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Latvia University
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ZINĀŠANU IETILPĪGA BIOEKONOMIKA 2021

Labās prakses ieviešanas vadlīnijas aprites bioekonomikas attīstībai

Arnis Lenerts



BalticBiomass4Value

Scientific conference

16 December 2021

LLU Aula, Liela street 2, Jelgava

Agenda

- 1. The BalticBiomass4Value project**
- 2. Analysis of Circular Economy and Bioeconomy policies and strategies Support Measures at the EU and BSR level**
- 3. The research of the support measures used to develop CBE Business Cases in the BSR countries (business environment study)**
- 4. The Interactive BB4V project Online Portal**

1. The BalticBiomass4Value project



Raimond Klavins on Unsplash

The Baltic Sea Region (BSR) holds a great potential for circular bioeconomy development. Therefore, the BalticBiomass4Value project aims to enhance capacity of public and private actors within the BSR to produce bioenergy in more environmentally sustainable and economically viable way by utilizing new biomass sources (chiefly, biological waste) for energy production, as well as possibilities to use bioenergy side streams for higher value bio-products. Biomass from different sources (agriculture, food and feed industry, forestry, wood industry, municipal waste and sewage sludge, fishery, algae), its logistics, various biomass conversion technologies and value chains will be mapped to identify best practices of bioenergy generation and the potential of more efficient and sustainable deployment of biomass in the BSR.

Seventeen partners from Lithuania, Latvia, Estonia, Germany, Poland, Sweden, Norway and the Russian Federation will bring together the producers of biomass and bio-based products, as well as relevant public authorities and policy stakeholders for the implementation of the project.

The project will end on 31.12.2021.

Unlocking the Potential of Bio-based Value Chains in the Baltic Sea Region



17 partners in 8 BSR countries



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NIBIO NORWEGIAN INSTITUTE OF BIOECONOMY RESEARCH



Project of the Interreg Baltic Sea Region Programme 2014–2020
“Unlocking the Potential of Bio-based Value Chains in the Baltic Sea Region.”

Project Acronym: BalticBiomass4Value

Project Number: #R095

Report on good practice implementation guidelines for circular bioeconomy development and a training programme targeted at regional/local public authorities in the BSR

Arnis Lenerts, Aina Muška, Irina Pilvere

July 2021

Preface

This report is an output of the implementation of Work Package 3, Group of Activities 3.1 “Good practice implementation guidelines for circular bioeconomy development and a training programme targeted at regional/local public authorities” as specified in the latest approved version of the Application Form of the BalticBiomass4Value project.

For the implementation of the BalticBiomass4Value project, a subsidy was awarded from the European Regional Development Fund under the Interreg Baltic Sea Region Programme 2014–2020.

The sole responsibility for the content of this publication lies with the authors. The European Regional Development Fund is not responsible for any use that may be made of the information contained therein.

