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MAPPING THE FUTURE SUSTAINABLE COMPETITIVENESS RESOURCES: ASPECTS OF FORESTS OWNERSHIP

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Abstract. Competitiveness race in the global economy, on the one side, and the acknowledgement of the sustainable development dimension, on the other side, brings Europe against extraordinary challenges but also to great opportunities. Mapping the future sustainable competitiveness creates a need for research initiatives to develop the new concept of competitiveness, with much of the research focusing on how sustainable development and competitiveness interact. The changing policy context, growing role of sustainable development, the transition to a green economy and the new European Union strategy Europe 2020 (2010) for smart, sustainable and inclusive growth leads to the "rethinking" of the main drivers of the sustainable competitiveness in the long prosperity and the future competitiveness leadership. The approach to natural resources, especially forests, as to the one of the future sustainable competitiveness resources, with the specific focus on its ownership is addressed in this article.

Keywords: competitiveness, sustainable development, sustainable competitiveness, natural resources, forests, forestry, ownership, public forests, private forests.

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1. Introduction

The agreement to launch the new European Union (EU) strategy for smart, sustainable and inclusive growth – Europe 2020 (2010) creates a need for research initiatives to develop the new concept of competitiveness, with much of the research focusing on how sustainable development and competitiveness interact (Balkytė and Tvaronavičienė 2010: 360).

On the one side, the challenge "to continually improve the quality of life and wellbeing on Earth for present and future generations" leads to the growing role of sustainable development.

On the other side, competitiveness race in the global economy is becoming more aggressive. Competitiveness is both a test of the economy and a chance to further enhance economic performance.

Generally, it is important not only to state the fact about the achievements in the context

of competitiveness, but the most important "puzzler" is to find out the factors, which create the complex competitive advantage of the country or region in the future (Balkytė and Tvaronavičienė 2010: 359).

According to the strategy Europe 2020 (2010), EU Member States should decouple economic growth from resource use, turning environmental challenges into growth opportunities and making efficient use of their natural resources.

There is a need for research initiatives to evaluate the natural resources role for the competitiveness in the context of sustainable development in the long prosperity.

It is generally recognized, that natural resources provide many benefits to society and to the economy and play an important role in the preservation of natural biodiversity and the mitigation of climate change. The quality of our ecosystems – namely air, water, soils and forests – should be ahead of negative impact of climate change.

Globalisation challenges increase the need to evaluate the basic factors, such as land, capital and labour, with new approach. Climate change and sustainable development dimension call for the acknowledgement of the role of natural resources for competitiveness and long-term development.

Despite the accepted importance of the forestry sector for sustainable development, there is a significant lack of information on forests ownership in Europe. The changing situation every year and the lack of good praxis examples create a need for new research.

The aim of this article is to present the approach to natural resources, especially forests, as to the one of the sustainable competitiveness resources in the long prosperity with the specific focus on its ownership.

First, the article presents the systematic view on sustainable competitiveness, taking into account the development of competitiveness concept in the context of sustainable development.

Second, the article provides an overview of the specific points of the forests ownership practice in the world, some EU Member States and Lithuania.

The existing theoretical views on forest ownership structure differ, but the benefit of forests is generally recognized.

Generally, the science literature and actual political documents' analysis of the specific points of the forests ownership practice in some EU Member States and Lithuania in the context of sustainable competitiveness is followed by the summary of the conclusions.

It is expected that in the future forestry will continue to be valued for the ability to serve a range of economic, environmental, and social functions and growing forests could become the source of growing sustainable competitiveness.

2. Competitiveness versus sustainable development

Being competitive or being only sustainable is easier than being sustainable and competitive at the same time. Despite the fact, what the European Union has the special strategy for sustainable development and the separate new strategy Europe 2020 (2010)

(before – Lisbon Strategy) with the specific point to competitiveness, it should be generally recognized the importance of the compatibility of competitiveness and sustainable development.

Sustainable development is a fundamental and overarching objective of the European Union, enshrined in the Treaty. The EU sustainable development strategy, launched by the European Council in Gothenburg in 2001 and renewed in June 2006, brings together the many strands of economic, social and environmental policy under one overarching objective – to continually improve the quality of life and wellbeing on Earth for present and future generations (Sustainable development … 2009).

According to the EU strategy Europe 2020 (2010), Member States should decouple economic growth from resource use, turning environmental challenges into growth opportunities and making efficient use of their natural resources.

Sustainable growth means building a resource-efficient, sustainable and competitive economy, exploiting Europe's leadership in the race to develop new processes and technologies, including green technologies, accelerating the roll out of smart grids, exploiting EU-scale networks, and reinforcing the competitive advantages of the businesses, particularly in manufacturing, as well through assisting consumers to value resource efficiency. Such approach will help the EU to prosper in a low-carbon, resource constrained world while preventing environmental degradation, biodiversity loss and unsustainable use of resources. It will also underpin economic, social and territorial cohesion (Europe 2020, 2010).

The political topicalities create the need for research initiatives to develop the new concept of "Sustainable competitiveness" in the context of globalisation, with much of the research focusing on how sustainable development and competitiveness interact (Fig. 1). Such additional research will lead to new theoretical models describing the relationships between international globalization, economic growth, sustainable development, wellbeing and competitiveness (Balkytė and Tvaronavičienė 2010: 341).

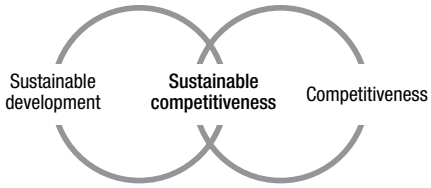

Fig. 1. Principal scheme of sustainable competitiveness
Source: authors

The concept of competitiveness and competitiveness models are still far from creating a consensus. The new factors are becoming important and a number of researchers provide the new models of competitiveness.

