



*“Gheorghe Asachi” Technical University of Iasi, Romania*



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## (UN)SUSTAINABLE CONSUMPTION AND SOME POLICIES BEHIND: LITHUANIAN CASE

**Renata Dagiliūtė**

*Vytautas Magnus University, Department of Environmental Sciences, Vileikos 8, Kaunas LT-44404, Lithuania,  
email: r.dagiliute@gmf.vdu.lt ; phone: +370 37 327904; fax: +370 37 327904*

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### **Abstract**

In the last two decades, countries in Central and Eastern Europe (CEE) have been undergoing some radical development changes. In the beginning of the 1990s economy as well as social and environmental issues have been affected by the transition to the market economy, globalization, and transition to the sustainability at the same time. As sustainable consumption patterns are one of the main preconditions for sustainability, this study focuses on consumption and some related policies in Lithuania, a typical country with a transition economy in CEE. Sustainability was not on the political agenda in Lithuania until 2003 and sustainable consumption was not focused on until 2009, when Lithuanian national strategy for sustainable development was reviewed. The results show that Lithuania inherited both sustainable (like low waste generation rates, refund system) and unsustainable (like high energy and water inefficiency) consumption levels, which were influenced by economic situation and new market mechanisms rather than some special political measures concerning consumption. Now, though efficiency is increasing, the overall consumption is generally growing.

*Key words:* policy, sustainable consumption, transition country

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### **1. Introduction**

Since 1992 Rio Summit Agenda 21 (UN, 1992, chapter 4) followed by 2002 Johannesburg Summit documents, sustainable production and consumption has become a concept of the international agenda encouraging the „shift towards sustainable consumption and production“ and promoting „social and economic development within the carrying capacity of ecosystems“ (UN, 2002a). The Johannesburg plan of implementation encouraged the development of a 10-year framework of programmes in order to accelerate the shift towards sustainable consumption and production via improved resource efficiency, minimized waste and maximized reuse, recycling, via developed awareness raising programmes; enhance corporate social and environmental responsibility, cleaner production support, developed indicators for monitoring progress, etc. (UN, 2002b). Tools like cleaner production, eco-

design, life cycle analysis, social corporate responsibility and others are indicated as ones leading to sustainable production. What concerns consumption, these tools include education, consumer information, and public procurement procedures. Thus, the measures addressing production and consumption are rather different; both parts – production and consumption – and measures are interrelated and influence each other.

However, focusing on efficiency, green consumption has not led to awaited results (e.g. energy (Barker et al., 2009)) and consumption is growing, correspondingly increasing the environmental burden. Some of planetary boundaries are already overstepped (Rockström et al., 2009) and key biogeochemical cycles are under pressure (Smith et al., 2014). Therefore, a challenge remains to shift towards more sustainable consumption and production patterns. Households are usually considered as the main consumers and major agents in changing consumption

patterns. Some researchers estimated that households are responsible for around 70-80% of environmental impacts (Tukker and Jansen, 2006). Hence, consumption behavior and habits are perceived as core elements seeking sustainable consumption and production and sustainability in general. However, altering consumption behavior and habits implies institutional changes, strengthening civil society, restricting population growth and consumption as well as social equity and justice, and value issues (Androniceanu and Dragulanescu, 2016; Fischer et al., 2012). As indicated by Pereira (2012), one of the ways towards sustainable society are “new social contract” and values shift from “westernized values”. The role of social change in order to alter consumption patterns and related environmental impacts is acknowledged, not neglecting the importance of regulation on the production side (Chen et al., 2014; Lorek and Fuchs, 2013; Tukker et al., 2008). As indicated by Akenji (2014), consumers’ choices depend a lot on the systems providing products and services, i.e. consumer “is not king” in the current production-consumption system.

Government as a governing institution and consumer itself plays an important role here. On the one hand, government as legislation launching institution, should provide a legal basis and incentives to sustainable lifestyles, business, goods and services (Pereira, 2012) by reforming formal institutions, improving citizen engagement and curbing consumption (Fischer et al., 2012), i.e. “setting direction” towards sustainable consumption and production (Akenji, 2014). On the other hand, governments could shape the demand side and give a lead in sustainable or at least green public procurements, as central governments in the European Union (EU) expend around 27% of gross domestic product every year (Eurostat databases).

