

# Chapter 1 Sustainable consumption and production governance in countries in transition

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## **Abstract:**

Unsustainable consumption and production patterns have brought the human civilization to the brink of a global disaster. Alteration of these patterns to minimize their adverse environmental impacts becomes now the key question of survival, the question relevant for any country and any citizen.

In this paper we are looking at consumption and production trends in the countries in transition belonging to the post Soviet area - Armenia, Azerbaijan, Belarus, Estonia, Georgia, Latvia, Lithuania, Moldova and Ukraine. These countries have common history but took different development routes. Now they are at different stages of economic development and political processes, with differences also in consumption- and production- related environmental pressures.

We analyze the sustainable consumption and production indicators, policy developments, progress achieved and main challenges behind sustainable consumption and production governance in these countries to make conclusions about the differences and commonalities.

The study is based on statistical data analysis and snap-shot surveys of national experts from non-governmental organizations, reflecting their views and observations, which often differ from official positions of national governments and international organizations.

## **1 Introduction**

The change of unsustainable consumption and production patterns in order to reduce the environmental impact is a matter of survival for our civilization. The concept of Sustainable Consumption and Production (SCP) is first of all directed to the optimization of nature resources use and minimization of anthropogenic environmental pressures.

Countries differ from each other in consumption- and production-related environmental pressures and drivers behind them but also in priorities, strategies and policy instruments used in SCP governance. In this paper we are focusing on the post-Soviet republics of Eastern Europe and Caucasus (Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine) and three Baltic States (Estonia, Latvia and Lithuania). For the purposes of shortness, they are referred to as EE&C region.

This region is rich and diverse in ecosystems as well as in economic activities. It inhabits around 225 million people and produces many services and industrial and agricultural goods. All the countries from the region were members of the USSR but after gaining independence in the beginning of 1990-ies, their economical, political and social transition processes went

on different paths: while the three Baltic States used shock therapy reforming their economic and political structures and became EU Member-States in 2004, the Eastern European and Caucasian countries were slower in economic liberalization and democratization processes and only aspire to join the EU. The six countries of the region are now united under the so-called EU Eastern Partnership initiative which provides for EU assistance in reforming their economies, governance systems, social and environmental policies to approach EU principles and standards.

All these countries over the last 20 years have experienced significant changes in their social, political and economic systems related to economic liberalization, privatization and democratization. The centrally planned economy was replaced by free market and opened for the global consumption choices. These changes have led to the new patterns of consumption and production and consequently household environmental impacts and pressures on global resources and ecosystems. The Earth has entered a new epoch where humans constitute the dominant driver of change to the Earth System and abrupt global environmental change can no longer be excluded (Rockström et al., 2009).

The main purpose of this paper is to assess the progress of these countries towards sustainable development and the transition to SCP and draw conclusions about the possibilities for improvements. The paper starts with statistical overview of some economic and environmental indicators relevant for SCP policy assessment and then describes the results from the snap-shot policy review carried out with the help of national environmental NGOs in the studied region.

## **2 Methodology**

This study builds on the previous project “Elucidating national and sub-regional progress on SCP policy development in Western (Belarus, Moldova, Russia, Ukraine) and South Caucasus (Armenia, Azerbaijan, Georgia) countries of the EECCA” carried out in 2008 by the Ukrainian National Environmental NGO “MAMA-86” (“MAMA-86”, 2008), as well as 2011 MAMA-86 project “Supporting environmental activities of the Eastern Partnership Civil Society Forum Working Group 3”, focused on studying environmental governance reforms in EaP (UNENGO “MAMA-86”, 2011), and explores SCP governance development in EE&C region using quantitative and qualitative research methods. First it looks at official social, economical and environmental statistical data on these countries and then follows with empirical analysis based on a snap-shot NGO expert survey to learn about the state of art in the SCP policy field in these countries.

Statistical data on GDP, CO<sub>2</sub> emissions and household final consumption expenditures (constant 2000 US\$) come from World Bank statistical database (<http://data.worldbank.org>); data on population are used from UN statistics division (<http://data.un.org>); ecological footprint data are taken from Global footprint Network studies and data on total material extraction (TME) are from SERI database ([www.materialflows.net](http://www.materialflows.net)).