Globalisation challenges increase the need to evaluate the basic factors, such as land, capital and labour, with a new approach. Climate change and sustainable development dimension call for the acknowledgement of the role of natural resources for long-term competitiveness.

3. Competitiveness resources in the context of sustainable development

3.1. Natural resources role for future competitiveness

According to the Global Competitiveness Index (GCI), provided by World Economic Forum (WEF), there are three stages of development. In the first stage, the economy in factor-driven and countries compete based on their factor endowments: primarily unskilled labour and natural resources. Maintaining competitiveness at this stage of development hinges primarily on well-functioning public and private institutions, well-developed infrastructure, etc. In the efficiency-driven stage of development countries increase product quality. Finally, after the efficiency-driven stage of development countries move into the innovation-driven stage (Schwab 2009: 7).

The European Commission's prognoses are that the tensions will be between production, consumption patterns and natural resources in 2025 (The World in 2025 … 2009: 18). According to The World in 2025 … (2009: 14), there will be increasing scarcity of natural resources in EU in 2025 and the EU can become more dependent on external sources. For example, more than 50 percent of the major ore reserves are located in very poor countries.

The new research tendencies lead to the acknowledgement of the important role of natural resources, despite the fact, that country or region could reach the innovation-driven stage.

A number of studies and researchers conclude that the relationships between sustainable development and competitiveness are becoming deeper.

Porter and Linde (1995: 133) pointed out what there is a need for thinking about the relationship between competitiveness and the environment. An underlying logic links the environment, resource productivity, innovation and competitiveness.

According to Wade-Benzoni (1999), maintaining the long-term viability of the earth's ecosystems by using the earth's resources sustainably helps ensure that economic opportunities are kept open for the future generations.

The importance to control balance between economic development, social development, and environmental development was mentioned by Grybaitė and Tvaronavičienė (2008). Lapinskienė and Peleckis (2009) have also initiated to establish the relationship between the sustainable development and the economic growth.

Berger (2008: 91) argues that national competitiveness should be seen as a relative rather than an absolute concept that allows for a benchmarking of nations. Some nations support competitiveness more than others by creating an environment that facilitates the competitiveness of enterprises and encourages long–term sustainability.

Taken together, all these researchers acknowledge the growing direct or indirect role of natural resources for competitiveness.

Much of any country's economic well-being flows from natural, rather than human-made, assets – land, rivers and oceans, natural resources (such as oil and timber), and indeed the air that everyone breathes (Abel and Bernanke 1998: 30). Moreover, an economy's output of goods and services depends on the quantities of available inputs, such as capital and labour, and the productivity of those inputs (Abel and Bernanke 1998: 182).

Climate change and sustainable development dimension call for the acknowledgement of the role of natural resources for competitiveness, especially "sustainable competitiveness", and long-term development.

Natural resources are the elements of the nature, which are used for the people's needs. The classification of natural resources can be different. Natural resources can be unfailing (sun energy, water) or failing (renewable (forests) or non-renewable (minerals).

Further, the specific point to the one of the renewable resources – forest – is addressed in this article.

Forests will be a major mitigation option over the next 30 to 40 years and represent a necessary transitional measure towards a low-carbon economy. However, given the wide range of goods and services provided by forests, mitigation and adaptation options in the forest sector need to be fully understood and used in the context of promoting sustainable development. Moreover, if forests are to effectively contribute to climate change solutions, countries, and the international community as a whole, will need to address several critical governance issues affecting forests, including those relating to rights, tenure, access, land-use planning, benefit-sharing, institutional and cross-sectoral coordination and law enforcement (Forests and climate … 2009).

According to Niskanen (2005: 13), there exists great potential to develop non-wood forest products and services sector and new entrepreneurship in this particular field in Europe. This is due to a raising demand for individual, green and even luxury products together with improvement in citizens' welfare.

In addition, government and private sector are promoting wood products and "green building" for their environmental friendliness (State of the World's … 2009: 26).

Increasingly, forests are important for sustainable development, societal well-being and the provision of key environmental services.

3.2. Global forest resources

It is expected that in the future forestry will continue to be valued for the ability to serve a range of economic, environmental, and social functions and growing forests could become the source of growing sustainable competitiveness.

The world's total forest area is over 4 billion hectares, which corresponds to an average of 0.6 ha per capita. The five most forest-rich countries (the Russian Federation, Brazil, Canada, The United States of America and China) account for more than half of the total forest area (Global Forest … 2010).

Europe, consisting of 48 countries and areas, accounts for about 17 percent of global land area but has one-quarter of the world's forest resources, approximately 1 billion hectares, of which 81 percent is in the Russian Federation (State of the World's … 2009: 22).

Forests and other wooded land cover 177 million hectares or 42 percent of the land (terrestrial) area of the 27 Member States of the European Union and are one of the most valuable multifunctional and renewable natural assets EU has (Forestry Statistics 2009). The most densely forested Member States are Finland (73.9 percent), Sweden

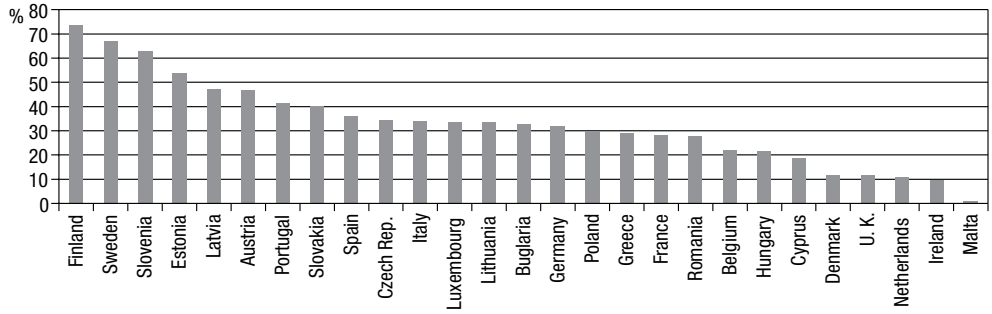

Fig. 2. Forest cover in the EU Member States as a percentage of the total land areas
Source: Global Forest … (2006)

(66.9 percent) and Slovenia (62.8 percent), whereas the least forested are Malta (1.1 percent), Ireland (9.7 percent) and the Netherlands (10.8 percent) (Fig. 2).