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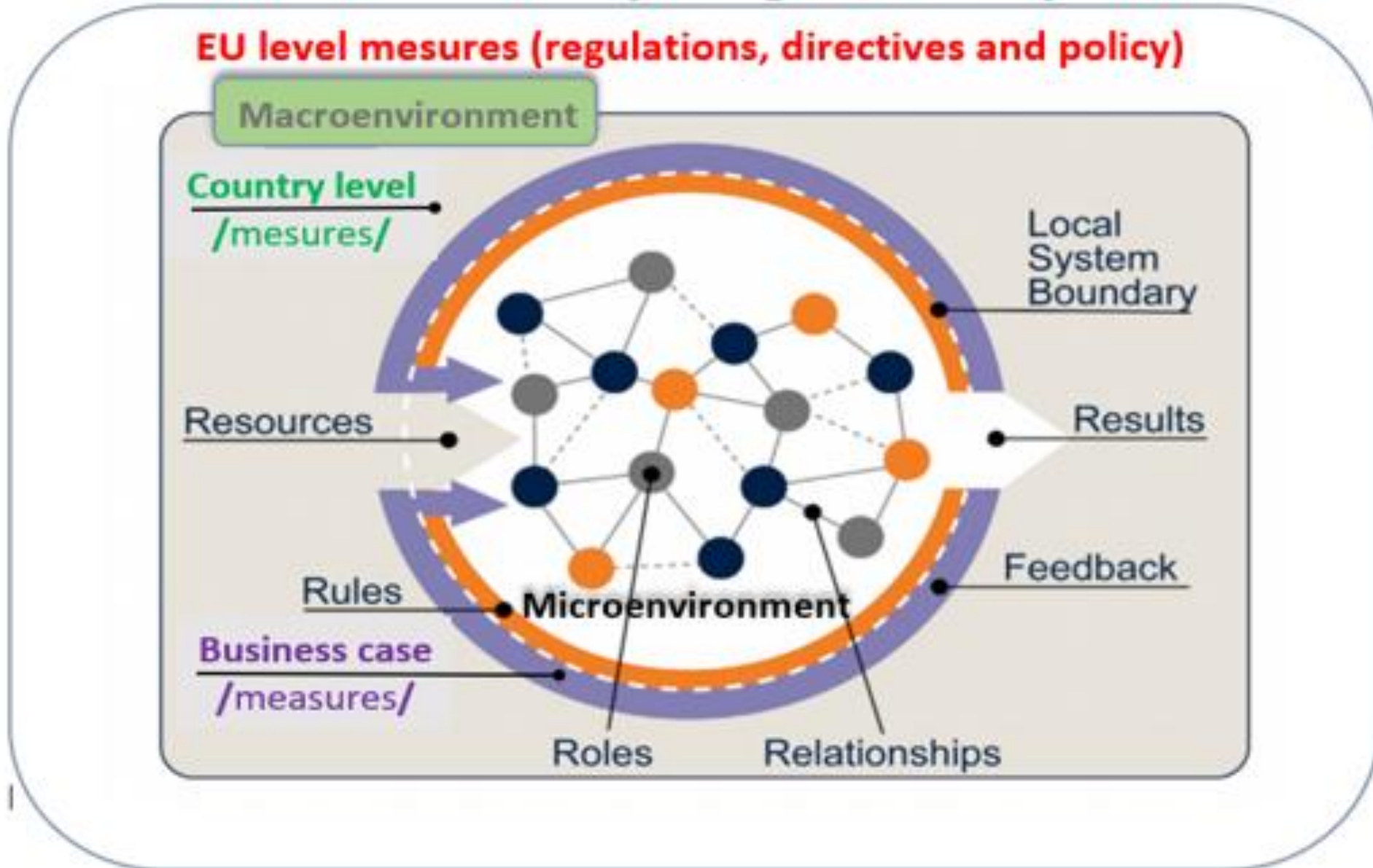
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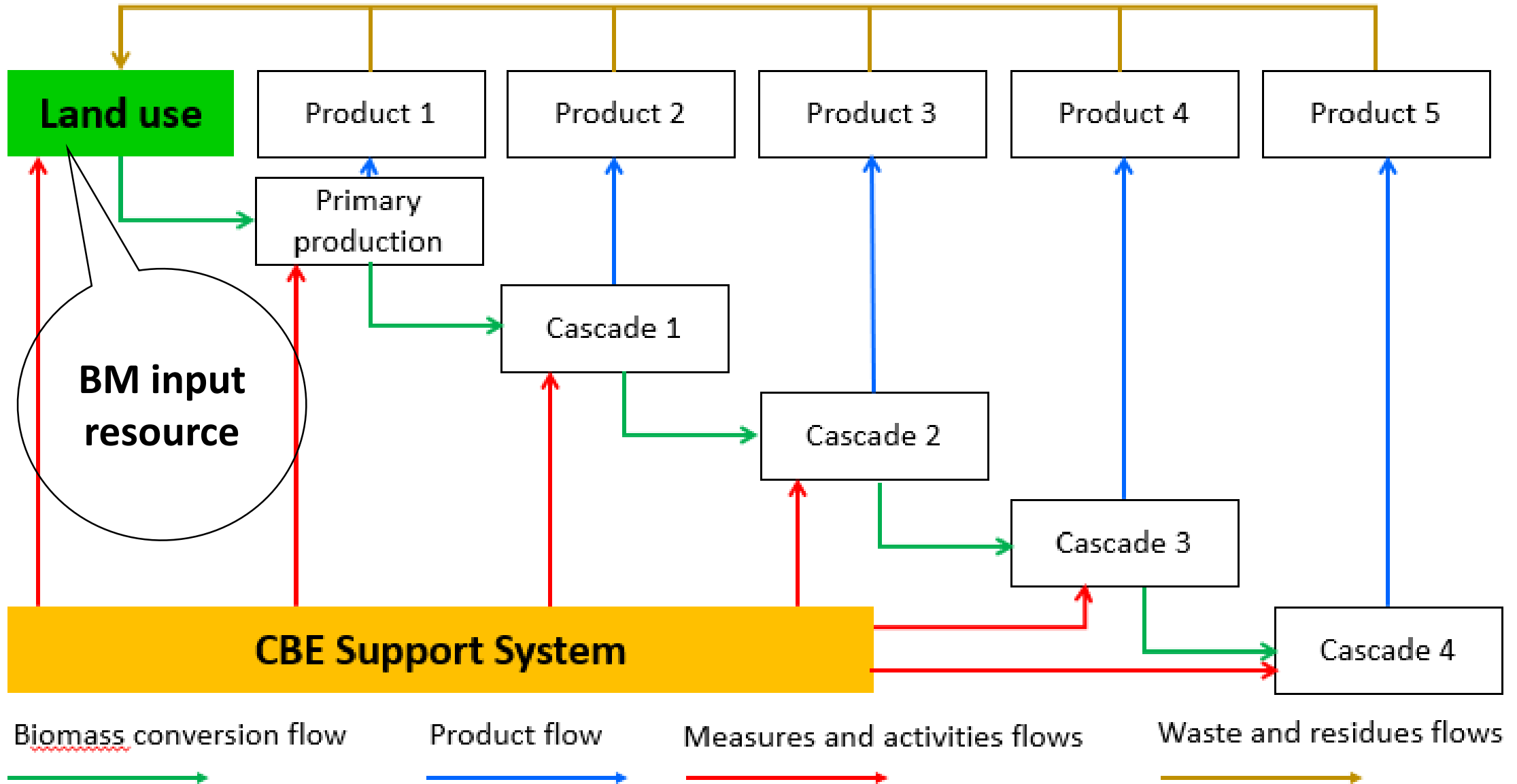
2. Analysis of Circular Economy and Bioeconomy policies and strategies Support Measures at the EU and BSR level

Direct and indirect CBE policies/strategies

Research environment for CBE policy documents



The Business Models (BM) value chain



Management mechanisms used by EU and national/local authorities to develop regional CBE