The qualitative analysis is based on assessments of the situation in the countries by experts from national NGOs reflecting their views and observations, which often differ from official positions of national governments and international organizations. The information was collected during the above mentioned projects, through a structured questionnaire, as well in expert discussions held during the international conference “Sustainable Development in Eastern Partnership Countries: Taking Stock of the Progress and Setting Goals on the Road to Rio+20” was organized by “MAMA-86” on April 19-20, 2012 in Kiev where all the experts presented their SCP country analyses and discussed results.

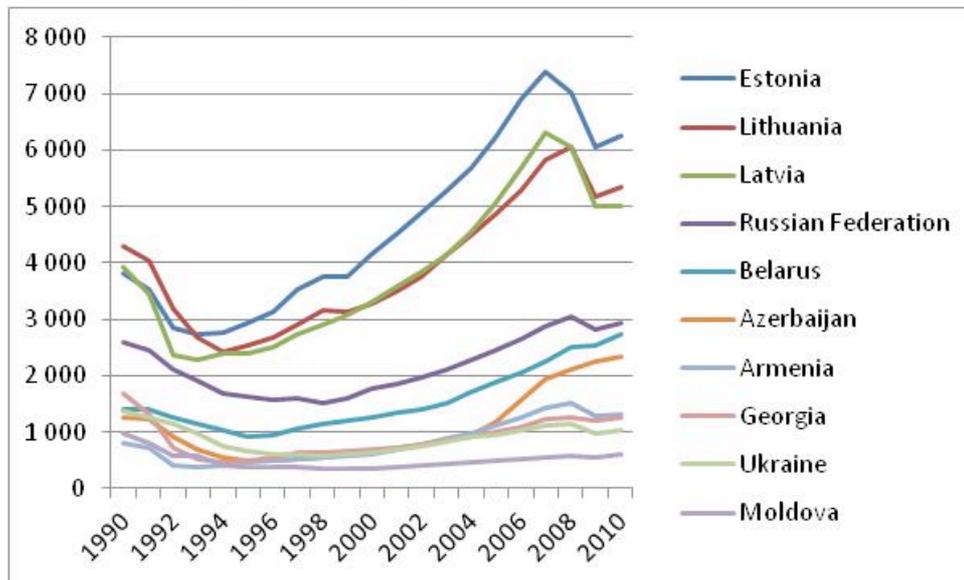
The study was organized around the strategies and their goals, principles and objectives, institutional mechanisms and policy instruments used for the SCP governance in the countries in transition. To provide information on these issues, the experts operated not only with

official statistics and normative base but relied on their own experience and knowledge on ongoing processes in their countries. The specific feature of EE&C countries is that official statistics does not always objectively reflects the state of affairs due to the low quality of data reported and imperfection of the indicators used. The legislative progress cannot be assessed purely on the basis of the presence or absence of specific legislation on the SCP. It is also necessary to take into account how these laws are integrated and implemented. These were the reasons behind the present review.

### 3 Statistical overview

All the countries in the region over the last 20 years have experienced steep economic (GDP) fall after the collapse of the USSR, followed by a rapid economic growth during 1996-2007 period, e.g. GDP growth rate in Latvia in this period on average was 7.5% annually (see fig. 2.). In the same period GDP, comparative price level and household final consumption expenditure of Central and Eastern European countries converged with EU15 (old EU Member States) (Liobikiene & Mandravickaitė, 2011). Three Baltic States are leading in per capita GDP and only Moldova, Ukraine and Georgia not reaching the level of 1990. However the global economic crisis of 2008 hit most of the region and especially Baltic States which experienced the sharpest decrease of GDP in the European Union. It creates many problems in providing sustainability but also opened new possibilities.

Figure 2. GDP changes in EE&C (2000 constant USD, 1990-2010).