The functions of forests and forestry are economic, environmental and social (The EU Forest … 2006).

According to Global Forest … (2010), 12 percent of the world's forests are designated for the conservation of biological diversity (Biological diversity conservation function), 30 percent of the world's forests are primarily used for production of wood and non-wood products (Productive functions), 8 percent of the world's forests gave soil and water conservation as their primary object (Protective functions). There is increasing management of forests for social and cultural functions (Socio-economic functions). Forestry provides also for the stewardship of scenic and cultural values, as well as other functions, such as traditional collection of mushrooms and berries, hunting and tourism. In addition, forests are very important in supplying social and recreational services, because people have traditionally close links to them.

On a global average, more than one-third of all forests is primary forest, i.e. forest of native species where there are no clear visible indications of human activities and the ecological processes have not been significantly disturbed. Primary forests include the most species-rich, diverse terrestrial ecosystems (Global Forest …2010).

Forests produce a broad variety of goods and services. The forest sector is one of the most important economic sectors within the EU Forestry and forest-based and related industries comprise the following industrial sectors: woodworking, cork and other forest-based materials; pulp, paper and paper-board manufacturing; paper and paper-board converting, and printing industries.

The forest sector has great potential to further develop high-quality and value-added products and services for the diverse and growing demands of society based on a renewable raw material source.

The EU is one of the biggest traders and consumers of forest products in the world, with a positive trade balance overall.

Western Europe has a major competitive advantage in the production of highly processed products such as reconstituted panels and high-quality paper (State of the World's …

2009: 26). It is expected that Western Europe will remain the largest producer of all forest products in Europe, accounting for 78 percent of paper production, 63 percent of wood- based panel production and 48 percent of sawnwood production in the year 2020 (Branch 2005: 241).

Forests are an important source of raw materials for forest-based industries. They also provide energy, both directly and indirectly, and a host of non-wood forest products and services, including grazing and forage for domestic and semi-wild animals. Forests offer many goods and benefits in addition to forest products, because they provide important environmental functions, such as the conservation of the natural heritage and the protection of water and soil.

The area of planted forest is increasing and now accounts for 7 percent of total forest area. Afforestation and natural expansion of forests in some countries and regions have reduced the net loss of forest significantly at the global level. The net change in forest area in the period 2000–2010 is estimated at 5.2 million hectares per year, down from 8.3 million hectares per year in the period 2000–2010 (Global Forest… 2010).

Deforestation can play a role in both global warming and cooling, and it also leads to reductions in biodiversity, disturbed water regulation, and the destruction of the resource base and livelihoods for many of the world's poorest.

Felling in Europe have been lower than the growth in forest resources and have actually declined over several decades. In the future, the ratio of fellings to increments is expected to increase as more wood is harvested to supply the wood industry, as well as reflecting the impact of fast growing demand for wood as a source of renewable energy (State of the World's… 2009: 25).

Generally, the use of forest resources for different purposes should be balanced (Communication from the Commission… 2008).

3.3. International praxis: world's forests ownership

In order to achieve effective governance, we need to involve both public and private sector organisations, enterprises, the science community and civil society, who all have interest and stake in forests (Vanhanen *et al.* 2007).

There is a great diversity of natural forest types, forest cover and ownership structures. Generally, there are three types of forests ownership (Fig. 3):

1) *Private ownership* refers to land owned by individuals, families, private co-operatives, corporations and enterprises, private religious and educational institutions, pension or investment funds or other private institutions. Private owners may be engaged in agriculture or other occupations (including forestry).
2) *Public ownership* refers to land owned by the State (or region), state-owned institutions or corporations or other public bodies, including cities, municipalities, villages and communes (including ownership by tribal or other indigenous peoples).
3) *Other ownership* refers to land that is neither "public" nor "private". It includes land for which ownership is unknown or un-defined (Forestry Statistics 2009).

Despite the changes in forest ownership and tenure in some regions, most of the world's forests remain under public ownership. 80 percent of the world's forests are publicly owned, but ownership and management of forests by communities, individuals and private companies are on the rise. Differences among regions are considerable.

North and Central America, Europe (other than the Russian Federation), South America and Oceania have a higher proportion of private ownership than other regions (Fig. 4). In some regions, there is an increasing trend of involving communities, individuals and private companies in the management of publicly owned forests (Global Forest … 2010: 10).

In Western Europe, 70 percent of forests are privately owned, often by individuals or families. In Eastern Europe, large parts of state forests were returned to their former owners in the 1990s, which increased the proportion of forest under private ownership. In many countries, the private sector has responded by forming strong private forests owners' associations and cooperatives. In CIS (Commonwealth of Independent States) countries, all forests are state owned (State of the World's … 2009: 25).

A number of researchers have analysed the various aspects of forests ownership or management in different countries. For example, Yrjölä (2002) presented the Forests management guidelines and practices in Finland, Sweden and Norway. Vihervaara and Kamppinen (2009) analysed Finnish forest industry, Liao and Zhang (2008) compared industrial and nonindustrial forest ownership , Diaz-Balteiro *et al*. (2009) researched the forests management in Spain, *etc*. The question of forest ownership is raised about different world regions: Japan (Yamashita *et al*. 2009), United States of America (Zhang *et al.* 2005), Europe (Wiersum *et al*. 2005; Schmithüsen and Hirsch 2009), etc.