Countries in Central and Eastern Europe (CEE) have been undergoing dramatic development changes in the last two decades. Economic, social and environmental issues have been affected by the transition to the market economy, globalization (Juknys et al., 2005) and transition to the sustainability, which began at the beginning of the 1990s (Mžavanadzė, 2009). Income inequality has significantly increased and the lack of strong middle class has hampered the formation of civic society, especially in countries with slow reforms and late liberalization (Archibald et al., 2004).

Moreover, economic and political issues quite often dominated over the environment, thus the existing market structures as well as reduced environmental control led to intensive energy and material activities, especially at the beginning of the transition (Cherp et al., 2003). On the other hand, Archibald et al. (2004) argue that countries of CEE have improved during the transition period, and all reforms including liberalization have had a positive impact on a more sustainable development: while living standards have risen, environmental pressure has decreased.

According to the international agenda, sustainability in general is one of the main targets and challenges for the countries in CEE. Lithuania, a former Soviet Union country and a typical transition country in Central and Eastern Europe, has experienced some transformational changes from centrally planned economy to the market economy, from totalitarianism to democracy. The sustainability concept as such came to Lithuania together with the reestablishment of independence in the 1990s. In Lithuania, sustainable production initiatives with cleaner production measures have started since 1993 (Staniškis et al., 2012). Various measures like cleaner production, environmental management system, EMAS, lifecycle approach, eco-design for sustainable industrial development (Staniškis et al., 2012) and economic restructuring (Dagiliūtė and Juknys, 2012) contributed significantly to the reduction in resource consumption and pollution in Lithuania. However, the question of sustainable consumption as such has only recently been acknowledged in Lithuania and has been discussed by Dagiliūtė (2008), Dagiliūtė and Juknys (2009), and Liobikienė and Mandravickaitė (2013) and some other researchers. Changing consumption patterns, i.e. changing the structure of consumption expenditures over the 1995 -2007 period, has led to a relative decrease in environmental impacts in most of New EU Member states including Lithuania (Liobikienė and Mandravickaitė, 2013). As stated by Tukker et al. (2008), economies differ markedly over the World and face different challenges; on the other hand, this gives opportunities for leapfrogging and directly adopting sustainable production and consumption structures, especially in fast developing countries. Though Lithuania and other CEE countries are not attributed to the developing ones, the transition and a relatively fast economic growth distinct them from the developed countries and leapfrogging opportunities can still be attributed to them.

As sustainable consumption patterns are one of the main preconditions for sustainability, this study focuses on some household and national consumption areas, as well as some policy instruments regarding some consumption areas in Lithuania. As consumption is a highly intertwined with production and is a crucial part of the production - consumption system (Caeiro et al., 2012), at all levels some results unavoidably affect the production side and have a(n) (in)direct impact on all the production-consumption parties (households, business, government). The results of the paper might be of interest to other CEE countries and the ones planning to join EU, as well as for policy makers.

This paper aims to view consumption changes that have been taking place in the last two decades and discuss some policy issues mainly influencing the main consumers or consumption patterns. First, consumption patterns inherited from the Soviet times are discussed. Then, the accession period and recent sustainable consumption challenges are presented. Some policies and their effectiveness are analyzed in Section 3. At the end, some conclusions are drawn.

## **2. Material and methods**

The paper is based on the analysis of consumption indicators and policies in private and public sectors during 1990 – 2010 year period. The indicators were chosen according to the literature review and country peculiarities. Various consumption indicators related to the main household consumption areas are usually analyzed: food and beverages, personal mobility, housing and tourism, from certain food product consumption, to home appliances, energy and water consumption (EEA, 2005; EEA 2012; Lorek and Spangenberg, 2001). As these areas cover a wide range of indicators, some authors focus on incomes and expenditures (Liobikienė and Mandravickaitė, 2013), some on water (Willis et al., 2013), or food consumption (Weidema et al., 2008) analysis and related impacts (e.g. energy and CO<sub>2</sub> (Rosas et al., 2010) etc. This is also confirmed by a review study on sustainable household consumption indicators (Caeiro et al., 2012) showing that the majority of the studies focus on one or two domains of consumption. These indicators might cover private and sectorial, or even national level, e.g. regarding domestic material consumption (Dagiliūtė, 2011; Weisz et al., 2006) or green public procurement (Dagiliūtė and Anikanova, 2011; Nissinen et al., 2009), depending on the actors involved. This study includes private (per capita) consumption indicators (final energy, electricity, water consumption by households, meat consumption, municipal waste generation, the number of personal vehicles, etc.). In addition, the indicators on a more aggregated (sectorial and national) level (volumes of building renovation, share bio-fuel consumption in transport, volumes of green public procurement, eco-farming etc.) are under analysis.

