



**Interreg**



EUROPEAN UNION

**Danube Transnational Programme**

**DanuBioValNet**

# Regional cluster landscape Slovakia

**WP3 Value Chain Mapping**

**Activity 3.2 Cluster Mapping**

**Output 3.2 Cluster Mapping as an Analytical Tool**

**D3.2.1 Regional cluster landscapes and one entire cluster landscape for Danube Region**

***Cross-clustering partnership for boosting eco-innovation  
by developing a joint bio-based value-added network for the Danube Region***



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## CLUSTER MAPPING FACT SHEETS

In the following the cluster mapping results of selected clusters and cluster initiatives in Slovakia in the field of Eco-Construction, Bio-based Packaging

and Phytopharmaceuticals are presented. Besides the mapping as such, additional informations are given about age, size, key objectives etc.

### ECO-CONSTRUCTION

#### Name of cluster organisation/initiative:

- Hemp Cluster
  - **Established year:** 2015
  - **Location:** Viničné, Slovakia
  - **Number of Members:** 32

#### Short Description of the Cluster:

Hemp Cluster was established with aim to create a platform and to support the development of hemp industry, which has a long tradition in V4 countries. The return of cannabis sativa in the V4 region is very important due to its versatility (food, cosmetics, land reclamation, production of papers), thus the cluster's objective is to establish the International Research-development Hemp

cluster in V4 region. Although there are 250 000 products in the world of cannabis sativa, the V4 countries produced only a handful of products. For this reason, Hemp Cluster also focuses on appropriate dissemination of information about cannabis sativa, its exploitation and benefits.

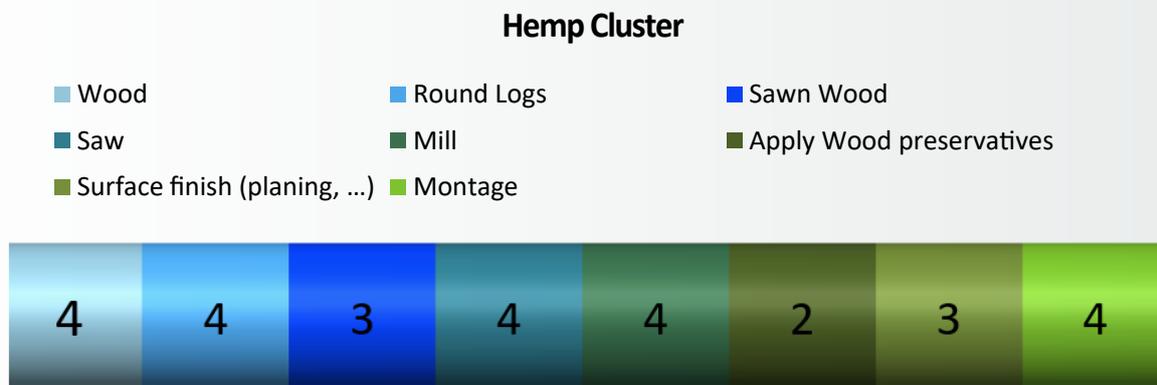
#### The basic preparing activities of Hemp Cluster for establishment of Research-development and business:

- Exchange of experience on the field days participating countries
- Trainings of professionals
- Research and mapping of the cannabis sativa 's development potential as a versatile and sustainable source in the V4 countries

#### Cluster Visual Map of value chains:

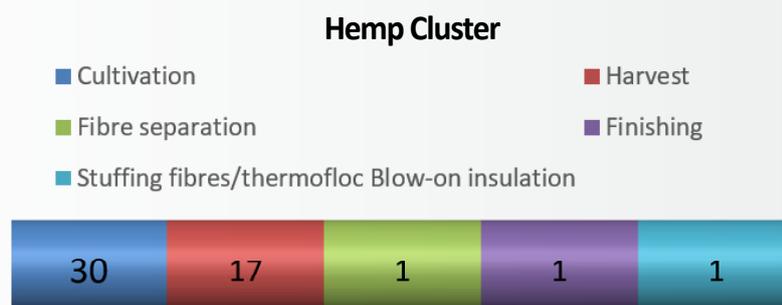
Cluster Visual Map is mapping the members of Hemp Cluster associated with the area of eco-construction (the numbers represent the amount of firms active in individual parts of value chain):

Picture 1: Value chain visualisation – Hemp Cluster



Numbers indicate amount of companies in the respective value-adding step.