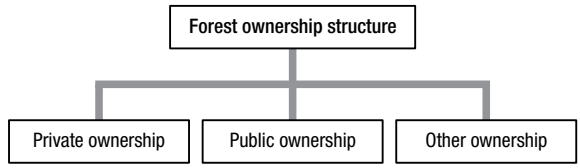

Fig. 3. Forest ownership structure. *Source*: Forestry Statistics (2009)

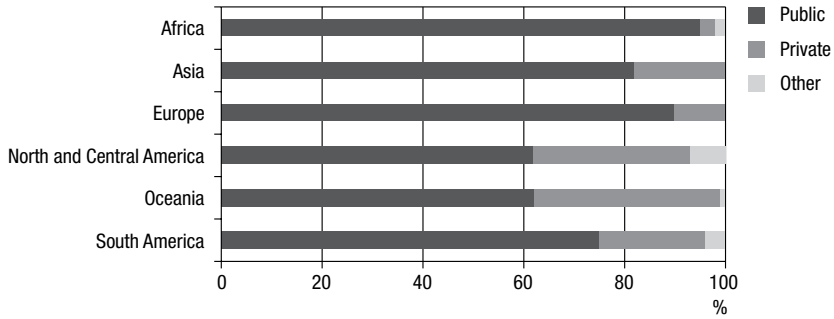

Fig. 4. Forest ownership patterns (2005). *Source*: Global Forest… (2010)

There is no accepted general model of forest ownership structure in EU. It was recognised the importance of public and private forest owners within the European Union and the wide variety of ownership types (Communication from the Commission ... 2005). Each EU Member State has a national model of forest ownership structure (Fig. 5).

The increases in the number of private forest owners need to be seen in light of the overall changes in ownership structure. About 35 percent of forests and other wooded land in the EU-15 were in public, and about 65 percent in private ownership. However, with the accession of the new Member States, the proportion between areas of publicly and privately owned forests has changed.

According to European Commission … (2010), about 40 percent of forests and other wooded land in the European Union are in public and approximately 60 percent in private ownership. However, the situation in each Member State is different.
The countries can be divided into three groups according to the dominance of forests ownership structure:

1) Dominance of public ownership (more than 60 percent of forests);
2) Dominance of private ownership (more than 60 percent of forests);
3) No dominance of public or private ownership (balanced ownership) (Fig. 6).

For better understanding of the existing ownership system, there is not enough to have a general look. Due to various changes, the statistics for various years and countries are

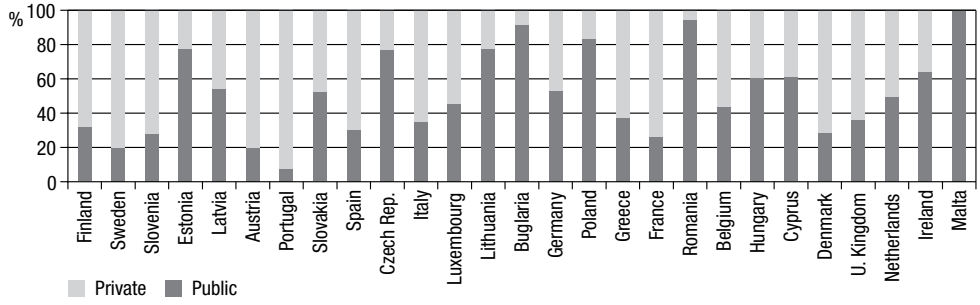

Fig. 5. Forest ownership: shares of public and private ownership (2005)
Source: The EU Forest … (2006: 7)

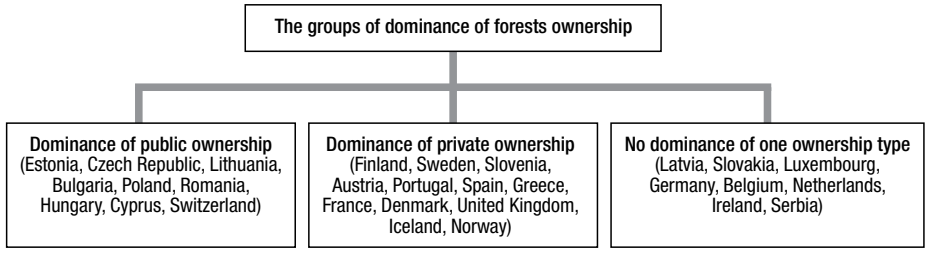

Fig. 6. The EU Member States and other countries according to the groups of dominance of forests ownership structure (2006–2007)
Sources: The EU Forest … (2006: 7); Schmithüsen and Hirsch (2009: 8)

not comparable. Different surveys arrive at different result with regard to forest land area. There are minor differences between the definitions of ownership categories that are used with various statistical compilations.

Each country should be analysed separately taking into the account a lot of factors with historical component.

For example, total forestry land in Finland is 26.3 million ha or 86 percent of the land area, of which 52 percent is under non-industrial, private ownership (individuals, heirs, private firms, *etc*.). The State owns 35 percent and forest industry companies own 8 percent. The remaining 5 percent represents forests under municipal, parish, shared or joint ownership (Finish Statistical … 2009: 429).

"Metsähallitus" is a state enterprise that administers more than 12 million hectares of state-owned land and water areas (Metsähallitus 2010). The Forestry Development Centre Tapio, which is subordinate to the Ministry of Agriculture and Forestry in Finland, provides development and expert services supporting forest policy planning and implementation for all organisations involved in forestry (Metsähallitus 2010).

In Finland private forest holdings are mostly in the hands of families. Private forests produce over 80 percent of round wood purchased annually. The Finnish forest industry is highly export-oriented, and in most sectors of the industry, 70 percent to 90 percent of production goes abroad. Finland is a major exporter of sawn softwood and paper, particularly graphic papers (Finish Statistical … 2009).