Data source:

Despite the common past, regionally there are significant differences in socio-economic development among the countries. United Nations data show that the highest poverty risk remains in Armenia, the Republic of Moldova and Georgia, while Azerbaijan has managed to decrease its poverty significantly. Per capita household final consumption expenditures vary from over 3000 USD in Estonia, Lithuania and Latvia to below 1000 USD in Moldova, Azerbaijan, Ukraine and Georgia. Similar differences are also in per capita GDP. World Bank classifies Estonia as “high-income economy”, Latvia, Lithuania, Azerbaijan and Belarus as “upper middle-income economies”, but Armenia, Georgia, Moldova and Ukraine are considered to be “lower middle-income economies”. The difference also lies in the countries’ economic structure, with agricultural prevalence in the economies of Armenia, Georgia and

Moldova, a rather large share of industry in the economies of Ukraine, Azerbaijan and Belarus and service-based economies of Baltic States.

In terms of energy consumption, most of the countries in the region depend on imported gas and oil. The only country that stands out is Azerbaijan with its own rich oil and gas deposits. Coal is an important source of energy only in Ukraine with around 30% of total energy production, while in other countries this number is below 3%. Nuclear power stations currently operate only in Ukraine and Armenia (Belarus and Baltic States are planning construction of new nuclear power plants). The share of renewable energy is still very small across the region, except for Georgia and Latvia, where, due to hydropower and biomass (Latvia), the share of renewable resources in gross final energy consumption is more than 30%.

Two-tailed Pearson correlation analyses reveals that there is statistically significant positive correlation between the household expenditures and changes in environmental impacts and pressures like Total Material Extraction, Ecological Footprint and electricity consumption (see table 1).

Table 1. Pearson Correlation between Household final consumption expenditure and other social-economical and environmental indicators (1990-2010)

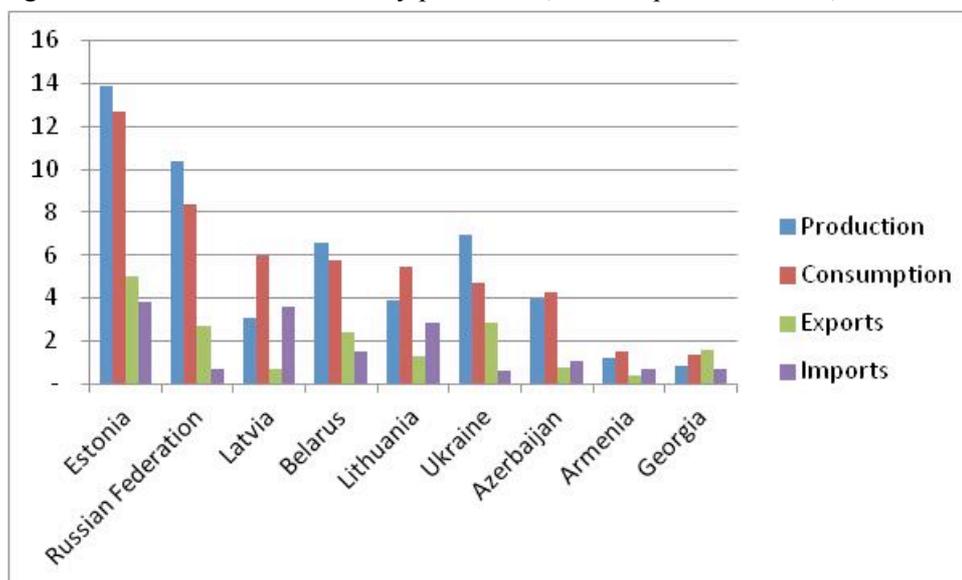
Household final consumption expenditure (constant 2000 US\$) per capita	Food production index (2004-2006 = 100)	CO <sub>2</sub> emissions (metric tons per capita)	Electric power consumption (kWh per capita)	GDP per capita (constant 2000 US\$)	Total material extraction (kg per capita)	Ecological Footprint of Consumption (ha per capita)
Armenia	0,930**	0,923**	0,108	0,984**	0,947**	0,835**
Azerbaijan	0,946**	0,251	0,089	0,954**	0,850**	0,588*
Belarus	0,661**	-0,014	0,07	0,992**	0,776**	0,016
Estonia	-0,208	0,339	0,809**	0,985**	na	0,619*
Latvia	-0,187	-0,373	0,811**	0,963**	0,928**	0,668**
Lithuania	0,734**	0,209	0,944**	0,994**	0,974**	0,461
Moldova	-0,575*	-0,661**	-0,552*	0,551*	0,696**	-0,186
Russia	0,489*	0,069	0,569**	0,870**	0,807**	-0,162
Ukraine	0,331	-0,075	0,354	0,736**	0,367	0,076