The period analyzed is roughly divided into two periods - post-soviet decade (1990 – 1999) and the decade representing current consumption trends (2000-2010). The first period covers a transitional decline and some recovery, the second one represents a rather fast economic growth and the current economic crisis. To reveal on-going consumption changes, the data from Statistical Office of Lithuania, Public Procurement Office and Eurostat are used. Some policies are chosen for the analysis according to the main consumption sectors and related environmental burden. The policy analysis is based on the targets and aims outlined in the particular policy document under the analysis or in the National Strategy for Sustainable Development (2009). The research is backed up with relevant studies in this field.

## **3. Results and discussion**

### *3.1. Post-soviet consumption trends*

In the last two decades, Lithuania, a former Soviet Union country and a typical transition country

in Central and Eastern Europe, has experienced transformational changes from centrally planned economy to the market economy. Around 1993 – 1995, one could observe the strengthening of environmental and municipal authorities as well as enhancing of industry and academic institutions. The National Environmental Protection strategy (1996) and other policy instruments were developed. With the help and financial aid of international institutions, some programs for pollution prevention and cleaner production implementation were launched (Rinkevicius, 2000), which could be considered as the beginning of environmental policy in Lithuania. Civic environmental movement was one of the drivers for the spread of democratic ideas and the reestablishment of independence; however in newly forming political and governmental structures environmental activists and greens soon lost their influence.

In general, economic and social issues dominated at the beginning of the 1990s. The inherited consumption patterns from centralized economy reveal some positive as well as negative consumption experiences. On the one hand, free or highly subsidized energy and water consumption in Soviet countries made these countries most inefficient economies of the World (Ürge-Vorsatz et al., 2006). Let alone the production, speaking about private consumption, no metering and real pricing of the resources existed. This led to highly inefficient energy (especially thermal energy) use and wasteful water consumption in the household sector. For example, at the beginning of the 1990s, water consumption in household sector amounted to 299 l/cap per day (to compare to recent 74 l/cap/day) (Fig. 1); thermal energy consumption – 280 kgoe/cap per year (to compare to recent 158.4 kgoe/cap/yr and still high (up to 30%) saving possibilities). On the other hand, centrally planned economy had limited possibilities of choice and availability, which means limited private consumption of food, apparel, household equipment, personal mobility (in terms of limited possibilities to have a personal car and freedom of travelling abroad) and some other. Consequently, these led to some positive environmental impacts like a relatively low waste generation, high public transport ridership (especially railway transport), developed refund system of glass bottles and collecting of waste paper.

All these consumption patterns were also affected by the changing economic system. Just after the reestablishment of independence, both sustainable (like low waste generation rates, refund system) and unsustainable (like high energy and water inefficiency) consumption levels were more influenced by economic situation and new market mechanisms rather than by some special political measures. For example, the implementation of accounting systems as well as the increase in prices, led to significant savings of water in household sector. Comparing to the 1990 -1991, the level of household water consumption decreased more than by half in 1995 and amounted to 147 l/cap/day.