The total area of the Swedish forest is 22.7 million hectares (EUROSTAT 2010). The total area of non-productive land is 5.8 million hectares. In year 2008 there were 329300 forest owners. The distribution of forest by ownership category in Sweden is: 56 percent – private (individual and other) owners; 17 percent – state-owned and state-owned corporations; 2 percent – other (public and other) ownership, 25 percent – private-sector corporations. "State" in this context refers to national agencies, foundations and other institutions whose functions include managing state-owned forest properties. Corporations of which more than 50 percent of the shares are owned by the state belong to the category of state-owned corporation (Swedish Statistical … 2009: 29). In Sweden, State forests are managed by one enterprise ("Sveaskog").

Generally, findings are that private land ownership produces proportionately much more than its share of market commodities that are traded in private markets, most notably timber (Siry *et al*. 2009: 9). Otherwise, state forest organizations play a leading role in forest management (State of the World's … 2009: 25).

There is a need for better information exchange on the forest sector in Europe (Wardle *et al*. 2008). Forest restitution processes, which took place in the new Member States, still continue in some cases. Taken together, comprehensive information is crucial for the development of policies for state and private forestry, and for European forestry in general.

The changing situation every year and the lack of good praxis examples create a need for new researches.

3.4. Forest ownership in Lithuania

The forest is one of the main Lithuanian natural resources, serving the public well-being of citizens, protecting the stability of the landscape and environmental quality (Lietuvos miškų ... 2002).

Lithuanian forests land area occupies 33.1 percent of Lithuanian territory in 2010 and forest coverage has a tendency to increase (Fig. 7) (Department of Statistics … 2010). Forests are a land area not less than 0.1 hectare in size covered with trees, the height of which in a natural site in the maturity age is not less than 5 meters, other forest plants as well as thinned or vegetation-lost forest due to the acts of nature or human activities (Lietuvos Respublikos miškų … 1994).

According to Lietuvos miškų ... (2002), Lithuanian forestry vision – a modern, market-oriented branch with rational use of forest resources and seek to increase it, with developed infrastructure and skilled workers, applying advanced technologies, creating jobs and a pleasant environment for living.

The strategy identifies the most important forest policy measures for the period up to 2015 and includes 12 strategic objectives: the conservation and enhancement of forest resources; forest ownership diversity; public participation in the decisions making process; public awareness about the country's forests; development of forestry science; strengthening of international relations; smart use of forestry resources and increase of productivity; forestry economic efficiency; sustainability of forest ecosystems; biodiversity and forest health; the satisfaction of general public related needs, state and private forestry development in the context of general rural development.

The Lithuanian state is an important owner of commercial assets in the country. The State either directly or indirectly controls or has minority share stakes in a number of industries – energy, transportation, forestry, and other (Annual Review … 2009: 6).

According to Lietuvos Respublikos miškų … (1994), forests can belong to the state or people (individuals and legal entities).

State's mission is to ensure diversity of ownership of forests and the effectiveness of forestry state regulatory system (Lietuvos miškų … 2002).

The total area of stands in Lithuania is 2 million ha, of which 0.8 million ha is private forest, 1 million ha belong to the State and 0.2 ha are reserved for property restitution (Annual Review … 2009) (Fig. 8).

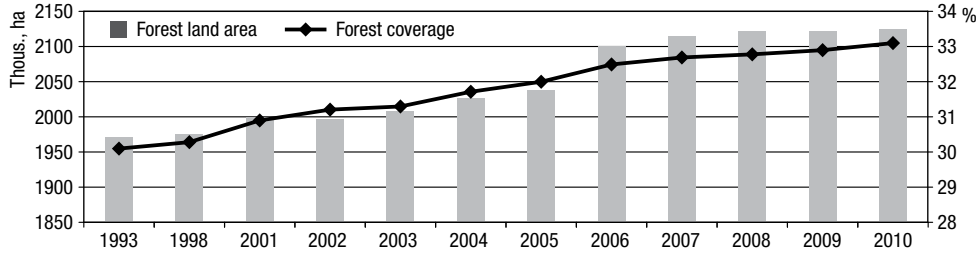

Fig. 7. Forest land area (ha) and forest coverage (percent) in Lithuania
Source: Department of Statistics … (2010)

The ownership structure of Lithuanian forests is changing during the land (forest) reform (Fig. 9). For example, in 2002 there was about 26 percent of private forest of the total forest area of the country. It is expected that after land reform private forests will be about 40–45 percent of country's forest cover (Lietuvos miškų … 2002).

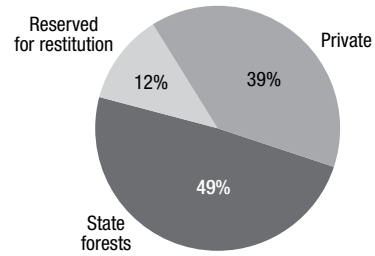

Fig. 8. Forest land by type of ownership in Lithuania in 2008
Source: Annual Review … (2009: 21)

National forests are managed by the Directorate General of State Forests at the Ministry of the Environment. It manages 42 state forestry enterprises (Urėdijos), which are further subdivided into 642 units. The average number of people employed by 42 state forestry enterprises was close to 4000 in 2009 (Annual Review … 2009: 21).

Forestry is an important branch of the Lithuanian economy (Fig. 10). The wood, paper products and furniture industry (hereinafter the „wood industry") has been growing for a long time. In 2000–2006, its value added at constant prices was rising by 18 percent on average annually (Lithuanian Economic Outlook 2009: 91).

Lithuania is a net exporter of round wood. The bulk of the production is exported to Sweden, Poland, Finland and Latvia, while most of the imports come from Belarus, Ukraine and Russia (Annual Review … 2009: 21).

