



National results from the analysis on “High-level study of regional dynamics” - Poland

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Article information

Title	National results from the analysis on "High-level study of regional dynamics" - Poland
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Brief summary	Poland has a strong potential in the production of raw materials, especially from agricultural and forestry sectors. It has a leading position in EU regarding the largest utilised agricultural area, and one of the largest areas of wooded land and growing stock of forests. Poland is also one of the leaders in the EU in animal breeding. Due to its highly developed primary sectors of the economy and food processing, as well as its large population, Poland produces a large amount of bio-waste, which has great potential for use, both to create innovative products and to produce bioenergy.
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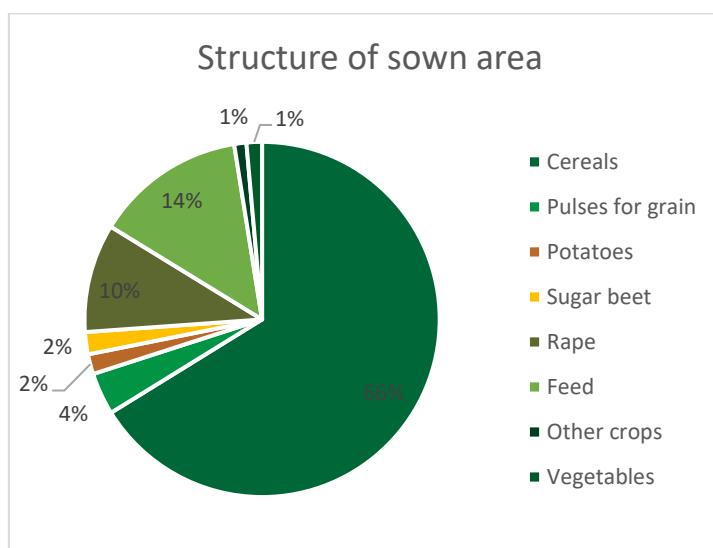
National results from the analysis on “High-level study of regional dynamics” – Poland

Poland is located in Central Europe, bordering Russia and Lithuania to the north, Belarus and Ukraine to the east, Slovakia and the Czech Republic to the south, and Germany to the west. Poland's northern border is marked by the Baltic Sea coast. The country has an administrative area of 312,696 km² and a population of 37,636,508 people, which gives population density of 120.36 inhabitants per km².



Agricultural sector

In 2020, Poland had 14,952,885 ha of agricultural land, of which 11,149,636 was arable land. Almost 50% of the agricultural area constitute cereal crops. There are more than 1.3 million agricultural holdings in Poland, with highly differentiated areas: 39,000 holdings with area of more than 50 ha, 106,000 holdings with area between 20 and 50 ha, 485,000 holdings between 5 and 20 ha, 662,000 holdings between 1 and 5 ha and 26,000 holdings with an area up to and including 1 ha.



Animal husbandry sector

The animal husbandry sector in Poland is mostly focused on the breeding of cattle, swine and poultry, but there are also other animals such as goats, sheep, horses and others.

Error! Reference source not found. **Population of the main livestock in Poland.**

Country	Cattle	Swine	Poultry	Sheep	Goats
Poland	6,267,461	9,769,697	218,302,793	270,492	60,897

Livestock population in 2023 (Source: Central Statistical Office).

Forestry sector

Poland is at the forefront of Europe in terms of forested area. Currently, Poland's forests cover 9.2 million hectares, which gives coverage of 29.6%. The ownership structure of forests is dominated by public ownership. Forests and forest land constitute one of the most important and valuable natural objects under legal protection. According to data from the Central Statistical Office, 42.2 million m³ of timber were harvested in Poland in 2021, i.e. by 6.5% more on an annual basis. Timber harvesting in Poland is dominated by coarse wood (40.7Mm³) - a share of approximately 96%. Small-sized timber, of which 1.6 Mm³ was harvested, is of marginal importance (4%).

Agroindustry

According to data from the National Support Centre for Agriculture (KOWR), the value of Polish food exports abroad in 2021 reached a record 37.4 B€, which gives a 9% year-on-year increase. More than 70% of Polish agri-food exports go to EU markets. Poland is a leading producer of fruit (apples, raspberries, blackcurrants, blueberries), meat (poultry, pork), dairy products and mushrooms.

Considering the high agricultural production and large afforested area, there is a high availability of biomass residues such as:

- Crop residues: stalks, leaves, husks, and straw that remain after harvesting wheat, rice, corn, sugarcane, others
- Animal manure: faeces, urine, bedding materials
- Harvest and processing waste: fruit peels, vegetable trimming, damaged or rejected produce, and by-products from food processing
- Green waste: trimmings, prunings, plant debris, leaves, branches, and grass clippings
- Forestry residues: branches, stumps, treetops, bark, sawdust, bark, sawmill slabs, sawdust, wood chips,

The large presence of residues and waste creates great potential for the development of various branches of the bioeconomy. There is a great potential for the development of the biogas sector, including the production of biomethane. The challenges are, for instance, technological limitations and improving product quality through the use of innovative solutions. Therefore, the directions adopted in the documents that may lead to a Polish development strategy for a circular bioeconomy are



concerned with the management of biomass throughout its life cycle, including processing, production of goods (food, feed, energy, etc.), sale of goods, their use and management of bio-waste.



References

1. *Forestry in 2021*, Central Statistical Office, access: 09.07.2024. [Online] Available at: https://stat.gov.pl/files/gfx/portalinformacyjny/pl/defaultaktualnosci/5510/3/3/1/lesnictwo_w_2021_r.pdf
2. *Agriculture in 2022*, Central Statistical Office, access: 09.07.2024. [Online] Available at: <https://stat.gov.pl/obszary-tematyczne/rolnictwo-lesnictwo/rolnictwo/>

Document information

Title BBioNets - Creation and promotion of Forest and Agriculture Networks to boost Bio-Based Technologies adoption and Value Chain development (GA No 101133904)

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Project overview BBioNets will constitute a thematic network that will rely on, promote, and further advance the work carried out by EIP AGRI Operational Groups (OGs) with respect to **management and/or processing of agricultural and forest biomass with Bio-Based Technologies (BBTs)**. The project will set up 6 regional Forest and Agriculture Networks - FANs (IE, ES, IT, GR, PL, CZ) that will identify local needs, prioritise specific BBTs and share BBT knowledge ready for practice to farmers and foresters, boosting the (re)definition of value chains, stimulating cross-fertilisation beyond borders, and bringing Europe to the forefront of farming, forestry, and bioeconomy with economically viable and sustainable practices.

Consortium



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