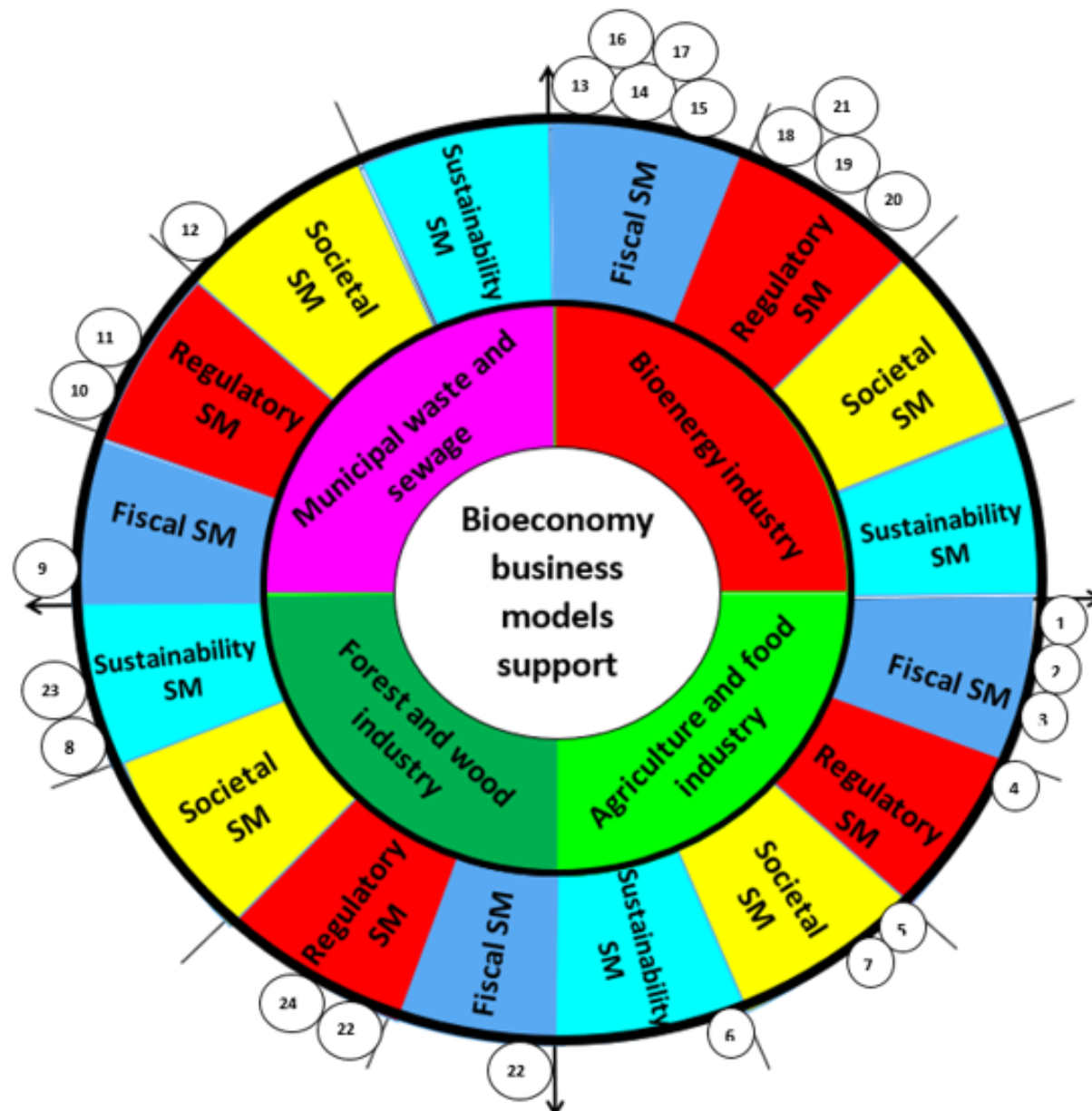
In order to better understand the **policy management process**, the **terms used in policy support documents** were **discussed** during the project:

- **Rules** - is a standard, statement or procedure, other than a policy or regulation, adopted by an public authorities. A Rule may supplement but not conflict with policies and regulations.
- **Support measures** – is a means any initiatives such as grants, rebates, exemptions and other forms of facilitation meant to make it easier for biobased sectors businesses to start up and operate.
- **Policy instruments** - are the tools which can be used to overcome problems and achieve objectives.

Project BB4V CBE impact policy means and SM implementation management

Impact policy means	Support Measures implementation management
<p style="text-align: center;">Fiscal</p>	CO ² tax
	Tax incentives / credits
	Market introduction programmes
	Remove subsidies on fossil fuel industries
	Fossil carbon tax
<p style="text-align: center;">Regulatory</p>	Implementation management focus area
	Quotas
	Mandates
	Bans
	Green Public Procurement
<p style="text-align: center;">Societal</p>	Harmonized sustainability assessments
	Labels
	Certificates
<p style="text-align: center;">Sustainability</p>	Obligatory GHG emissions goals for chemicals & materials
	Tighter environmental standards for chemicals & materials
	Self-committed Targets on bio-based
	Become part of a Renewable Carbon strategy

CBE Policy Analysis Diagram for Estonia



List of the SM (Estonia)

1. Support for investments in agricultural holdings to Production of bioenergy from biomass of agricultural origin (ERDP for 2014–2020).
2. Rebuilding of agricultural machinery to biogas or biofuel consumption (ERDP for 2014–2020).
3. Support is paid for SMEs investing in the production of higher value-added products.
4. Permitted to spread up to 170 kg of nitrogen (Water Act).
5. Big data knowledge transfer program (ERDP for 2014–2020).
6. Reduce ammonia emission 1% by 2030.
7. The purpose of the support is to develop national and international cooperation (ERDP for 2014–2020).
8. Greenhouse gas emissions from land use are compensated by an equivalent absorption of CO₂.
9. Supporting preparation for reuse and recycling in the amount of 18 mln €. (ERDF for 2014–2020).
10. 50% recycling target for municipal waste.
11. Requirements for manufacturing of products from sewage sludge.
12. According to end-of-waste criteria for biodegradable waste and sewage sludge the product has to be certified.
13. Zero tax for biomethane that is used in transport sector.
14. Support scheme for biomethane fuelling stations
15. Renewable Energy Subsidy.
16. Renewable energy charge.
17. Efficient production of heat.
18. 10% renewable energy in transport sector so called "Blending mandate".
19. Environmental requirements for fuels.
20. Guarantees of Origin for renewable electricity.
21. Promoting the usage of biomethane in transport sector.
22. Forest act.
23. PEFC Programme for the Endorsement of Forest Certification.
24. FSC Forest Stewardship Council as Regulatory.