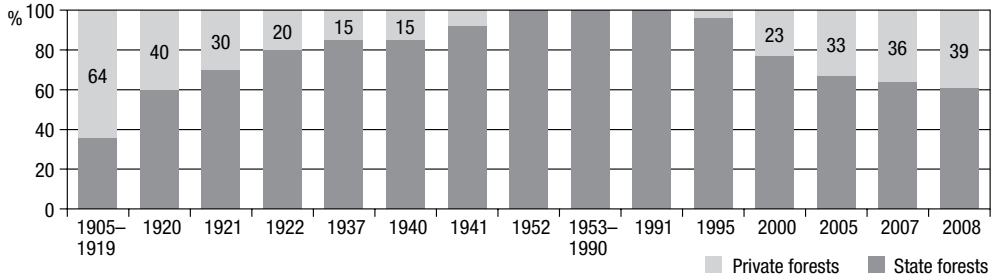

Fig. 9. Forest ownership in Lithuania. *Sources*: The Lithuanian private … (2007), Annual Review … (2009: 21)

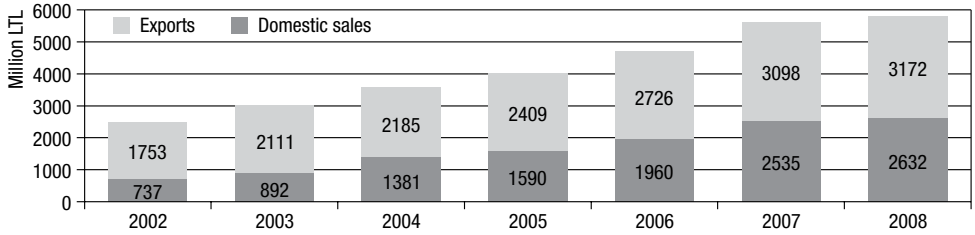

Fig. 10. Sales of wood, paper products and furniture in Lithuania (LTL million)
Source: Lithuanian Economic Outlook (2009)

The added value of the Lithuanian forest sector is about 2.6 percent of Gross Domestic Product (GDP) in 2009. Forest sector is an important branch in labour market. Nearly 30 percent of the total forestland area is designed for ecological functions.

The State is a major owner of forest and forest land in Lithuania, owning approximately 1 million ha. State forestry enterprises are obliged by law to pay 5 percent of the income received from the sale of round wood and standing forest to the State budget. The income is intended to be used to satisfy the general needs of forests. Moreover, in May 2009, the government introduced an additional 5 percent payment to the State budget, which is used for general budget purposes. Despite the whole sector operating profitably, cost of capital is not accounted for. The state is not receiving an adequate return for capital employed in the forestry sector and the forestry sector is not creating value for its owner (Annual Review … 2009: 22).

Public forests could give more benefit. State-owned enterprises in Eastern Europe are often a mess (State industries … 2010: 29).

State industries … (2010: 29) indicated that a glaring example of mismanagement comes from the forestry industry in Lithuania. Lithuania's state-owned forests are run by 42 companies, but the average yield in 2008 was only a quarter of the Swedish figure and even that trickles away into company costs: the state receives no dividend.

There is a need to compare and examine the costs and benefits (both social and private) of different policies (Zhang *et al.* 2005: 452). Valstybinio audito ataskaita (2010) stated that "activities of the most forest enterprises, which manage public forests, and of the Directorate General of State Forests coordinating their activities are not sufficiently effective".

The audit report evaluating the effectiveness of the management of State-owned forests points out that the Lithuanian Forestry Policy and its Implementation Strategy has not been updated since it was issued in 2002, therefore it does not take into account substantial changes in Lithuanian economy, which have occurred during the last eight years. Furthermore, as Government institutions still have not made the final decision on the optimum number of forest enterprises, the objective of the Strategy is not yet implemented: to reorganize and optimize State regulation system of public forestry (Valstybinio audito ataskaita 2010).

Generally, from the ownership standpoint, the problem is that Forestry-industry isn't effective in Lithuania. Valstybinio audito ataskaita (2010) noted that Lithuanian forest enterprises use their resources with different effectiveness, therefore the price of timber sold by different forest enterprises differs by more than a third, and costs of its preparation differ by up to 42 percent.

According to Lietuvos Respublikos miškų … (1994 Article 2), The Directorate General of State Forests under the Ministry of Environment shall conduct the economic management of state-owned forests attributed to state forest enterprises, shall organise and co-ordinate restoration, maintenance, protection and utilization of forests and forest resources.

The mission of the Directorate General of State Forests is to enhance the ecological, environmental, economic, recreational and other socially important values of state forests as the most important components of the whole state forestry by managing them in accordance with the principles of sustainable forest use and by rational use, restoration and enlargement of forest resources (Lietuvos Respublikos miškų … 1994 Article 2).

Generally findings of the analysis are that Lithuanian forest cover is relatively low compared to some of the EU countries (Finland, Sweden, Slovakia, Estonia), but it has a tendency to increase.

State-owned ownership of forests is dominating in Lithuania. Lithuania has a relatively high number of public bodies that manage forests – 42 enterprises, while the more forest-rich countries in EU have fewer bodies (one or more). For example, state forests are managed by one enterprise in Sweden ("Sveaskog") or in Finland (Metsähallitus 2010). Latvian state forests are supervised by 2 companies (AB „Latvijas valsts meži" and „Valsts meža dienests"). In Estonia, where the state forest area is similar to Lithuanian, one company – State Forest Management Centre (RMK) manages the state forest.

The forestry sector in Lithuania lacks transparency. In most EU countries trading is centralised. The trading is not centralised in Lithuania and all 42 state forestry enterprises are engaged in trading of wood in Lithuania. This is a disadvantage compared with the usual model in most EU countries, where trading is centralized (Annual Review … 2009: 23).