Picture 2: Value chain visualisation – Hemp Cluster



Numbers indicate amount of companies in the respective value-adding step.



1



1

### 1 Hemp Cluster Slovakia

**Services offered by cluster organization/cluster initiative to support cluster members:**

The association is oriented towards following activities:

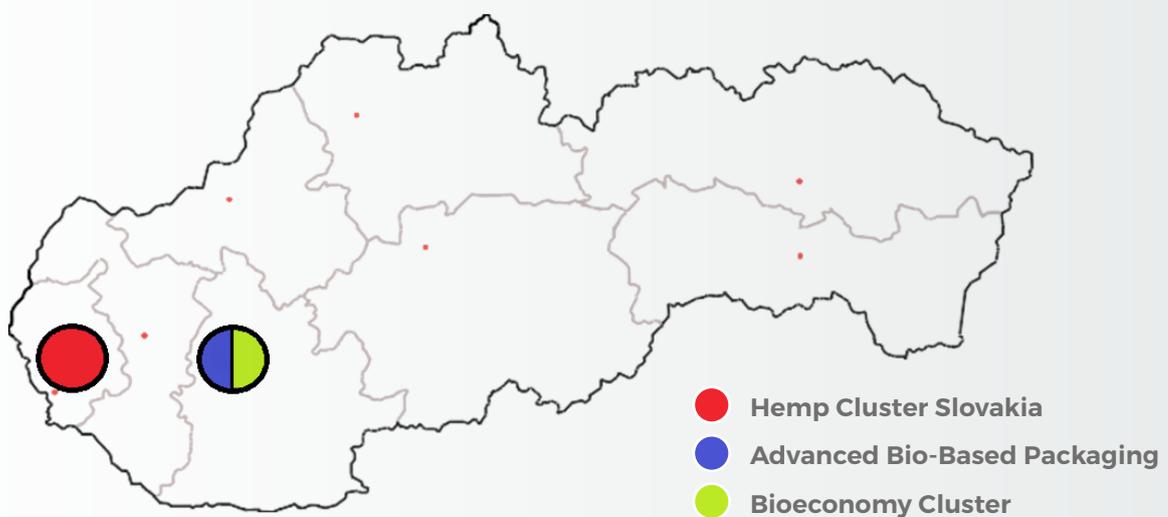
- Facilitation of collaboration between members/ facilitation of cross-sectorial cooperation
- Support of knowledge transfer
- Strengthening of external relations
- Support of skills for the labour market in relevant areas

- Slovak Technical University (Bratislava) – Research and Academia
- National Agricultural and Food Center (Lužianky) – Research and Academia
- AgroBioTech Center (Nitra) – Research and Academia
- Slovak University of Agriculture (Nitra) – Research and Academia
- Slovak Academy of Sciences (Bratislava) – Research and Academia
- Slovak Innovation and Energy Agency (Bratislava) – Policy
- Ministry of Economy of Slovak Republic (Bratislava) – Policy

**List and short description of other key actors in bioeconomy including those with strong cooperation between SMEs and research in your region/ country:**

- National Forest Centre (Zvolen) – Research and Academia

**Visual Map of the country/region with hot spots/regional agglomerations/active clusters:**



## ADVANCED BIO-BASED PACKAGING

### Names of cluster organisations/initiatives:

- Slovak Plastic Cluster
  - **Established year:** 2009
  - **Location:** Nitra, Slovakia
  - **Number of Members:** 29