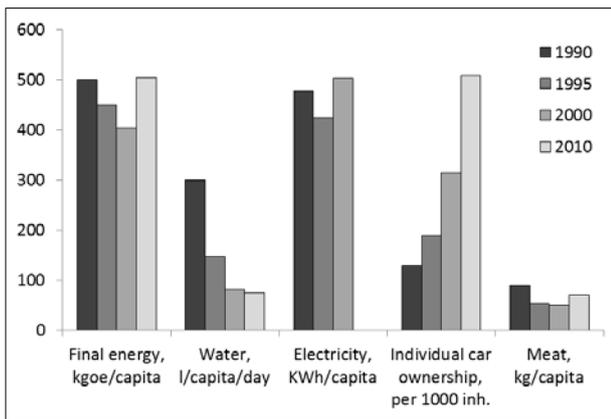


Fig.1. Private consumption in Lithuania in 1990, 1995, 2000 and 2010 (based on Statistics of Lithuania)

As an example of the negative impact made by the transition from planned economy to the market economy and changed ownership form, one could mention the degradation of public transport system and increasing car ownership (Fig. 1), as well as the destruction of system of glass package refund. It has been taking time and other resources to re-establish them now, especially in terms of consumer preferences and changed habits.

### 3.2. Current consumption patterns

The accession of Lithuania to the European Union (1999 – 2004) much contributed to the further development of environmental competences, institutions as well as changes in the state of the environment via various funding mechanisms and non-financial support. However, sustainability was not on the political agenda until Lithuanian national strategy for sustainable development (NSSD) was approved in 2003. Despite the fact that some consumption issues were covered by this strategy, sustainable consumption came to the political agenda only with the renewal of the NSSD in 2009.

The formal changes followed the renewed European Sustainable Development Strategy (2006) and determined the appearance of the chapter dedicated to sustainable consumption. Nevertheless, the issues addressed in this chapter are not consistent and some aspects are omitted, like social inequality, consumption patterns, environmental impact and more concrete targets.

In the case of consumption, the general aim of the strategy – “to achieve the present [year 2003] development level of EU-15 countries by 2020, according to indicators of economic and social development as well as the efficiency in consumption of resources, and not to exceed allowable EU standards, while meeting the requirements of international conventions in the field of minimization of environmental pollution and input into global climate change” – is not applicable as such in general. First, consumption patterns and levels in the EU could hardly be perceived as sustainable (Mžavanadzė, 2009). Second, Lithuania is dealing quite well with

international commitments (e.g. climate change) due to a significant economic downturn in the early 1990s, and still has an opportunity to leapfrog in some areas. For example, energy consumption per capita is about 2 times lower and municipal waste generation per capita is about 38% lower than in EU15 (Eurostat, 2010). Third, having in mind relatively high income inequality and high risk of poverty, for some social groups an increase rather than decrease in consumption is still necessary.

Despite the fact that economic indicators are improving on the national level, income inequality remains relatively high and every fifth resident of Lithuania lives in poverty. Therefore, consumption reduction or stabilization in absolute terms (Jackson, 2009) is not very likely in Lithuanian case (especially in some income groups) and a focus on the reduction in consumption related environmental impact would be a desirable and most probable option.

Overall consumption following the economic cycles has been increasing over the last decades. From 1995 up to the recent economic downturn, growing incomes and consumption expenditures have led to the increase in the motorization rate more than two times; also, there is an upward trend in energy consumption and waste generation (based on Statistics of Lithuania). Until 2007, consumption expenditures grew in all consumption categories (Liobikiene and Juknys, 2012). Only in the last decade, household incomes and expenditures have grown more than 1.5 times including a significant cut in incomes (30%) and expenditures (40%) due to the economic crisis. Over the period of 2000-2007, the most pronounced consumption expenditure growth was recorded for clothing and footwear (3.7 times), education (3.5 times), housing (3.1 times), recreation and leisure (2.6 times). Taking into account that prices for some consumption categories (like clothing and footwear) were declining (Liobikiene and Juknys, 2012), the increase in consumption expenditures directly indicates a rather significant growth in consumption volumes (e.g. clothing, footwear).

During the economic crisis, consumption expenditure has decreased in all (except clothing and footwear, and communications) expenditure categories, despite the fact that food and non-alcoholic beverages (24%), transport (17%), and housing (17%) accounted for the largest shares of consumption expenditure. Since 2008, together with growing prices, decreasing incomes and expenditures have led to the decreased meat (22%) and electricity consumption (5%), while final energy consumption and the number of cars has continued increasing (Fig. 2). Hence, people have been saving more on the luxury goods, culture, restaurants, but not so much on the necessities, except cars.