The number of employees employed by 42 state forestry enterprises averaged to 3846 in 2009 (or one employee per 234 ha of forests under management in Lithuania *versus* one employee per 4488 ha of forest under management in Sweden) (Annual Review… 2009: 23). Valstybinio audito ataskaita (2010) pointed out, that Lithuanian forest enterprises employ 2060 professionals (without workers), while in Latvia in the same job there are 2150 professionals ("Latvijas valsts meži" and Latvian State Forest Service), despite the fact that Latvia has 21,4 percent more forest area than Lithuania has. The State Forest Management Centre (RMK) in Estonia employs 1118 workers – two times less than the Lithuanian 42 enterprises. Sweden has more forests, but Sweden AB Sveaskog and State forestry agency employs 2058 professionals. The figures show that the average forest area for one employee in Lithuania is less than in other countries.

4. Perceptions of future sustainable competitiveness resources

4.1. Forest policy in the European Union

The forest policy in the European Union is developing step by step. Nevertheless, Member States have the right to state their own policy in compliance with EU policy. For example, there is no accepted general model of forest ownership structure in the EU and each EU Member State has a national model of forest ownership structure.

The growing concern about the coherence between the forest policies of the Member States and forest-related activities at the EU level, as well as the rising profile of forests in international policy debates and initiatives on sustainable development, were the

main driving forces behind the adoption of the EU Forestry Strategy (Council resolution 1998).

It was recognised the importance of private forest owners within the European Union and the wide variety of ownership types (Communication from the Commission ... 2005).

It was confirmed the economic, social, and environmental importance of the forest sector in the EU and the multiple benefits that sustainable forestry provides to society.

The overall objective of the EU Forest Action Plan (2007–2011) is to support and enhance sustainable forest management and the multifunctional role of forests. The Action Plan provides a framework for forest-related actions at Community and Member State level and serves as an instrument of coordination between Community actions and the forest policies of the Member States (Communication from the Commission … 2006).

The Lisbon Strategy (Presidency Conclusions. Lisbon … 2000) objectives of sustainable economic growth and becoming the most competitive and dynamic knowledge-based economy in the world, were compatible with the Gothenburg objectives of safeguarding the quantity and the quality of the natural resources base.

The forest sector can substantially contribute to the sustainable development of the society and to the quality of life. The challenge is to improve competitiveness, while practicing sustainable forest management, diversification of outputs and valuation of the services provided by forests to society.

Significant progress has been made in developing forest policies, laws and national forest programmes. Of the 143 countries that have a forest policy statement, 76 countries have issued or updated their statements since 2000. Of the 156 countries that have a specific forest law, 69 countries – primarily in Europe and Africa – reported that their current forest law has been enacted or amended since 2005. Close to 75 percent of the world's forests are covered by the national forest programmes, i.e. a participatory process for the development and implementation of forest-related policies and international commitments at the national level (Global Forest … 2010: 9).

Another notable development has been institutional and administrative changes in the way that governments act within the sector. Some countries have partially privatised state forest assets and, in Eastern Europe, the restitution of forests to their previous owners has created a vast number of small private forest owners. Furthermore, where significant areas of forest remain in public ownership, many governments have encouraged their public forest managers to act more like private forest owners by setting clear commercial targets and more clearly separating the different roles of the forestry administration (i.e. policy formulation, policy implementation and the management of public forests) (Branch 2005).

According to the EU strategy Europe 2020 (2010), EU Member States should decouple economic growth from resource use, turning environmental challenges into growth opportunities and making efficient use of their natural resources.

The EU has adopted an ambitious energy and climate policy which aims by 2020 to reduce energy consumption by 20 percent, with a similar cut in CO_2 emissions, while

raising the share of renewables in the EU's energy mix to 20 percent (the "20/20/20" climate/energy targets). One of the seven flagship initiatives of the European Commission is "Resource efficient Europe".

It is generally recognized, that natural resources provide many benefits to society and to the economy and play an important role in the preservation of natural biodiversity and the mitigation of climate change. The quality of our ecosystems – namely air, water, soils and forests – should be ahead of negative impact of climate change.

4.2. Aspects of future forest ownership role for sustainable competitiveness in Lithuania

Lithuania is in the 53 place according to The Global Competitiveness Index (2009–2010), provided by the World Economic Forum, covering 133 countries (Schwab 2009), or in the 31 place (2009) according to the annual World Competitiveness Yearbook, published by The Institute for Management Developments (IMD), with coverage of 59 economies (Garelli 2009).

Political topicalities and public discussions about the ownership and management of Lithuania's state forest create the need for searching the optimal ownership structure and raise of questions about the future competitiveness resources in Lithuania.

There are two different positions in the society about the state forests management: one suggestion is to privatize state forests; the second opinion is that state forests should be saved in the state ownership with the optimized existing management system.

Generally, a comparison with other regions shows the remaining potential for productivity growth.

The wood sector is able to compete successfully on foreign markets as reflected in the large surplus of foreign trade in the relevant products. The development of this national sector will rely heavily on the speed of modernisation processes and success in securing additional supplies of raw materials from abroad as well as in optimising the use of local resources. In this area, the government plays a key role. In addition, the industry is an important component of the production sector even in well-developed countries (such as Denmark, Finland, Italy, etc.) (Lithuanian Economic Outlook 2009: 94).

There are possibilities to reduce costs by increasing efficiency in the sector (e.g. following the example of the Nordic countries, which have expensive labour and raw material costs, but remain competitive through system optimisation) (Garelli 2009: 218).

Building on the different experience at EU level, the decisions about forest ownership and management in Lithuania should be based on a shared vision of the long-term and global challenges. It is suggested to take into the account the variable factors.

The wood industry has acquired vast experience in Lithuania and forestry is an important branch of the Lithuanian economy.