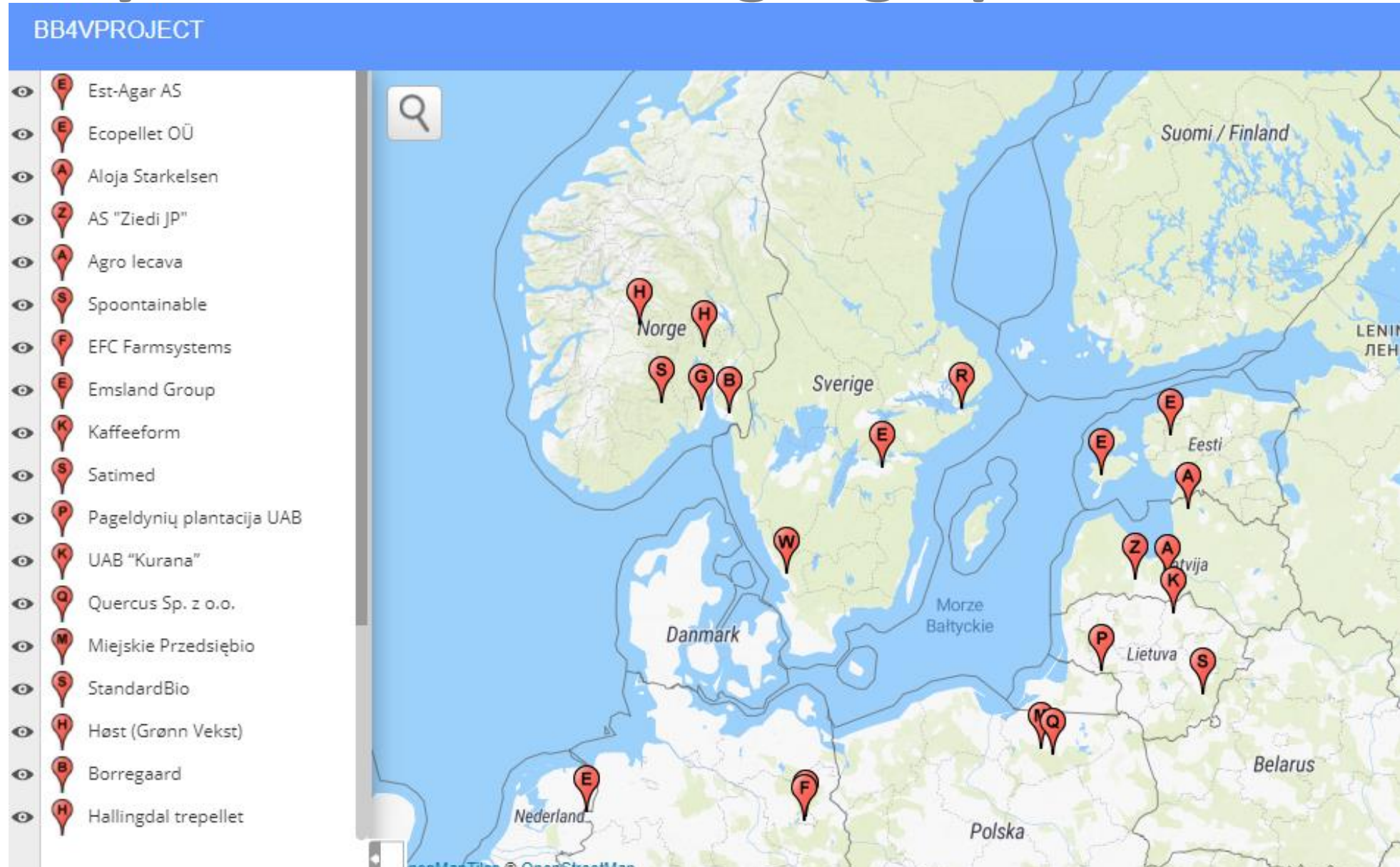
Overview of Available Information on CBE Policy SM as of September 2020 for each BB4V Project Country

Circular Bioeconomy policy measures status indicator		LT	LV	EE	DE	PL	SE	NO	Σ	
Bioeconomy funding programme	Biobased industrial sector									
	Bioeconomy R&I									
	Infrastructure investments									
	Other									
Educational programmes on the bioeconomy?										
Biobased industrial sector	Agriculture and food industry	Fiscal support measures	4	6	3	3	3	3	2	24
		Regulatory support measures	1	3	1	2	4	7	2	20
		Societal support measures		1	2		1	2	2	8
		Sustainability support measures		1	2	2	1	1	2	9
	Forest and wood industry	Fiscal support measures		2	1	1	4	3	3	14
		Regulatory support measures	3	1	2	2	4	3	2	17
		Societal support measures		1			1	2	1	5
		Sustainability support measures		1	2		1	2	1	7
	Municipal waste and sewage	Fiscal support measures		2	1	1	2	4	2	12
		Regulatory support measures	2	1	2	2	2		7	16
		Societal support measures		1	1	1		1	1	5
		Sustainability support measures		1			1	3	1	6
	Bioenergy industry	Fiscal support measures	5	2	5	2	4	3	4	25
		Regulatory support measures	2	3	4	4	4	5	4	26
		Societal support measures					1	3	2	6
		Sustainability support measures		1		1	2	3	1	8