In some cases, a car could be attributed to the necessities, especially for the people in the suburbs and rural areas, as public transport system has so far been insufficient. On the other hand, the increase in car ownership indicates that besides incomes and insufficient infrastructure, some other, socio-

psychological (social status, attitudes), factors might be causing this trend.

### 3.3. Main consumers, polluters and some policies behind

As suggested by Akenji (2014), the shift towards sustainable consumption could be achieved via sustainable attitudes, facilitation (policies, administration) of attitudes to the actions, and appropriate products and infrastructure. In what concerns production, efficiency has been increasing and this is mainly caused by growing prices and implementation of EU directives (Štreimikienė et al. 2008); however, on the national level, both overall energy consumption and material consumption is growing (Dagiliūtė, 2011). This growth is mainly caused by household and transport sectors (Dagiliūtė and Juknys, 2012). Households and transport sectors were the main final energy consumers in Lithuania, constituting correspondingly 33.3% and 32.75% of final energy demand in 2010.

Industry and services sectors used only 18% and 12.6% of final energy consumed. Households together with commercial and institutional buildings, who use water for daily needs, are also among the main water consumers (excluding energy sector), amounting to 46% of water consumption in Lithuania. These two main consumers (households and transport sector) contribute significantly to the environmental pollution problems. Transport sector is responsible for more than 21% of all greenhouse gasses emissions and contributes to more than 56% of national NO<sub>x</sub> emissions. Households, together with other commercial and institutional organizations, are second largest contributors to SO<sub>2</sub> (25%) and NMVOC emissions (23%). Therefore, these sectors should be addressed in order to increase efficiency and environmental performance of consumption (transport sector and related environmental impact are closely related with private consumption, as environmental burden (energy needs, pollution) of personal mobility is accounted in this sector). The recent economic crisis should be treated as a possibility for innovations on national, municipal and individual level (Bleischwitz et al., 2009); on the other hand, during the economic downturns environmental issues usually have

lower priority (Mass et al., 2012) because social and economic issues dominate. In the case of consumption, woeful memories about limited consumption possibilities and freedom to choose, together with some factors like social status, image and inner beliefs as well as views created to some extend specific consumption patterns in Lithuania. As an example of such rather specific consumption patterns could be the above-mentioned decrease in incomes followed by motorization rate growth by 8% (and public transport ridership shrinkage). Hence, in Lithuania, besides economic factors, a rather complex system of different factors effects the consumption in general and on individual level. To address this variety of factors and aspects influencing and shaping consumption patterns, a deeper analysis is necessary, which could serve the background for the implementation of different policies. Policies that are effective in the Western World may not work in transition countries like Lithuania due to different income level, inherited consumption experiences and attitudes. Promoting self-restriction or reduced consumption in low or even middle-income groups might be useless and unacceptable in this case, especially having in mind income and consumption differences between old and new EU member states. It is necessary is to shape consumption in a more sustainable and responsible way, to introduce changes in attitudes and behavior, which is rather challenging. Some surveys on sustainable behavior and consumer attitudes suggest prevailing quite strong perception on links between consumption and wellbeing (Dagiliūtė, 2008).

The residents of Lithuania do not relate their own actions with environmental problems (Eurobarometer, 2009, 2011a). The personal responsibility for climate change is acknowledged by only 15% of Lithuanians (EU-27 – 21%) (Eurobarometer, 2011b). The environmental impact of purchased goods is important for 60% citizens of Lithuania (meanwhile in EU27 – 80%) (Eurobarometer, 2011a); however, 66.6 % of them declare to know nothing or very little about the environmental impact of purchased products, the choice being mostly conditioned by price (71.8%), quality (71%) and brand (55%) of the product.