Lithuanian forests – a bridge towards a renewable future. Firewood and timber, including the purveyor of waste wood and wood wastes (bark, needles, sawdust, sawdust briquette), reeds, straw and other agricultural waste are dominated by the production of renewable energy resources of Lithuania in the balance sheet.

The comparison of Lithuanian and other countries forest ownership should bear in mind the different richness of all natural resources.

The total forest area in Europe is expected to increase by around five percent between 2000 and 2020. This will occur due to a mixture of afforestation and natural processes and will occur both on former agricultural land as well as along the tree margin in mountain and boreal areas. However, the area available for wood supply might decrease, due to increasing demands to set-aside forests for other functions, such as: biodiversity conservation; recreation; and protective functions (Branch 2005). Otherwise, it is important to have quantity as well as quality.

The productivity of state-owned and private-owned forest should be analysed and compared.

On the one side, the challenge for the future will be for the forest sector to adapt and evolve to remain competitive in the changing policy environment.

On the other side, short-term economic goals have to be juxtaposed and reconciled with long-term ecological milestones in corporate environmental strategy planning (Vihervaara and Kamppinen 2009: 92). Naturally the transition to a green economy requires strong demand and willingness to pay for forest environmental services.

The forest sector requires relatively little investment to obtain significant revenues from exports of wood raw materials and primary processed products. Lithuania could have a challenge to export products with higher added value – future drivers of sustainable competitiveness.

Despite the importance of economic factors and a need for higher forest sector productivity and profit, "soft" factors should also be taken into account before making the decision about state forests management. Regardless of forest ownership, the forest is primarily a national asset that must be preserved for future generations, allowing the environmental, economic and social needs of society (Lietuvos miškų ... 2002).

The state's mission could be to save the ecosystem, living environment and historical Lithuanian image of "green" country – to save forests in the state-ownership. Generally, there is a need for research initiatives to evaluate the state forest role, challenges and opportunities for the competitiveness in the context of sustainable development in the long prosperity.

5. Conclusions

The changing policy context, growing role of sustainable development, the transition to a green economy and the new European Union strategy for smart, sustainable and inclusive growth (Europe 2020, 2010) call for the "rethinking" of the main drivers of the sustainable competitiveness in the long prosperity and the future competitiveness leadership.

Despite the accepted importance of the forestry sector for sustainable development, there is a significant lack of information on forests ownership in Europe.

Recognising a wide range of natural, social, economic and cultural conditions and differences in ownership regimes of EU forests, it is expected that growing forest could become the source of growing future sustainable competitiveness resource in Lithuania.

Forest resources in Europe are likely to continue expanding (State of the World's… 2009: 26). Lithuanian forest cover (33.1 percent) is relatively low compared to some of the EU countries (Finland, Sweden, Slovakia, Estonia), but forest coverage has a tendency to increase.

There is no accepted general model of forest ownership structure in EU and each EU Member State has a national model of forest ownership structure. Countries can be divided into three groups according to the forest ownership structure with dominance of public ownership (Estonia, Poland), private ownership (Finland, Sweden) or without dominance of one type of ownership (Germany, Netherlands). Despite changes in forest ownership in some regions, most of world's forests (80 percent) remain under public ownership. The State also is a major owner of forest and forest land in Lithuania. From the forests ownership standpoint, the problem in Lithuania is that the existing management of state-owned forests is not effective. Lithuania has a relatively high number (42) of public bodies that manage forests, while the more forest-rich countries in the EU have one body (Sweden, Finland). The trading is not centralized in Lithuania, in contrast to the most EU countries. The average forest area for one employee in Lithuania is less than in other countries. The comparison with other regions shows the remaining potential for the productivity growth.

The different theoretical views and research in the scientific and legal literature on the topic of forest ownership present different approach to the ownership structure. Two contrary opinions and suggestions are in the Lithuanian society about the state forest management: to privatise forest or save state-owned forests.

Building on the different experience at EU level, the decisions about forest ownership and the improvement of management in Lithuania should be based on a shared vision of the long-term and global challenges, so as to develop clear objectives and implement them using a coherent and balanced approach to sustainable development and forest.

Public forests could give more benefit after the improvement of its management without changing the main owner: state forests should stay state-owned. Lithuania's challenge is to save forests growth and use forests as the future competitiveness driver in the context of sustainable development.

The findings of this article could be led by further research of natural resources role in the context of competitiveness and sustainable development and the impact on future sustainable competitiveness.

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DARNAUS KONKURENCINGUMO ŠALTINIŲ PAIEŠKOS: MIŠKŲ NUOSAVYBĖS ASPEKTAI

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Santrauka

Lenktyniavimas dėl konkurencingumo pozicijos globalioje ekonomikoje ir vis didėjantis darnaus vystymosi svarbos pripažinimas kelia Europai didelių iššūkių, o kartu atveria naujų galimybių. Darnaus ateities konkurencingumo šaltinių paieškos lemia naujas mokslinių tyrimų iniciatyvas, kuriomis būtų plėtojama darnaus konkurencingumo koncepcija, apimanti darnaus vystymosi ir konkurencingumo sąryšį. Kintanti politinė aplinka, didėjanti darnaus vystymosi svarba, perėjimas prie „žalios" ekonomikos ir nauja Europos Sąjungos pažangaus, darnaus ir integracinio augimo strategija „Europa 2020" skatina iš naujo įvertinti pagrindinius ilgalaikio darnaus konkurencingumo šaltinius. Straipsnyje plėtojamas požiūris į gamtos išteklius, ypač miškus, kaip į vieną iš ateities darnaus konkurencingumo šaltinių, kartu detalizuojant kai kuriuos miškų nuosavybės aspektus.

Reikšminiai žodžiai: konkurencingumas, darnus vystymasis, darnus konkurencingumas, natūralūs ištekliai, miškai, miškininkystė, nuosavybė, valstybiniai miškai, privatūs miškai.

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