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Differently from other indicators, CO<sub>2</sub> emissions correlate with the household expenditures only in Armenia. Study by Davis and Calderira (2010) which looks at consumption related CO<sub>2</sub> emissions suggest that there are significant differences in the region: from 12.7 kt CO<sub>2</sub> per capita in Estonia to 1.4 in Georgia. Countries having highest consumption related emissions also have high production related emissions, suggesting that significant part of the emissions are produced domestically, but large part of the CO<sub>2</sub> emissions in Baltic States is imbedded in imported products.

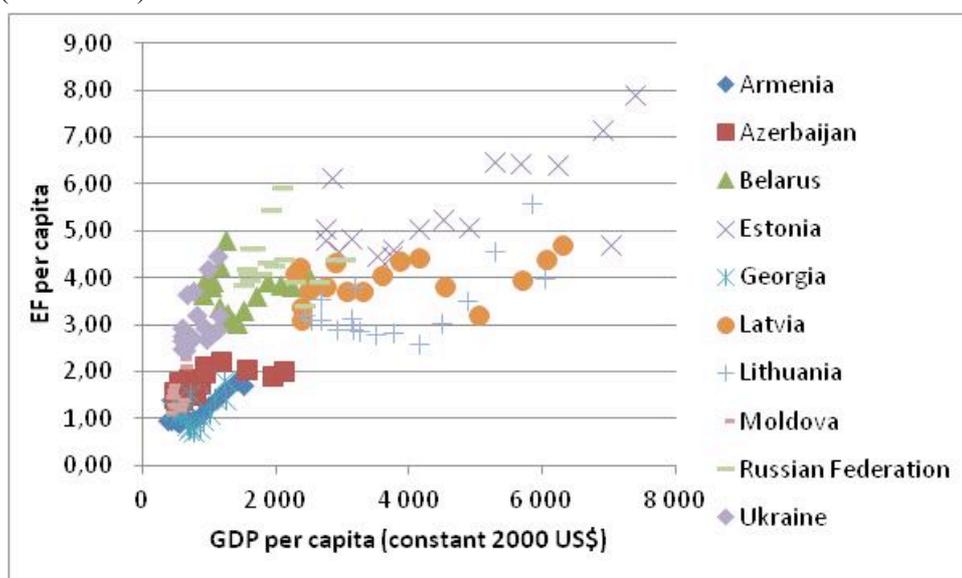
Figure 1. CO<sub>2</sub> emissions caused by production, consumption and trade, 2004



Source: Davis & Caldeira, 2010.

Moldova's case is specific as it has statistically significant negative correlations between household expenditures and CO<sub>2</sub> emissions, food production index and electricity consumption. Over the last 20 years, Moldova, similar to all the other countries from the region has experienced a steep fall in CO<sub>2</sub> emissions, but unlike others, where electricity consumption has been growing all the last 15 years (in Baltic States between 2005 and 2010 it increased by more than 20%), in Moldova it's still decreasing (electricity consumption and CO<sub>2</sub> emissions in this case has strong correlation).

Figure 3. Environmental Kuznets curve and Ecological footprint in relation to GDP changes (1992-2008)



Environmental Kuznets curve considers a nuanced relationship between income and environmental impact and suggests that an environmental emission might rise as income increases until a particular level is reached, at which point emission levels begin to fall

(Arrow, 1995). The fundamental implication of this theory is that economic growth may be seen as favoring environmental protection.