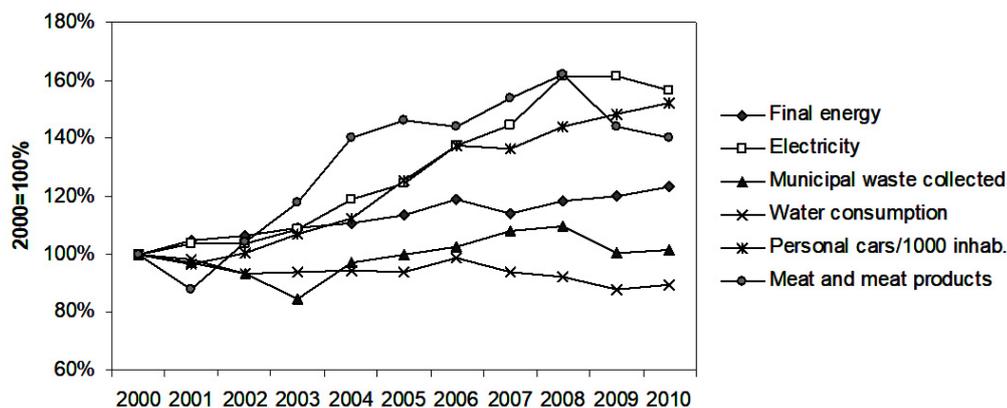


Fig. 2. Main trends in private consumption in Lithuania 2000 – 2010 (based on Statistics of Lithuania)

On the other hand, motivated consumers are “locked-in” by existing infrastructure (for example, there are only limited possibilities to use public transport in order to reach rural areas or suburbs in late hours, as well, using a bicycle is rather complicated due to insufficient infrastructure). At the same time, reshaping advertising and values, empowering consumers by providing alternatives is a crucial issue. Both sustainable consumption policy as such and Action Plan for Sustainable Production and Consumption are still in the stage of development. However, consumption patterns in Lithuania have of course been affected by legislation like integrated pollution prevention and control and integrated product policy, eco-labeling, as well as some energy or public procurement policy instruments. To reword this, consumption towards more sustainable pattern is driven mostly in turn with sustainable production initiatives.

Most of the political instruments usually address directly only business and governmental institutions as the main actors. Business is getting more involved in sustainability issues as pressure from the society is increasing, however the “compliance” approach still dominates and voluntary commitments are rather rare. Regarding final users, private consumers have mainly an indirect role. Bottom – up initiatives are rather weak and in some cases even top-down policy instruments fail due to the passiveness of the citizens. The renewed National Strategy for Sustainable Development (2009) is until now the only document dealing with sustainable development.

In general, the main aim of sustainable consumption is *“to make sure that the growth [of total consumption of products and services] does not worsen the environmental quality, giving preference to environment-friendly services and products that are produced and used with the smallest amount of energy and other natural resources, without toxic substances, and which have the lowest possible impact on the environment throughout the life-cycle”* (NSSD, 2009). Nevertheless, the strategy is rather limited to the promotion of eco-procurements on national and individual level, exploring the attitudes of the consumers, consumption habits, behavior and developing and implementing *„a sustainable consumption policy based on the use of products and services having the lowest possible negative impact on the environment“*. Hence, there is a lack in real action towards sustainability and changing consumers’ habits even if some “locked in” situations might be overcome.

However, as the analysis of some existing policy instruments shows, civic or personal activities particularly need stimulation. For example, Multifamily Building Renovation Program (GD, 2004) approved in 2005 has been stagnating and no significant achievement in energy saving in household sector is observed. Thermal performance of many old

multifamily houses in Lithuania is very poor and they need much more thermal energy than renovated ones. However, the economic crisis constantly changing conditions for state support, as well as reduced subsidies do not foster any program implementation. On the other hand, residents are lacking the will and are rather passive in general, though adequate funding and crediting mechanisms have been established, reduced VAT has been set for insulation and renovation works, and relative big financial support was allocated for promotion and advertising of this program.

