



POWER4BIO
REGIONS FOR
BIOECONOMY



POWER4BIO. CROSS - VIST TO MAZOVIA. 20-21 JANUARY 2021 ONLINE

Dr hab. Piotr Gradziuk – Polish Academy of Sciences, Institute of Rural and Agricultural Development

This project has received funding from the European Union's
Horizon 2020 research and innovation programme
under grant agreement No 818351



Assumptions and review of the bioeconomy development strategy for Mazovia





Idea (1)

„The Bioeconomy Strategy and its Action Plan aim to pave the way to a more innovative, resource efficient and competitive society that reconciles food security with the sustainable use of renewable resources for industrial purposes, while ensuring environmental protection”

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Innovating for Sustainable Growth: A Bioeconomy for Europe

(23. 05. 2012)

Idea (2)



„To be successful, the European bioeconomy needs to have sustainability and circularity at its heart. This will drive the renewal of our industries, the modernisation of our primary production systems, the protection of the environment and will enhance biodiversity”

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

A sustainable Bioeconomy for Europe: Strengthening the connection between economy, society and the environment

(11. 10. 2018)

UE Priorities



- **Closing the loop - An EU action plan for the Circular Economy, Brussels (2.12.2015);**
- **Clean Energy For All Europeans, Brussels (30.11.2016);**
- **Investing in a smart, innovative and sustainable Industry A renewed EU Industrial Policy Strategy, Brussels (13.9.2017);**
- **The Future of Food and Farming, Brussels (29.11.2017).**

COMMUNICATIONS FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS AND THE EUROPEAN INVESTMENT BANK

Nationals Documents



- **The Strategy for Responsible Development for the period up to 2020 (including the perspective up to 2030);**
- **Strategy for Sustainable Rural Development, Agriculture and Fisheries 2030;**
- **National Strategy of Regional Development 2030;**
- **Draft Energy Policy of Poland until 2040;**
- **List of the National Smart Specialisation (effective from 1st of January 2021).**

Regional documents



- **Regional Development Strategy of the Voivodeship Mazovia until 2030. Mazovia as an Innovative Region;**
- **Regional Innovation Strategy for the Voivodeship Mazovia until 2020;**
- **Spatial Development Plan for the Voivodeship Mazovia (December 19, 2018);**
- **Draft Regional Innovation Strategy for the Voivodeship Mazovia until 2020 (version of September 16, 2020).**

Selected indicators characterising the bioeconomy potential of the Mazovian Voivodeship in 2018 (1)



No.	Indicator	Poland	Mazovian V.
1.	Students per 10,000 inhabitants	299,8	409,3
2.	Graduates per 10,000 inhabitants	81,9	104,7
3.	Employed in research and development per 1000 economically active persons	7,7	16,7
4.	Enterprises which have incurred outlays for innovative activities as % of all enterprises in the industry	31,1	33,1
5.	Expenditure on research and development activity per 1 inhabitant in PLN	668	2 959
6.	Outlays on R&D activity - relation to (GDP) in %	1,03	1,78

Potencjał Woj. Mazowieckiego (2)



No.	Indicator	Poland	Mazovian V.
7.	Agricultural area per capita in hectares	0,38	0,40
8.	Purchases of agricultural products in terms of cereal units/ha UAA	42,9	53,6
9.	Cattle per 100 ha of UAA	42,3	53,7
10.	Production of slaughter livestock in terms of meat in kg/ha UAA	374,1	536,7
11.	Production of milk in l/ha UAA	939	1 408
12.	Forest cover in %	30,9	23,4

Mission



Mazovia - the bioeconomy leader in Poland

Vision



Mazovia will become a region:

- with a significant contribution of biomass use to the development of a closed-circuit economy,
- developed in accordance with the principles of sustainable development,
- in which innovative bioeconomy technologies and associated industries will be developed, enabling the bioeconomy to become more efficient,
- economically competitive, with an environmentally aware society.

Strategic goals



- 1. Efficient management of resources in line with sustainable development principles,**
- 2. Increased use of renewable biological resources in high added-value sectors,**
- 3. Contribution to the implementation of the climate policy,**
- 4. Strengthening the research potential of scientific entities and development of cooperation in relations between business, science and the environment,**
- 5. Shaping and promoting pro-environmental and pro-health consumer behaviour.**

1. Efficient management of resources in line with sustainable development principles



1.1. Agriculture and fishery,

1.2. Forestry,

1.3. Waste Management,

1.1. Agriculture and fishery

- 1.1.1. Rational use of agricultural production space and maintaining production potential of soil and waters,**
- 1.1.2. Production of raw materials with quantitative and qualitative parameters desired by consumers and industry,**
- 1.1.3. Limitation or elimination of threats to the natural environment and care for the preservation of biodiversity,**
- 1.1.4. Improvement of the quality and accessibility of advisory services, integration and transformation activities in the agri-processing sector, and efficient use of the financial resources of the Common Agricultural Policy and the European Regional Development Fund.**

1.2. Forestry



1.2.1. Sustainable forest management,

1.2.2. Enhancing the role of forests and forest management in mitigating of the climate change,

1.2.3. Exploiting the pro-environmental and pro-social functions of forests.

1.3. Waste Management



1.3.1. Municipal waste including food waste and other biodegradable waste,

1.3.2. Post-consumer waste,

1.3.3. Sewage sludge.

2. Increased use of renewable biological resources in high added-value sectors

2.1. Processing of agricultural and animal products,

2.2. Wood sector,

2.3. Medical sector,

2.4. Biotechnological, chemical and environmental protection sector,

2.5. Energy sector.

2.1. Processing of agricultural and animal products



Selected measures:

- Production of quality food,
- Production of nutrition-intensive products,
- Processing of animal products to increase their nutritional value,
- Production and distribution of quality and innovative products, including traditional, regional and organic products.

