industry, policy and civil society hub and an innovation platform that facilitates discussion on the development, testing and implementation of creative and innovative ideas, concepts and policies addressing challenges of the **wood-based value chain and its role in a circular economy**. Users directly contribute to value creation and are integral to the development process through Living Lab activities. Living Lab InnoRenew provides an opportunity for members to work together to jointly develop new ideas, products and services.

**Beneficiaries:** 24 members from SLO (+96 members from other 28 countries), users of the outputs

**Output and results:** joint R&D projects, new products and processes

**Transferability:** other bio-economy sectors

Living Lab InnoRenew accelerates Slovenia's development of scientific excellence in a wide range of fields related to renewable materials:



***Thank you!***

***Tanja Berglez & Špela Flegar, ŠTP***  
***Peter Kumer, MIZS***  
***Mateja Novak, Anteja ECG***



# Best Practice Examples Austria

1<sup>st</sup> Webinar  
November 18, 2021





## Regional funding scheme related to Upper Austria's S3 strategy: Cluster Cooperation Project on Dry fermentation reactor, coordinated by the Cleantech-Cluster

<https://www.cleantech-cluster.at/kooperationen/cluster-kooperationsprojekte/detail/cooperation/trockenfermentationsreaktor/>

### Description

Development of a modular and stationary dry fermentation reactor in concrete construction to produce biogas from municipal waste in markets with warmer climates. Its design should enable municipal waste to be fermented without causing the problems of the existing biogas industry (especially with regard to susceptibility to impurities).

### Beneficiaries:

reduce susceptibility of plants to faults and increasing the effectiveness of biogas plants => Involved Companies

### Output and results:

2, 3 or more reactors

**Transferability:** all biogas plants with municipal waste



© pixabay

# From fly to fish

[Von der Fliege zum Fisch \(lebensmittel-cluster.at\)](http://lebensmittel-cluster.at)

## Description

Supposed biogenic waste becomes feed for larvae, which are pressed in a new process and thus become sources for three further value chains. As the main theme of the project, the larval protein becomes high-quality feed for juvenile fish and becomes a sustainable alternative to common feed, which until now has mainly been produced from fish meal from the by-catch of international deep-sea fishing. This results in regional, sustainable upcycling instead of the exploitation of resources.

## Beneficiaries:

Fish farming, animal feed production, waste management of biogenic waste,

**Output and results:** high-quality feed for Animals

**Transferability:** Regional to global sustainable food and feed value chains



© pixabay



# BioBASE - Innovation platform for bioeconomy and circular economy

<https://biobase.at/>

## Description

This platform serves as a central information hub for economy, research, local administration and politics and brings all the information and people together.

## Beneficiaries: Stakeholders of Bioeconomy

- Initiate and coordinate research projects
- Networking of knowledge and actors
- Identification of current & future research questions
- Awareness measurements

## Output and results:

A competence map, a database listing ongoing national (and subsequently also international) activities and actors in the field of bio and circular economy.

**Transferability:** other regions



# Biorefineries in the bioeconomy of the future

[Project Task 42ff \(wood-kplus.at\)](http://wood-kplus.at)

## Description

The IEA Bioenergy Task 42 "Biorefineries in the Bioeconomy of the Future" pursues the strategic goal of advancing the establishment of biorefineries. In biorefineries, biomass is processed into a range of marketable bio-based products and energy through process integration. This combined production of products and energy from biomass represents a sustainable system solution that does not rely on fossil raw materials and supports the circular economy.

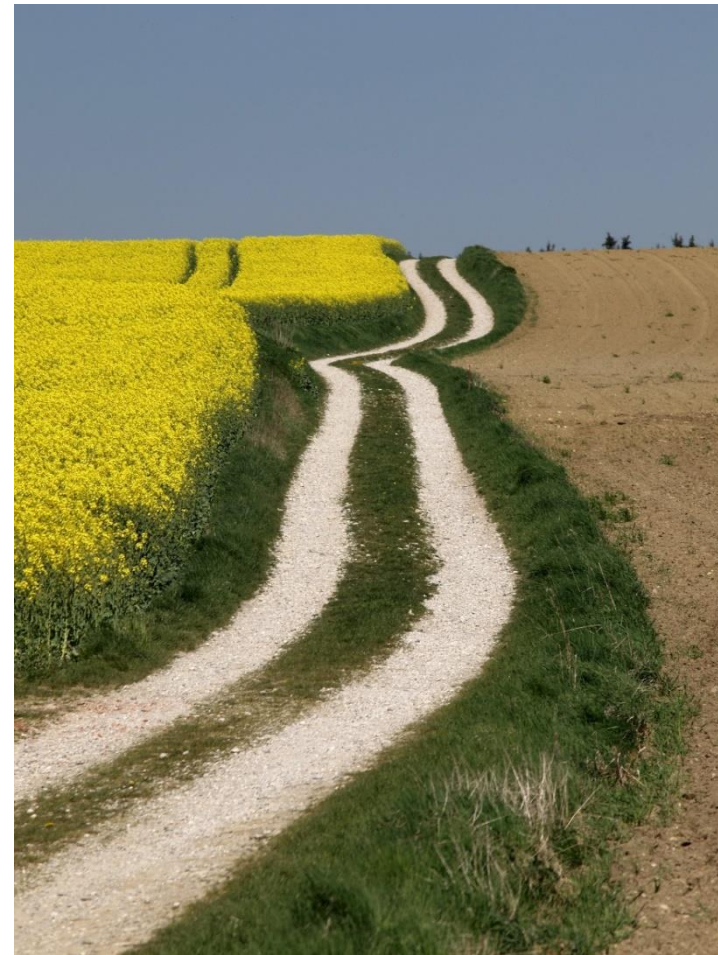
## Beneficiaries: Biorefinery Actors

Biorefineries can significantly reduce the emission of climate-relevant emissions and make an active contribution to sustainable development

## Output and results:

An open-access tool for the assessment of biorefineries was developed, which systematically supports a TEE analysis (Technical/Economic/Environmental Assessment) of biorefinery processes. The results of the analysis of biorefinery processes in the form of case studies were summarised in so-called "Biorefinery Factsheets".

**Transferability:** Biorefinery Actors of other regions, Countries;



© pixabay



## Description

The aim of the ÖKOLOG programme is to encourage and motivate schools to become active in the field of environmental education. Step by step, concrete topics such as saving energy, avoiding waste, ecological school grounds design, healthy snacks, etc. are made visible at the schools. At the moment in more than 600 ÖKOLOG schools of all school types and 10 teacher training colleges teachers, students and pupils learn and work together on environmental and bioeconomic themes.

## Beneficiaries: Pupils, Teachers;

Support schools

**Output and results:** they serve as an information hub, but also offer workshops or provide materials

**Transferability:** other regions and schools



© ÖKOLOG

# Model region for biobased circular economy in MELK & SCHEIBBS

<https://modellregion-melk-scheibbs.at/>

## Description

The Municipal Environmental Associations (GVU) Melk and Scheibbs are applying to become an Austrian model region for bio- and circular economy.

## Beneficiaries:

Educational and research institutions, essential companies and 58 municipalities are developing concepts and projects for a sustainable region.

## Output and results:

From green gas, from microplastic reduction to climate positive farms, the range of initial projects is wide and will continue to grow.

## Transferability: other regions

### Funded By

Klima- und Energie-Modellregionen - KEM Bioökonomie/Kreislaufwirtschaft -  
Klima- und Energiefonds - Klima- und Energiefonds (klimafonds.gv.at)



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***Thank you!***  
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