Citizens have still been not willing to invest into renovation and take long-term commitments to the banks via loans. After the program was launched, only 357 multifamily blockhouses were renovated until 2010. And this only makes up to 1% of all block houses under the regulation of this program. In order to achieve the stated objectives (to renovate 70% of multifamily blockhouses and to save up to 20% of final energy by 2020), it is necessary to increase the volume of works about 10 times. Recent initiatives introduce some changes in the scheme of the implementation of the program suggesting the creation of governmental/municipal bodies, which would take the bank credits and could be responsible for the renovation. Long Term Transport System Development Strategy (GD, 2005) also addresses energy issues on national and private level. The strategy aims at multi modal cost-efficient transport system by giving priority to environmentally friendly transport, which uses more alternative fuels and reduces environmental pollution. On the national level, together with Law on Biofuels and Bio-Oils and some fiscal measures (reduces taxes, monetary compensations for biofuel producers) the structure of fuel consumption in transport sector has shifted in a positive way. The share of renewables in transport sector increased up to 3.5% in 2010 (Fig. 3). However, the progress achieved has not been sufficient to reach the foreseen targets of 5.75%.

According to the targets of the strategy and the aims of biofuel and renewable energy promotion directives (2003/30/EC; 2009/28/EC), the amount of biofuel in sold diesel fuel has been recently set at 6-7% in Lithuania. Other targets of the Long Term Transport System Development Strategy (GD, 2005) seem to be more challenging. As already mentioned, private motorization rates are increasing and the popularity of public transport is constantly shrinking. Only since 2007, the volume of passengers transported by city public transport (buses and trolleybuses) has decreased by 23%. More than 85% of cars are older than 10 years. The promotion of newer, electric cars, hybrid or more energy efficient automobiles is weak (no special VAT reductions or other fiscal mechanisms, no restrictions on imported used cars’ age or automobile tax); equally inefficient is the promotion and provision of public transport.

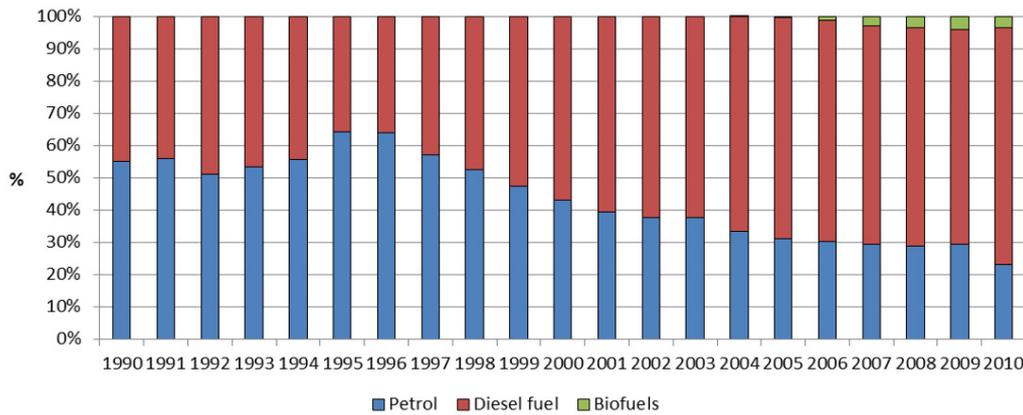


Fig. 3. Structure of fuel consumption in transport sector (based on Statistics of Lithuania)

Though the environmental criteria, which are approved by National Program for Green Public Procurement (GPP) Implementation (GD, 2007) also include the criteria for transport and transportation, only 2 automobiles out of 41 purchased using GPP corresponded with these criteria in 2008. In addition, among the public transport, the share of road transport amounts to more than 50% of all passengers transported and the air transport is growing significantly. The share of rail transport (considered to be a more environmentally friendly mode of transport) has now decreased two times and lost its competitiveness as compared to the beginning of 1990s, when railway offered a much denser net of routes and stations, as well as adequate frequency. One of the above-mentioned policies which works on the national level to promote sustainable consumption of governmental institutions is National Program for Green Public Procurement Implementation (GD, 2007). The aim of this program is to promote green public procurement and ensure that purchased goods and services are as environmentally friendly as possible. Lithuanian National Strategy for Sustainable Development (NSSD, 2003, 2009) also aims to reach the level of the leading EU countries in GPP application by 2020. This is quite a challenging target, as in some EU countries green public procurement

accounts for 50% and more of all public procurements (Evans et al., 2010). According to the study on green public procurement in EU-27 (EU, 2012), top performing countries include Belgium, Denmark, Netherlands and Sweden with all EU core GPP criteria applied in 40-60% of public procurement cases.