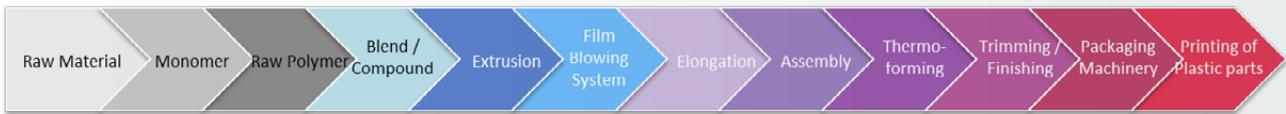
### Short Description of the Cluster:

Slovak Plastic Cluster (SPK) is interest association of independent legal entities and related institutions, which are regionally and sub-regionally connected with potential of increasing of their competitiveness and economic growth. The cluster was found as initiative of non-governmental entities in plastics production sector. The associated companies are competitors on one hand, on the other hand, they need to solve the same kind of problems and share the same resources. Slovak Plastic Cluster supports partnership between companies and

education institutions (schools), mainly focused on the real development of dual education plastics and rubber processing sector. It also searches for partners to cooperate in various types of projects, e.g. common trade fair visits, common booths at fairs, presentations and commercial visits that bring new opportunities for cooperation. In relation to bio-based industry, Slovak Plastic Cluster also deals with biodegradable plastics. Within the project, called "Biodegradable materials and their processing" the cluster is testing the processing of biodegradable material using the technology of injection moulding. The co-authors of the project are the Institute of Polymer of Slovak Academy of Science and the Institute of polymer materials of Faculty of chemical and food technology of Slovak Technical University.

### Cluster Visual Map of value chains:

Cluster Visual Map is mapping the members of Bioeconomy Cluster associated with the area of phyto-pharmaceuticals (the numbers represent the amount of firms active in individual parts of value chain):



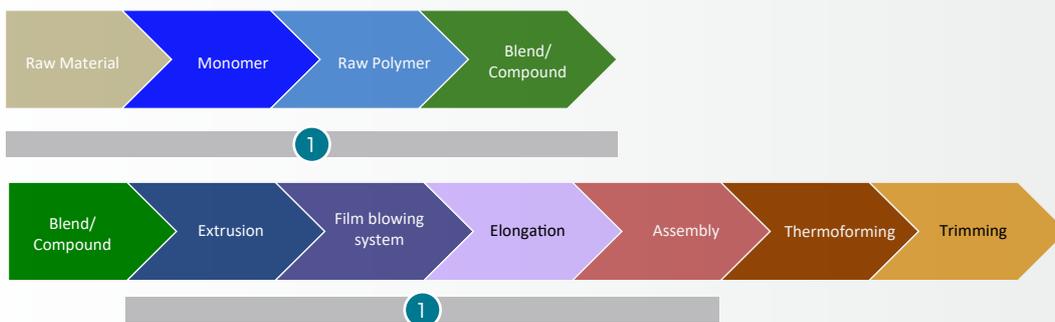
Picture 3: Value chain visualisation – Plastics Cluster UA

### Slovak Plastic Cluster

- |                 |                        |                       |                             |
|-----------------|------------------------|-----------------------|-----------------------------|
| ■ Raw Material  | ■ Monomer              | ■ Raw Polymer         | ■ Blend/Compound            |
| ■ Extrusion     | ■ Film Blowing System  | ■ Elongation          | ■ Assembly                  |
| ■ Thermoforming | ■ Trimming / Finishing | ■ Packaging Machinery | ■ Printing of plastic parts |



Numbers indicate amount of companies in the respective value-adding step.