Indeed data show that indicators, such as urban concentrations of particulate matter and sulphur dioxide, decline over specified income levels (Chertow, 2001). However impacts such as energy use, waste generation, CO<sub>2</sub> emissions, resource shortages and biodiversity losses seems to have a linear relationship to income, rather than an Kuznets curve relationship (Weizsacker et al., 2009; Markandya et al., 2002; Chertow, 2001). Similarly also ecological footprints so far relentlessly follow economic growth (Caviglia-Harris et al., 2009; Bagliani et al., 2008). Results from this study on the Post Soviet bloc countries also supports these findings (see Figure3) suggesting that national economies would have reduced the ecological footprint through more efficient resource use and economic restructuring, but as the result of the rebound effect - increasing overall consumption and economic growth, consumption and production related environmental pressures continue to increase.

## 4 Survey results

### SCP strategies – principles, goals and objectives

Although sustainable development and SCP have been on the global policy agenda for more than two decades and countries have committed to develop national sustainable development and SCP strategies only some countries have done that (Berg, 2011; EEA, 2010; Watson et al., 2009). Our country analysis reveals that the EE&C region follows this general picture. Sustainable development strategies formally exist in Armenia, Belarus, Estonia, Latvia and Lithuania. However in some cases these documents do not really provide for a comprehensive sustainable development policy and are more focused on national economic development (e.g., the Belarus has developed the National Sustainable Socio-Economic Strategy until 2020, which is a regular economic development planning document, with no focus on environmental aspects).

SD goals and priorities are also poorly integrated into sectoral policies. Yet, environmental policy documents in some countries of the region, as is the case with the recently adopted National Environmental Strategy of Ukraine until 2020 or Latvia's Environmental Policy Plan, do contain SD principles, in particular environmental policy integration, but being sectoral policy documents cannot replace an overarching sustainable development strategy.

In general, there is a lack of understanding of SD terminology among politicians and society: SD is often confused with sustained economic growth. In its turn, the environment is considered by many as an obstacle to economic development. It is widely believed that only economically developed countries could afford comprehensive environmental protection measures and, therefore, while the economies are still weak, this cannot be a priority. Therefore there is no political will to include environmental policy into development priorities and the status of the environmental pillar in the governance system remains rather low.

SCP is the term unknown to most of the population, including politicians and policy-makers. SCP terminology is practically not mentioned in legislation, although by spirit, if not by letter, many of the countries' strategies of socio-economic development or sectoral policies (e.g., energy or rural development strategies) do provide some elements of SCP. However many of those provisions have a declaratory nature or not enforced and/or are fragmented, uncoordinated and contradict with legal acts.

The Baltic States have become members of EU but other EE&C countries with exception of Belarus are only aiming for EU integration. This integration process entails the harmonization of legislation between EE&C countries and EU. An example of this is the

above-mentioned National Environmental Strategy of Ukraine, which mandates development of 10-year National SCP Framework Programme, an SCP strategy and Action Plan. It could be expected that, due to further European integration reforms, SCP could make its way into the countries' reform agenda.

On the practical level, there are many activities that could be counted towards SCP goals, such as energy efficiency measures in industry and housing sector implemented by private companies and municipalities, renewable energy (solar, wind, small hydropower) development, waste management programs, organic farming initiatives, introduction of ISO 14000 standards and eco-labeling, scientific research to develop new eco-friendly technologies and so on. However, these activities could be still compared to small islands in the ocean of unsustainable practices. It is also problematic to assess the actual impact of such measures, because of weak environmental monitoring systems (except for Belarus, where it is considered to satisfy the requirements) and a lack of accessible comparable statistical data in countries of Easter European and Caucasus.

### **SCP policy integration in sectoral policies**

The prevalence of unsustainable consumption and production in EE&C means that there is great room for improvement and many "low-hanging fruits". In particular, substantial opportunities lie in energy sector (industry, housing, and transport), organic agriculture, sustainable forestry and ecotourism.