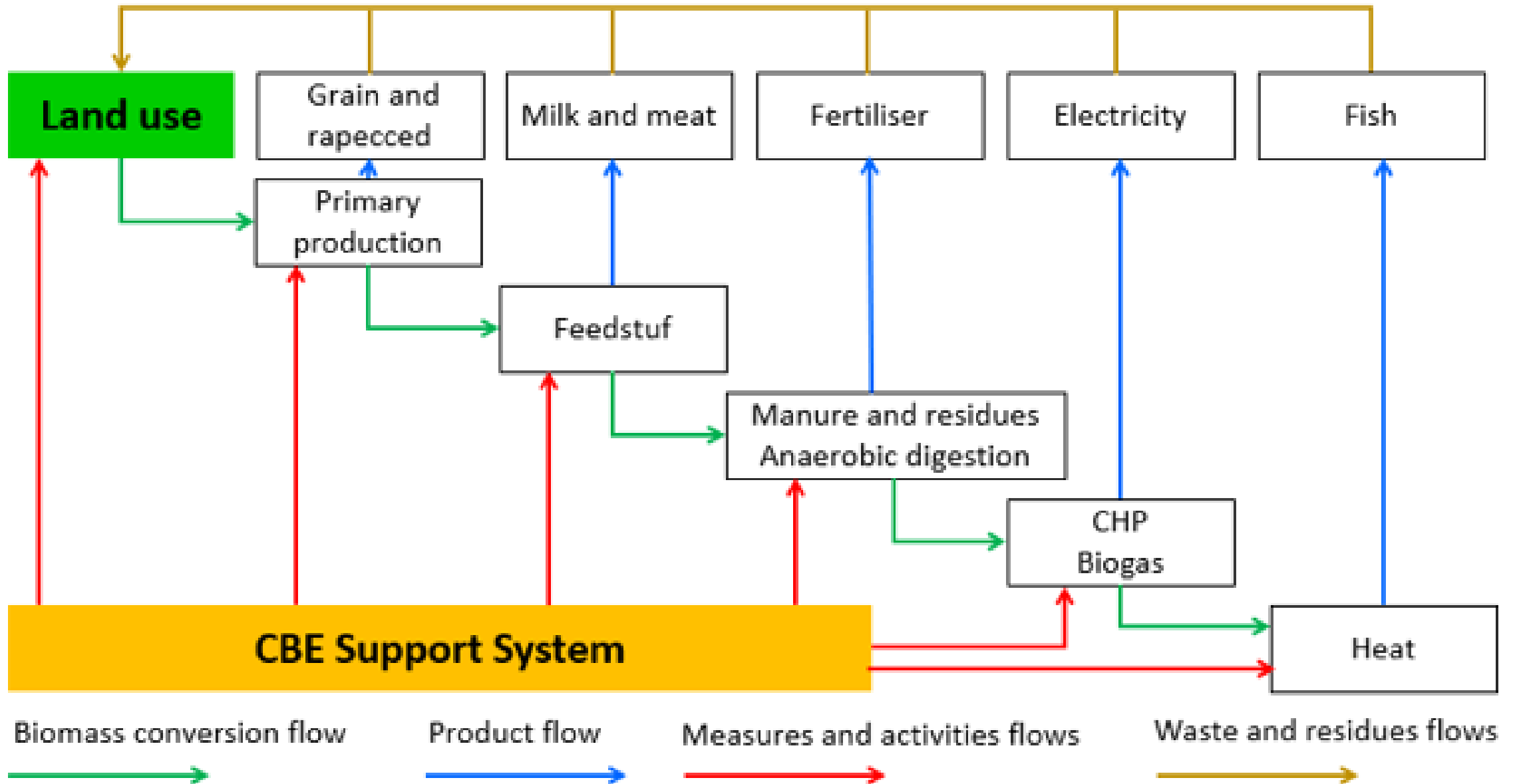
Source: authors' construction based on expert information and the FAOLEX Database

3. The research of the support measures used to develop CBE Business Cases in the BSR countries (business environment study)