### 1 Slovak Plastic Cluster

**Services offered by cluster organization/cluster initiative to support cluster members:**

The association is oriented towards following activities:

- Support of networking/clustering
- Increase in capacity and skills of suppliers
- Strengthening of external relations (export) and development of new production projects
- Support of skills for the labour market in the strategic areas of plastics processing sector
- Increase of connections between research and company needs

## PHYTOPHARMA

**Name of cluster organisation/initiative:**

- Bioeconomy Cluster
  - **Established year:** 2015
  - **Location:** Nitra, Slovakia
  - **Number of Members:** 16
- Hemp Cluster (described above)

**Short Description of the Cluster:**

Bioeconomy Cluster is an association of legal entities established with the aim to promote cooperation, networking and knowledge transfer among its members, which include mainly the representatives of business sector (SMEs operating in the sector of agriculture, food, forestry and also in

more sophisticated areas, such as eco-construction, phytopharmaceuticals and bio-polymers), R&D actors, academia, as well as tertiary sphere. Despite the fact that Bioeconomy Cluster (BEC) is a young organization that was established in 2015, it was formed several years, whereby the representatives have worked in this field for more than 10 years. Moreover, the cluster has already actively engaged in European and national policies, but mainly in networking and supporting the SMEs. Recently, BEC was benchmarked by the "European Secretariat for Cluster Analysis" and subsequently awarded with the European Cluster Management Excellence Label in Bronze.

**Cluster Visual Map of value chains:**

Cluster Visual Map is mapping the members of Bioeconomy Cluster associated with the area of phytopharmaceuticals (the numbers represent the amount of firms active in individual parts of value chain):

**Picture 4: Value chain visualisation – Bioeconomy Cluster**

### Bioeconomy Cluster

- |   |                                   |
|---|-----------------------------------|
| ■ Cultivation                                 | ■ Harvesting                      |
| ■ Storage / Transport / Trading               | ■ Analysis / Testing / Developing |
| ■ Pretreatment (Drying, Grinding, Separation) | ■ Extraktion (Solid-Liquid,..)    |
| ■ Purification                                | ■ Formulation / Capsuling         |
| ■ Packaging                                   | ■ Sales                           |



Numbers indicate amount of companies in the respective value-adding step.

**Services offered by cluster organization/cluster initiative to support cluster members:**

The association is oriented towards following activities:

- Support of the exchange of innovation including organization of trainings, workshops, events on national/ international level mainly through international projects (e.g. DanuBioValNet)
- Support of R&D actors and technology transfer/ knowledge transfer
- Support of competitiveness and internationalisation of SMEs
- Support of networking/clustering
- Facilitation of collaboration between members

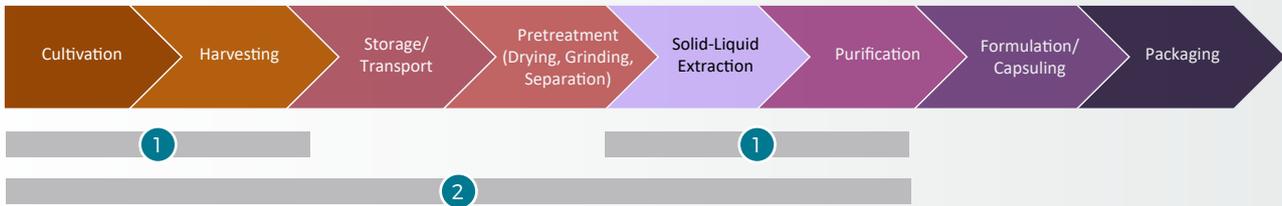
Picture 5: Value chain visualisation - Hemp Cluster

### Hemp Cluster

- Cultivation
- Harvesting
- Storage / Transport / Trading
- Analysis / Testing / Developing
- Pretreatment (Drying, Grinding, Separation)
- Extraktion (Solid-Liquid,..)
- Purification
- Formulation / Capsuling
- Packaging
- Sales



Numbers indicate amount of companies in the respective value-adding step.



- 1 Bioeconomy Cluster Slovakia
- 2 Hemp Cluster Slovakia

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