**The energy sector** in most EE&C countries is still highly centralized and dominated by large energy-generating capacities. The sector, most of the facilities of which date back to the USSR, is primarily based on fossil fuels use and outdated inefficient technologies (with exception of Baltic States where most of the power plants are renewed or recently built), which, in particular, causes considerable energy losses. Although all countries have legislation on energy conservation, energy efficiency and use of renewable resources, these issues are not in the core of national energy strategies; in many cases they are driven by economic rather than environmental reasoning. The relative legislation is generally either not consistent (i.e., subsidizing of fossil fuel consumption is preserved along with measures to encourage energy efficiency) and/or only partially implemented.

Important elements of the energy policy is also increasing generation capacities and export (for example, in Ukraine through construction of 22 additional nuclear power blocks, as provided by the Energy Strategy until 2030; Baltic States are planning a new Nuclear Power plant in Ignalina), and ensuring energy independence (Baltic States).

Not only for current EU members from Baltic States but also two East European – Moldova and Ukraine - European integration again plays an important role: membership of the latter in the European Energy Community requires these countries to adhere to a number of EU regulatory acts in the energy field covering the issues of energy efficiency, renewables, as well as reduction of emissions of the energy sector.

Still, the energy sectors remains to be among the most non-transparent and information on energy flows is hardly accessible to the public (except for Baltic States where energy information is more and more accessible).

There are big regional differences in climate change mitigation policies. The Baltic States have developed their national strategies and participate in EU Emission trading system, but other countries of the region, which are not part of EU does not have specific legislation setting CO<sub>2</sub> emission reduction targets or actions to reach them.

**In industrial sector** situation is similar: most of the industry in the Baltic States collapsed as the result of the shock therapy and disintegration of USSR, while other EE&C countries preserved most of its industry which still in most of the cases is outdated and based on obsolete energy-intensive, resource-inefficient and polluting technologies, as a result of which industrial pollution continues to affect environment and in some countries, such as Ukraine,

energy intensity remains to more than twice higher than the EU average. Pollution fines and resource taxes also remain low in the region but more importantly in many cases a lack enforcement of these measures and inadequate environmental monitoring are serious impediments on the way to cleaner production. **Waste management**, including municipal waste, is limited mostly to waste collection and landfill. Waste separation is developed only in the Baltic States but in the rest of the region is still uncommon, and waste recycling plants are few.

**In transport sector** the use of private cars in the EE&C has not yet reached the levels of EU15, although the car ownership increases constantly; also the aviation is rapidly growing, even despite the current economic crisis. There is practically no use of new energy efficient modes of transport such as electric cars or hybrids because of their prices and limited infrastructure. However there is some development in this respect in Baltic States where money from Norwegian fiscal instruments and sold CO<sub>2</sub> quotas are invested in energy efficiency projects as well as demonstration projects for new technologies and modes of transportation. Poor public transport policy and limited investment in the co-use transportation modes is a serious obstacle to sustainable mobility. The main focus of the countries' transport policies are on improvement of road infrastructure and transit systems, while the development of environmentally friendly public and alternative not motorized transport services and measures for stimulating less intensive use of private cars do not find adequate political support.

**In the housing (construction) sector** a progress towards SCP principles is ambiguous (this relates both to construction of new buildings and operation of the old ones). On the practical level, there is a tendency to introduce energy efficient technologies in the construction of buildings and in communal services. Yet these measures are not systemic and address the problem of the housing sector energy and resource inefficiency only to a limited extent. There are also problems associated with spatial planning and procedures for land allocation for construction sites, which is often non-transparent and municipal development plans either lack public and stakeholder participation or simply do not exist. This results in urban sprawl, especially around bigger cities, the landscape change, significant increase pressures on the existing communal infrastructure, diminishing of urban green space, which dramatically decrease the quality of life in cities.

There are also negative trends observed regarding the environmental impact assessment in some countries of the region (UNENGO "MAMA-86", 2011). For example, in Ukraine, the new Law on Urban Planning has effectively demolished the mechanism of EIA. There are even less opportunities to stop environmentally dangerous construction in Georgia, where investors are given carte blanche in their activities, regardless of their potential environmental impacts. Unsustainable trends are also observed in rural areas. While urban building construction is booming, there is little progress in rural infrastructure development, which means increasing gap between urban and rural populations in access to basic infrastructure, including communications.