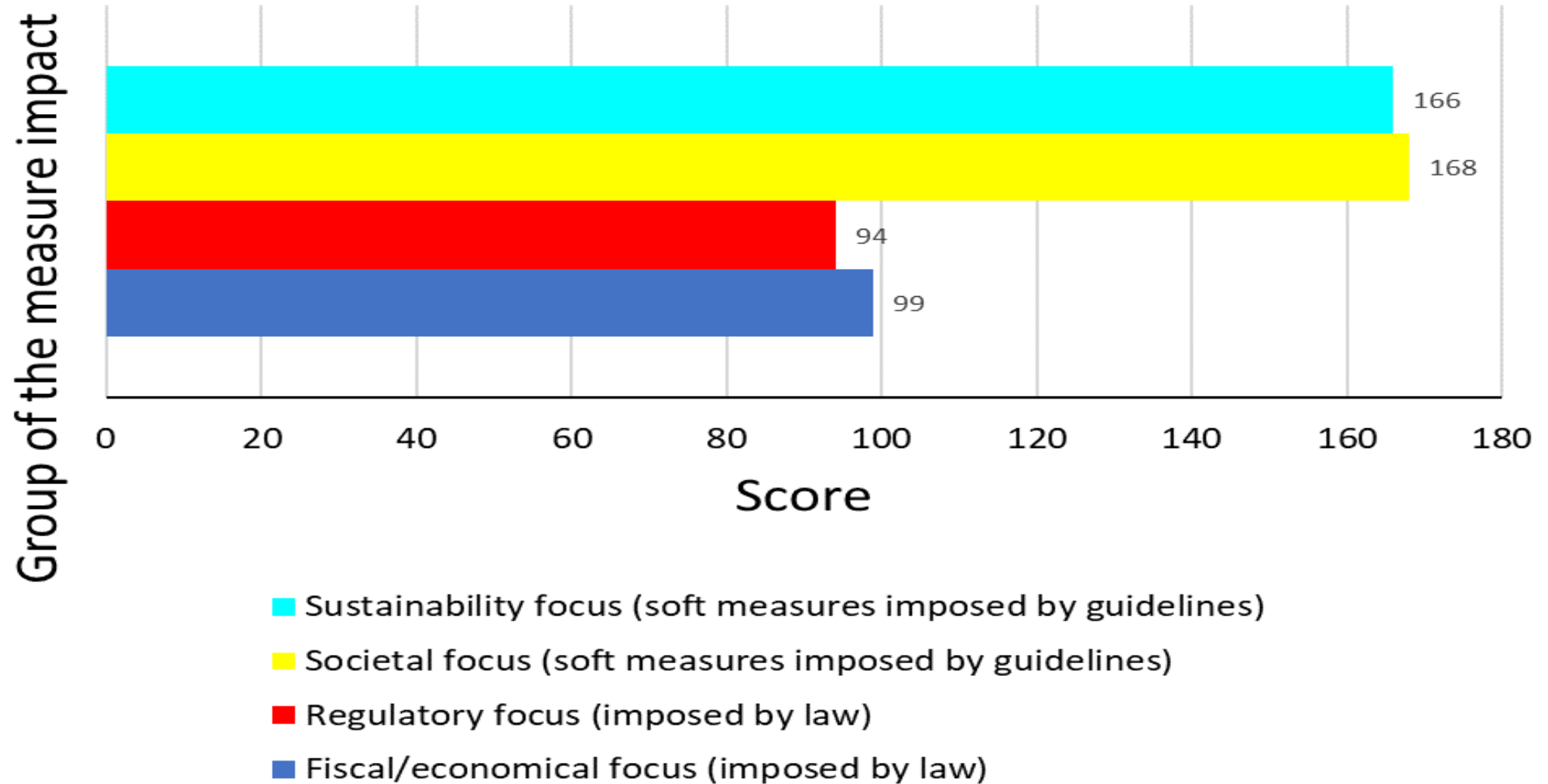
Analysed BC and their geographical location



