Bioenergy Promotion
A Baltic Sea Region project

BUSINESS ENVIRONMENT ASSESSMENT
Summary Report

Subtask 5.2.1.
PARTNER ORGANIZATIONS:

1. Lithuania:
   - Lithuanian Energy Institute
   - Lithuanian Research Center for Agriculture and Forestry, Institute of Agriculture

2. Latvia:
   - Latvian State Forestry Research Institute “Silava”
   - Vides Projekti
   - Latvian University of Agriculture

3. Norway:
   - Norwegian Forests and Landscape Institute
4. **Sweden:**
   - Swedish Energy Agency

5. **Belarus:**
   - Grodno Region Forestry Board (GRFB)

6. **Germany:**
   - Potsdam Chamber of Industry and Commerce (Brandenburg)

7. **Estonia:**
   - Foundation Private Forest Centre

8. **Poland:**
   - Baltic Eco-Energy Cluster

9. **Finland:**
   - Motiva
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1. Introduction

1.1. Objectives

The objectives of this summary are to overview the Environment assessment for biomass-based business on data provided by the respective partners in nine countries lying in the region of Baltic Sea.

The report will help to describe and assess the current national environment for biomass-based business in participating countries. The country level analyses will provide valuable background information for analysing certain biomass-based business practices and setting up models in the following stages of Task 5.2. Focus of the summary was on the political, economic and technological aspects of the biomass energy business development. Report displays the problems which each of the countries has to face and the perspectives of development which are based on this environment.

1.2. Methodology

Each of the countries had to present a Business Environment Assessment report according to the present situation, describing the major actors in biomass energy business and their role, business environment in the countries according to six aspects. These are subjective opinions of the authors of the reports as well as the statistic numbers and research results.

In this methodology is used the term biomass-based business for all business activities that are carried out as a part of the bioenergy production and use chain. The term biomass-based business was chosen to reflect the connection to biomass as a basis and source for energy.

In describing present situation, we concentrate on the conditions of the region in general, therefore we have to remember that it is composed of the characteristics of each country individually, the differences between the countries and possibilities of the cooperation...
between them. The report will help to get a deeper insight and a better understanding about current trends and future perspectives of the biomass-based business in the countries of the Baltic Sea Region.

### 1.3. Participants

There are nine participating countries: Belarus, Estonia, Finland, Germany, Latvia, Lithuania, Norway, Poland, and Sweden. The Baltic Sea Region is mostly defined by the drainage basin of the Baltic Sea. As for the states which can be regarded as the Baltic Sea Region from the political and administrative point of view we can distinguish Germany, Poland, Russia, Lithuania, Latvia, Estonia and the Scandinavian countries – Finland, Sweden and Denmark. Regarding to this we can state that the report is considering almost all of these countries and can be representative for the situation in the region in general.
2. Business environment in the Baltic Sea Region

Business environment is composed of the six aspects such as legal and policy aspects, economic aspects, ecosystem approach aspects, social aspects, technological aspects, knowledge aspects. In this summary we are concentrating on the legal, economic and technical aspects of the business environment.

2.1. Legal and policy aspects

Great impact on the development of the biomass-based business has governmental policy and legal acts. These aspects of the business environment cover all the acts, statutes, bills, decrees (both local and central), certification systems which build up the legal frameworks for an enterprise with biomass-based business activities as well as government policies, programs and action plans, main actors influencing the relevant policy making in the countries which all together identify the possibilities of the businesses to initiate and develop their activity.

Influence on the biomass-based business can be exerted by the means of legal and policy instruments.

Chart 1 shows the influence of the key legal documents on business in the Baltic Sea Region basing on data from the nine countries of this region.
Therefore we can say that influence on business of the legal acts is rather strong, though favourable. Most of the instruments influencing the operation costs in the countries of the Baltic Sea Region are tax reliefs for the consumers and producers of the bioenergy based products, reduced excise duty rates, feed in tariffs for the electricity from renewable sources (which cover the difference between the actual production costs and the market price of the energy source), financial support for investments, environmental fees and fines, emission constraints, lower fees for export / import of bioenergy based products, subsidies, grants or support projects, public orders for the bioenergy sector production, facilitation of the legal procedures concerning investment in Renewable Energy Sources business. Countries introduce national programs and plans concerning renewable energy, promote it in the society.
General attitude of the governments to the RES businesses is to facilitate the development of the bioenergy sector, increase the competitiveness of the companies based on the production of bioenergy.

2.2. Economic aspects

The biomass-based business activities are organized along the bioenergy production and use chain. Clarified needs for the bioenergy products or services distinguish development of the business based on it to exclude the situation when supply doesn’t meet demand.

Chart 2.3. The demand for bioenergy products / services generally in the Baltic Sea Region
On the Chart 2.3, demand for the bioenergy products or services is displayed. We can see that generally in the Baltic Sea Region there is quite high demand for this kind of products and value of the bioenergy increases though there occur some shortages connected with the economic conditions. Competition between the bioenergy based businesses is rather low.