**In agriculture and forestry** there is some legislative progress on transition toward SCP, for example in promotion of organic farming which is growing all over the region. Latvia for example is running a campaign to have municipalities sign up for the non-GMO areas. The main concerns of the agricultural policy in the region are agricultural intensification in the Baltic States and food safety and security of the food supply in the rest of the region. At the same time, contemporary challenges of agriculture related to biofuel production or climate change are not understood and not strategically addressed.

### **SCP Policy Instruments**

Countries in EE&C region are using a wide variety of different policy instruments to execute the previously described strategies, plans and legislation, although command and

control and economical instruments prevail. One of the wide-spread instruments - punitive measures for breaching environmental legislation (e.g., charges for water and air pollution) - are not adequate to the damage caused and are poorly enforced. Therefore, the system of penalties is not effective and in practice does not achieve the intended objectives – it neither stops the violations nor raises budget revenues.

The harmonization with international production standards has been initiated but still is rather slow and on the national level not integrated with the SCP concept. The harmonization is induced by external factors, mainly international trade and EU integration.

There is a general lack of funding for sustainable production measures, as it is not a priority for private capital under the current conditions of economic crisis, and public financing is also limited, with exception of Azerbaijan where oil revenues allow the state to fund many initiatives on energy efficiency and construction of renewable energy facilities and the Baltic States where part of the EEZ grants were directed towards sustainable development.

An environmental fiscal reform has been only partially addressed in the national legislation, with many economic incentives being mostly on paper. However, those measures that have been introduced show good results: e.g., an introduction of the “green tariff” for renewable energy in Ukraine (one of the highest in Europe) in 2009 resulted in solar and wind power development, driven by massive foreign and domestic investments (it is estimated that 400 mln. Euros have been invested in renewable energy in 2011).

An important factor for energy efficiency and renewable energy measures is the numerous international assistance projects being implemented in many countries of the region (by EU, EBRD, GEF, GIZ, UN agencies, etc.). Projects are also being implemented under the framework of UNFCCC and the Kyoto Protocol mechanisms. Some of them focus on modernizing large production facilities, with medium and small-scale enterprises getting much less attention. Others introduce energy efficiency measures in communal services, however in a fragmented manner and mainly in big urban areas, while the infrastructure in towns or rural areas remains unaffected. The Baltic States have also used significant part of EU structural funds to invest in environmental infrastructure, especially in water, waste water and waste management infrastructure. All in all, the technical assistance alone is insufficient to make a drastic change under conditions of obsolete energy- and resource-intensive technologies prevailing in production and housing in EE&C.

People in the EE&C countries are generally unaware of sustainable development ideas and there is also little concern about SCP. Currently the consumer behavior is hardly shaped by environment-saving concerns. Moreover, subsidizing of energy consumption on household level does not allow economic factors to effectively drive energy saving, even under current low levels of the population income. Establishing adequate economic incentives for individual consumers and restructuring current inefficient and centralized communal energy and water supply systems, district heating and waste collection, which do not allow for individual decentralized resource efficiency initiatives, are necessary to ensure resource-conscious household behavior.

NGOs in the region have been lobbying for inclusion of SD and SCP principles in governmental policies for many years; however these efforts have had a limited success, partially due to a lack of regular consultation mechanisms and processes. The Baltic States and Armenia shows a rare example in the region of establishing a permanent platform that allows for the dialogue between the government and NGOs on sustainable development (National Sustainable Development Council). However these bodies are with limited impact on the national policies and do not go beyond general government priorities. Establishing effective regular public participation mechanisms for SD policy formulation and implementation is critical under conditions of permanent political changes, when such mechanisms could provide institutional memory and ensure the consistency of the policy.