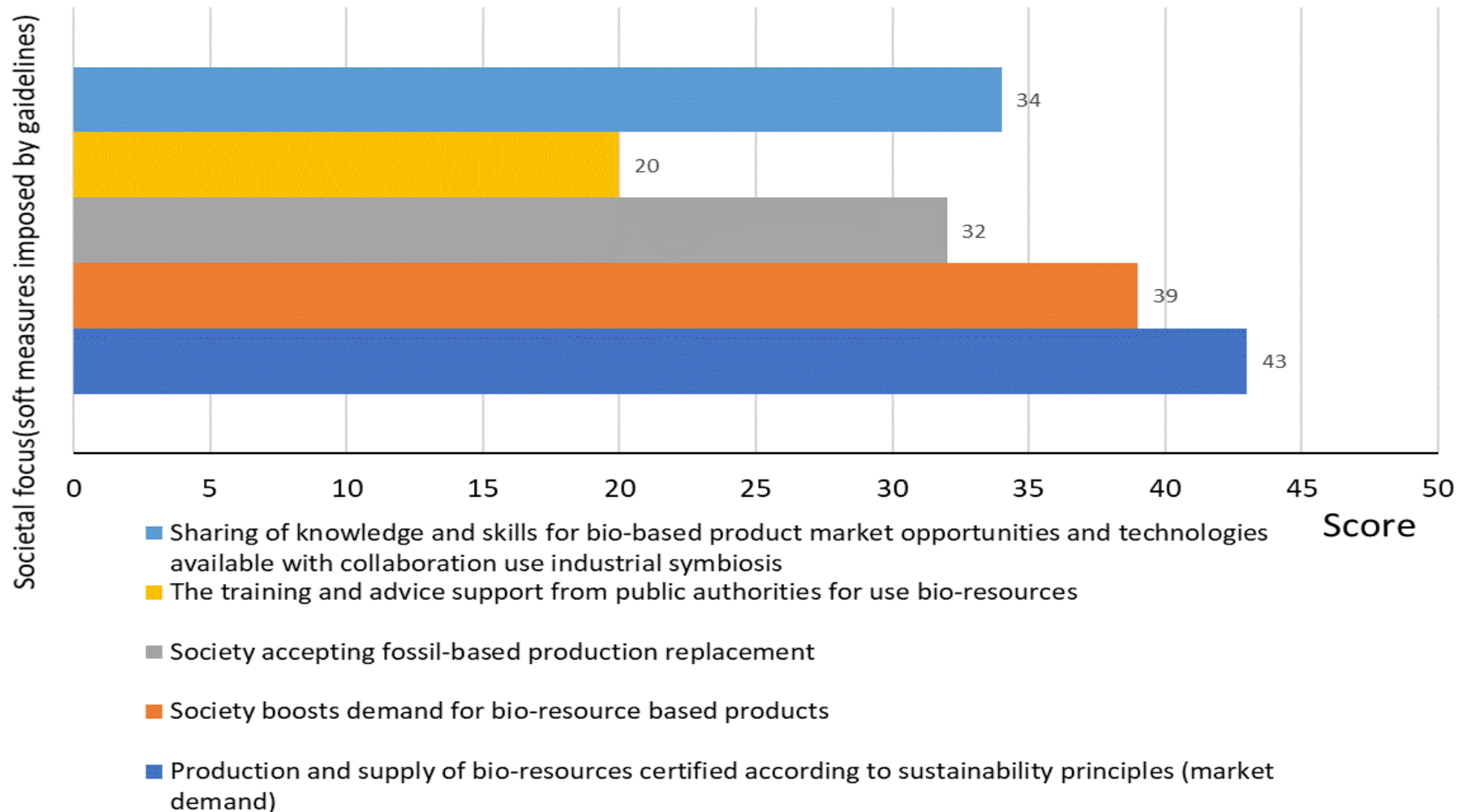
CBE BM in Agricultural Production



CBE BC SM macro environment assessment results



Societal CBE BC SM assessment results



Examples of CBE BC SM and Good Practice Implementation Based on Funding Schemes by Using EU Funds

Business Model		Circular Bioeconomy in Agricultural Production (BM6)
Country/Business Case		Latvia/ AS Ziedi JP
Implementation Aspects	Funding schemes that regional / local public authorities could launch for effective support of CBE development	The company has obtained bank loans for development and used the EU funds (EAFRD and EMFF) for a variety of projects. In addition, annual agricultural direct payments and national livestock subsidies are used. The initial investment for establishing circular production and biogas facilities has been more than EUR 10 million.
Business case support measure for impact policy instruments	Fiscal	<ul style="list-style-type: none"> -Taxation on noxious air-polluting emissions creates a synergy effect with CO₂ taxation. -Loans and guarantees for rural entrepreneurs (4%). -Promotion of the use of advice and services (LRDP for 2014–2020). -Support for investment in agricultural holdings: investment in recycling and infrastructure (LRDP for 2014–2020).
	Regulatory	<ul style="list-style-type: none"> -Management of nitrate use in vulnerable territories. -Improvement of manure management systems. -National categories of goods and services for which mandatory application of green procurement is stated. -Feed-in tariffs for renewable electricity and for combined heat-power (CHP) production. -Promotion of self-generation and self-consumption of energy.
	Societal	-Sharing of knowledge and skills for bio-based product market opportunities and technologies available.
	Sustainability	-Increase of the RES share in electricity consumption.

Source: authors' construction based on Latvian expert information

Good Practice Implementation Examples

The main aspects or directions that would be relevant to the **CBE BM Good Practice Implementation Guidelines** are:

- Organisational development for interdisciplinary and inter-institutional cooperation (**CBE BC examples: *oceanBASIS, Greve Biogass AS***);
- Funding schemes that regional / local public authorities could launch for effective support of circular bioeconomy development (**CBE BC examples: *AS Ziedi JP, Est-Agar***);
- Knowledge and technology transfer uses R&D services and consultation schemes, business incubators and other innovation support structures, study and training programmes (**CBE BC examples: *Aloja Starkelsen, Ltd***);
- Cross-border cooperation uses knowledge and technology transfer, attraction of FDI (**CBE BC examples: *Pageldynių plantacija UAB***);
- Awareness raising uses labelling, certification and campaigns to promote green products and recycling schemes, image improvement of agriculture and other bioeconomy businesses (**CBE BC examples: *Wapnö Farm, oceanBASIS***).

4. The Interactive BB4V project Online Portal

Features of the Interactive Online Portal



e-Tools ▾ The project ▾ News & events ▾ Contacts English ▾



Explore good practice bio-based business models and real-life inspiring examples

Analyse biomass value chains in the Baltic Sea Region

Start or expand your own bio-based business

Enable bio-based businesses at your region

CATALOGUE OF GOOD PRACTICE BUSINESS MODELS

DATABASE OF STATISTICAL INDICATORS, INCLUDING SEVERAL CALCULATORS FOR BIOLOGICAL WASTE POTENTIAL AND BIOENERGY DEMAND MODELLING

BUSINESS PLANNING TOOL

CATALOGUE OF MEASURES TO PROMOTE THE CIRCULAR BIOECONOMY AT THE LOCAL AND REGIONAL LEVEL

Biznesa modeļu piemēru katalogs

Izpētiet labas prakses bioloģiskos uzņēmējdarbības modeļus un reālās dzīves iedvesmojošus piemērus

Showing 1 - 6 of 32

Sort by: Oldest First



Labas prakses biznesa modeļi
1. modelis: Siltumenerģija un kurināmais no koksnes biomasas

Šo uzņēmējdarbības modeli izveidoja pārstrādes uzņēmumi, kas izmanto koksnes biomasu fosilo enerģijas resursu aizvietošanai. Konkrētāk, tas pārstāvēja divu veidu uzņēmumus: tos, kas ražo c [...]

→ MORE



Labas prakses biznesa modeļi
2. modelis: Degviela/kurināmais un elektroenerģija no biogāzes

Šo modeli veido pārstrādes uzņēmumi, kuru mērķis ir aizstāt fosilo enerģiju. Tas, kas to atšķir no iepriekš minētā modeļa, kurā cietajam kurināmajam izmantoja koksnes biomasu, ir atšķirīga [...]

→ MORE



Labas prakses biznesa modeļi
3. modelis: Centralizētā siltumapgāde un elektroenerģija no dažādiem biomasas...

Šī uzņēmējdarbības modeļa pamatā ir pieci uzņēmumi, kas siltuma un elektroenerģijas ražošanai izmanto atkritumus un dažādus citus biomasas avotus, kā arī bioetanolu (viens uzņēmums). Tas i [...]