Though there are legal preconditions for the development of green public procurement in Lithuania (in 2007), the practical implementation of GPP is not smooth. In 2010, green public procurement accounted for only up to 5.8% by number and 18.4% by the value of all performed public procurement in Lithuania (Fig. 4); meanwhile, the strategic goal foreseen in the National Program for Green Public Procurement Implementation was to reach at least 25%. Thus, the possibilities of GPP are not fully employed in order to reduce the environmental impact (Dagiliūtė, Anikanova, 2011). Having acknowledged the importance of green public procurement and fostering a further development of GPP, it is necessary to improve information provision for all stakeholders, to enhance the spread of best practices, the creation of auxiliary instruments for procurement specialists, as well as to boost political support and impose stricter requirements on purchasing institutions. It is also necessary to promote green or sustainable procurements on the private level.

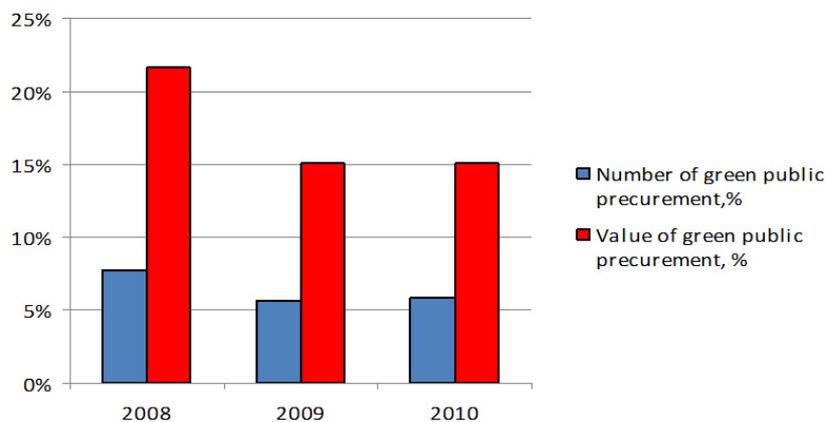


Fig. 4. Volumes (share and value) of GPP of all public procurements in Lithuania (based on Public Procurement Office)

Though there is more and more information provided about the environmental impacts of consumption, still there is no systematic approach to this issue, nor responsible institutions that could collect and provide reliable information, control the quality of the eco-labeled non-food products, etc. In the field of food products, such a system is established, certified food eco-label is more and more recognized, but some additional efforts are needed to strengthen its reliability. Local eco-farming is expanding, the area under ecological farming amounting up to 6% agricultural area (162.6 t hous. ha in 2012). Though the areas of eco-farming are increasing and farms are becoming larger, still there is no uniform information on eco-food consumption within the country, exports as well as imports.

#### 4. Conclusions

Some positive changes have taken place in the last 20 years in the field of sustainable consumption; however, some additional research and more active measures (not only information provision) as well as attitude changes are necessary to underpin sustainable consumption in Lithuania. Though there are no detail data and research on the environmental impacts of private consumption, speaking about sustainability, some positive trends should be maintained, like relatively lower waste generation and energy consumption. It is still possible to take some measures in order not to follow some unsustainable consumption patterns of the West and at the same time ensure the quality of life, especially for low-income groups.

Among the important factors are social changes, cultural and moral values, particularly regarding social status and material wealth. Woeful memories still decisively persist in Lithuanians mentality, but some environmentally friendly habits from the past have to be reestablished.

Command and control as well as economic mechanisms seem to be most influential: limits, permits, standards, prices and subsidies mostly affect the consumption from the production side. Still stronger political will creating conditions for sustainable consumption is also necessary, both when shaping consumption of governmental institutions and challenging business. However, while personal or authority will is necessary, passiveness and indifference persist.

Though focus on “green” consumption is debated, in Lithuania it remains as an option or starting point for sustainable consumption. Having in mind different development experiences, which have shaped specific consumption patterns in transition countries, policies and measures employed in the West might not work in the case of Lithuania, especially economic and voluntary tools (due to low incomes, lack of business traditions and know how). Therefore, a more detailed analysis of existing and proposed policy tools is necessary in order to reach the foreseen

goals and to ground sustainable consumption in Lithuania.

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