2.2. Wood sector

Selected measures:

- use of technologies for extraction of bioactive compounds from forest benefits, wood industry waste, including coniferous trees, for use in the economy,
- dissemination of modern, biodegradable, reusable, dismantlable wood and wood-based packaging, paper, cardboard and carton.

2.3. Medical sector

Selected measures:

- Research and development of biological and biosimilar medicines production,
- Production of therapeutic substances of natural origin,
- Application of new technological solutions allowing to improve the assimilability of substances contained in dietary supplements and foodstuffs for nutritional uses.

2.4. Biotechnological, chemical and environmental protection sector



- 2.4.1. Use of innovative biotechnological processes for production of bioproducts,
- 2.4.2. Processing of biomass into specialised chemical products,
- 2.4.3. Bioproducts and speciality chemicals products,
- 2.4.4. Application of innovative biotechnological methods in environmental protection.

2.5. Energy sector

Selected measures:

- **Production of liquid biofuels, biocomponents, other chemical compounds of the second and subsequent generation,**
- **Development of technologies for energy management of waste in WTE processes.**

3. Contribution to the implementation of the climate policy



3.1. Reduction of greenhouse gas emissions and CO₂ bio-sequestration,

3.2. Energy production from renewable sources.

3.1. Reduction of greenhouse gas emissions and CO₂ bio-sequestration



Selected measures:

- Rationalization of nitrogen fertilization, proper storage and application of natural fertilizers, widespread cultivation of faba bean crops, use of nitrification inhibitors,
- Carbon sequestration in soil and biomass produced by agriculture and forestry,
- Development and dissemination of knowledge on climate-friendly practices.

3.2. Energy production from renewable sources

Selected measures:

- Improving the efficiency of biomass energy use,
- Implementation of innovative technologies for energy extraction from other renewable sources,
- Implementation of technologies for biomass or waste conversion into fuels with parameters allowing safe use in currently manufactured production units.

4. Strengthening of research potential of scientific entities and development of cooperation in the business - science - environment relations



Selected measures:

- **Integration of activities of the science, education and development sectors,**
- **Animation of cooperation between the science sector and business,**
- **Reducing uncertainty in the implementation of innovation and high-risk innovation projects,**

5. Shaping and promoting pro-environmental and pro-health consumer behaviour

Selected measures:

Promotion of healthy consumption patterns

Strategy implementation system



- **Team for updating and monitoring implementation of the Bioeconomy Development Strategy for the Mazovian Voivodeship,**
- **Working groups responsible for preparation, implementation and monitoring of strategic objectives:**
 1. **Efficient management of resources in line with sustainable development principles,**
 2. **Increased use of renewable biological resources in high added-value sectors,**
 3. **Contribution to the implementation of the climate policy,**
 4. **Strengthening the research potential of scientific entities and development of cooperation in relations between business, science and the environment,**
 5. **Shaping and promoting pro-environmental and pro-health consumer behaviour.**

Strategy financing system (1)



Own resources

- funds from the budget of the Masovian Voivodeship,
- funds from the budget of other local government units,
- state budget funds,
- private funds.

Strategy financing system (2)



Funds from the budget of the European Union and other international institutions

- Regional Operational Programme of Mazovian Voivodeship 2014 -2020 and 2021 – 2027,
- National Operational Programmes,
- Directly managed by the European Commission,
- Norwegian Financial Mechanism and European Economic Area Financial Mechanism,
- Tools using the resources of the European Investment Bank,
- Other international financial institutions.

Strategy financing system (3)



Other national resources

- Polish development fund,
- Bank Gospodarstwa Krajowego,
- Polish Agency for Enterprise Development,
- Korporacja Ubezpieczeń Kredytów Eksportowych S.A,
- Polish Investment and Trade Agency S.A,
- Industrial Development Agency S.A.,
- Non-governmental organisations.

System of monitoring and evaluation of the strategy



Coordinator of the monitoring system

(Department of Bioeconomy Development of the UMWM)

- The basic point of reference for the monitoring of the implementation of the Strategy is a set of indicators depicting the expected results of the implementation of the Strategy, relating to individual strategic and operational objectives.

Evaluation



Main objective of the evaluation

- 1) Have the records of the Strategy remained up-to-date after about three/five years?
- 2) What should be changed or supplemented in the next revision of the Strategy?
- 3) Has the position of the Masovian Voivodeship changed due to the implementation of the Strategy?

Thank you for your attention!

[Piotr Gradziuk]

[pgradziuk@irwirpan.waw.pl]



POWER4BIO
REGIONS FOR BIOECONOMY

This project has received funding from the European Union's
Horizon 2020 research and innovation programme
under grant agreement No 818351