**Chart 2.4. Share of bioenergy in overall energy consumptions in countries of the Baltic Sea Region**

As it is shown on the Chart 2.4, the share of bioenergy strongly differs between the countries. It depends on the environment of the business as well as the potential. There are still many aspects which limit business development in this area. The most common limitations in the region are lack of the resources or their high prices, lack of the infrastructure and high operational costs, lack of the technical facilities, competition with the energy from fossil fuels, high costs of investment and long period of return on investments.
2.3. Technical aspects

Another aspect crucial to the development of the bioenergy based business is technological aspect which should be identified in order to assess the level of preparedness for the technological demands of biomass-based business. Technical aspects mean preparedness of biomass-based business for the technological demands.

Chart 6 shows the access to technology in the Baltic Sea Region. Though we see that in general it is quite easily accessible – there are many problems each country has to face. Among the most common ones there is lack of the experience and technologies that improve the efficiency of the production, high knowledge demand, high costs of the technology development and a strong need for the research and development together with the cooperation with business.

*Chart 2.5. Access to technology in the countries of the Baltic Sea Region*

Though we see that in general it is quite easily accessible – there are many problems each country has to face. Equipment used for the biomass production is low-quality and emissions not correspond to the environmental standards, there is lack of the experience and technologies that improve the efficiency of production, high knowledge demand, high costs
of the technology development and a strong need for the research and development together with the cooperation with business. Small plants can’t afford new expensive technologies and equipment. Despite these problems implementation of the new technologies is profitable for the companies and the cost / benefit balance is rather positive. It means that there is a need for increasing technology and reduction of costs and wastes which will lead to the growth of volume of the production. Additional improvement has to be done in the logistics, long-distance haulage operations.

3. Main actors of business environment

Having assessed the different aspects of the environment, we also need to gather information on the actors and their roles shaping the business environment. In order to obtain a full insight it is also needed to know what is the actors’ ability to influence their own environment”.

The main actors we understand as the subjects that are directly or indirectly involved in or have influence on biomass-based business. Here we concentrate on four sectors in which are defined as actors of the business environment: public, private, research and development, NGOs and others.

Main functions of the public actors in the biomass-based business environment are providing development plans on the national and regional levels, legislation and investments, creating support system for the national businesses, development of entrepreneurship and innovation, sustainable use of resources and environmental protection, facilitation of the steady improvement of the business environment, approving or issuing permits, licenses, technical regulations and other documents allowing usage of natural resources, implementation of regulations concerning polluting of the atmosphere.
Private actors in the Baltic Sea Region are businesses associated with biomass use or production. There are many big and small businesses for biomass or bioenergy production in the Baltic Sea Region, most common of which are: using biomass or bio-based raw materials in production, producing and delivering biomass products or energy crops, producing and delivering heat energy or electricity made from biomass, providing the supply chain of the biomass products, supply of the equipment and installation of the bio-based plants.

Research and Development actors are mostly Universities, Institutes and Colleges, research and innovation centers, working on such topics: research and development strategies of technology for production biomass products or energy from the biomass products, generation of research information about the environment, high-tech technology solutions and innovation services, energy sector research and optimization, energy saving management, energy-environmental policy studies.

NGOs and others are generally associations, unions, agencies, movements and centers working on: preparing special law for development in biomass and bio-based products field, support for the bioenergy producers and consulting services in the field of bioenergy, facilitation of perception and knowledge on bioenergy, integration of businessmen, institutions and persons acting for the development of renewable energy sources.
From the chart 3.1. we can conclude that the largest part between the major actors of the biomass-business environment (here we mean key and strong actors of the environment) occupy Public institutions and authorities. This allows to assume that they have the biggest influence on the biomass-based business. The rest of the economic sectors take similar parts (that is 24% private companies, 18% research and development institutions and 18% NGOs and others) between the key and strong actors of business environment.
4. Conclusions

Data presented in the report gives a preview on situation of the business environment in the Baltic Sea Region. From the material contained in this report we can see general trends in the region, different aspects of the biomass-based businesses development. Despite the differences between the countries which are situated in the region, they face similar problems in the development of bioenergy based businesses (technology development problem, economic limitations, need for high investments and long period of the return on the investments at the same time). Another very important problem for the biomass-based business is economic profitability, which is presently supported by systems of official legal and financial support. Though political situation and regulations are favourable for the business, social support is high and potential of the development in general is big – there is still much to be done in this field. Bioenergy based business has to gain power, develop technologies which will reduce the costs of the production and rich the level of competitiveness with the other energy-based businesses, become more independent from the government and increase cooperation within the Baltic Sea Region.

* Methodology for country level Business Environment Assessment, subtask 5.2.1