Biznesa modeļu atbalsta pasākumu katalogs

Country	Sector	Related bio-based business model	Type of support measures	Group of support measures
Country	Sector	Related bio-based business model	Type of support measures	Group of support measures
Search				<input type="button" value="CSV"/> <input type="button" value="PRINT"/>
Country	Sector	Related bio-based business model	Type of support measures	Group of support measures
Estonia	Agriculture and food industry	Model 2: Fuel and Electricity from Biogas Model 3: District Heating and Electricity from Various Biomass Sources Model 6: Circular Bioeconomy in Agricultural Production Model 7: Bio-based Fertilizer for Increased Soil Quality	Familiar resources - undreamt of possibilities. The Government's Bioeconomy Strategy. The Norwegian CO2 tax.	Fiscal support measures
Estonia	Agriculture and food industry	Model 2: Fuel and Electricity from Biogas Model 3: District Heating and Electricity from Various Biomass Sources Model 6: Circular Bioeconomy in Agricultural Production Model 7: Bio-based Fertilizer for Increased Soil Quality	Familiar resources - undreamt of possibilities. The Government's Bioeconomy Strategy.	Regulatory support measures
Estonia	Agriculture and food industry	Model 2: Fuel and Electricity from Biogas Model 3: District Heating and Electricity from Various Biomass Sources Model 6: Circular Bioeconomy in Agricultural Production Model 7: Bio-based Fertilizer for Increased Soil Quality	Familiar resources - undreamt of possibilities. The Government's Bioeconomy Strategy.	Societal support measures
Estonia	Agriculture and food industry	Model 2: Fuel and Electricity from Biogas Model 3: District Heating and Electricity from Various Biomass Sources Model 6: Circular Bioeconomy in Agricultural Production Model 7: Bio-based Fertilizer for Increased Soil Quality	Familiar resources - undreamt of possibilities. The Government's Bioeconomy Strategy.	Sustainability support measures

Main conclusions

- Not all BSR country have national bioeconomy and circular economy policy documents
- Circular bioeconomy support measures exist on large range political documents related agriculture, forestry, waste and bioenergy industry
- Used Circular bioeconomy business cases support measures for developing bioresources based business depend on:
 - Geographical location;
 - Availability of bioresources kind.
- The results of expert interviews showed:
 - More important for bioeconomy business developer are microenvironmental factors
 - Knowledge of bioresource processing technologies is crucial for starting a business

Project consortium



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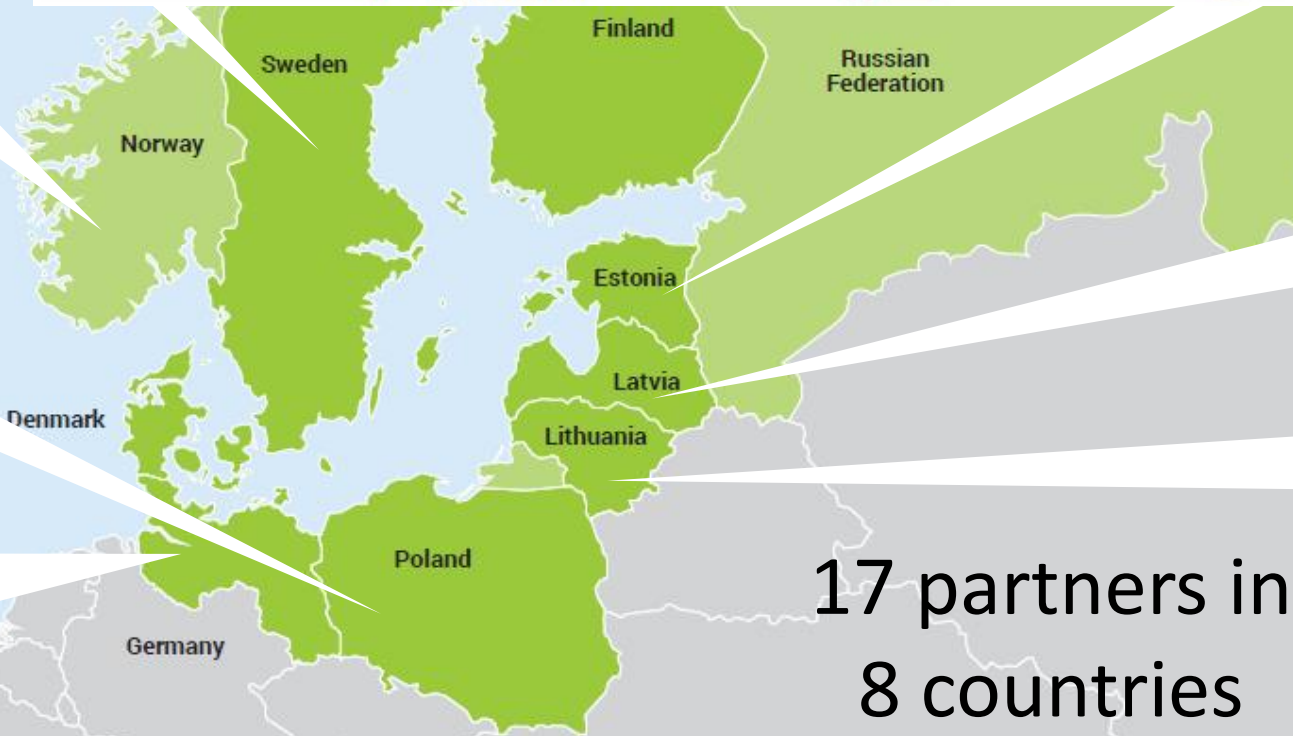
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