## 5 Discussion

Many authors have stressed that there is necessary drastic reduction of environmental impact of economic activities to avoid the collapse of civilization and change should come from society by transforming economic, institutional and social structures (Assadourian, 2010; Jackson, 2009; Daly, 2008). This applies also to the countries in EE&C region, but there are differences in focus. The ecological situation in the Baltic States improved considerably when industry output reduced in the beginning of 90ies and policy changed along with the collapse of the Soviet Union. EU accession process stimulates stronger environmental policy and legislation and application of environmental management principles. However this does not lead to the decreasing environmental pressures of consumption as shown by the ecological footprint indicator.

Countries with lower GDP rates have also lower household consumption and ecological footprints, but the trends are alarming, as increasing income leads towards higher resource consumption and pollution levels linked to the life cycle of the products and services. All the countries in the region most likely will increase their economic activity to aim for material prosperity levels of the west, meaning also increasing environmental pressures from consumption and production. At the same time, they do not have enough capacity to develop new technologies for decoupling the growth and there is no willingness to redefine progress away from GDP growth.

The results of our study contradicts with the findings in other studies (Lenzen and Murray, 2001; Birch et al., 2004 and Barrett et al., 2005) who established a relatively strong correlation between per capita expenditure and Ecological Footprint ( $R_2=0.76-0.82$ ). This can be explained by the structural changes in the consumption patterns (structure of household expenditures) and industrial processes which at least partly decoupled economic growth from ecological impacts. However the data demonstrated strong correlation between ecological footprint and GDP which is in line with many other studies (e.g. York, Rosa, Dietz, 2004; Venetoulis, Chazan, Gaudet, 2004).

This correlation has led many people to believe that environmental protection means reducing economic welfare and therefore is politically unacceptable. One of the main political and economical policy goals in the region is to reach the GDP levels of Western Europe as revealed by the snapshot survey. Frame of mind behind the strategies to reach this goal is the approach - 'let the economy grow and take care of environmental concerns later'. However environmental Kuznets curve suggest the opposite. Therefore the challenge remains to find a new and healthy balance between economic aspirations and environmental imperatives.

Development and implementation of SCP policy is a complex and cross-cutting task, which is hardly achievable without proper horizontal and vertical policy integration mechanisms. All the countries in the EE&C region lag behind in policy integration so its establishment should be among the priorities of SCP policy development. Therefore we suggest replacing current market-based approach to SCP governance in the EE&C region with the more holistic and integrated one (see table 2).

Table 2. Current and Integrated approaches to SCP policy

	<b>Current market approach</b>	<b>Integrated governance approach</b>
<b>Goals</b>	Relative decoupling	Progressive decoupling
<b>Strategic approach</b>	Eco-efficiency approach dominates; Technical and economic reforms to increase the eco-efficiency of economic sectors; Supply side management; Support for sustainable consumption and greener products; Basic responsibility is placed on the shoulders of individual consumers; Law hanging fruits.	Complementary, integrated approach; Coordinated structural reforms within governmental to reduce the resource flow within the parameters of the planet's ecological capacity; Eradication of unsustainable consumption habits; Basic responsibility rests on society; Changes in consumption sectors with the most significant environmental pressures.
<b>Process</b>	Centralized, institutionalized decision-making; Vertical integration; Limited interest group participation.	Decentralized, network-type decision-making; Horizontal and vertical integration; Broad interest group participation; Self-education process; Powerful political coordination.
<b>Instrument application</b>	Singular use of instruments; Use of market instruments; Rational consumer approach; Technological innovations; Fixed norms.	Holistic approach; Integrated use of instruments; Target group orientated approach; Social (systemic) and environmental innovations; Elastic norms.

To encourage such change towards SCP governance, there is a need for transition not only in economic sectors and in technologies but in the institutional framework that should encourage prosperity also outside of the market and social-psychological mindset of the people should shift towards less materialistic values and lifestyles. Important element of this transition should be a better dialogue and cooperation among different stakeholders and particular attention should be paid to bridging existing value-action gap with awareness-raising campaigns and other activities, in order to stop the growing consumer culture and environmentally-irresponsible behavior. But action-value gap, when people are practicing pro-environmental behavior as the result of the economic limitations, but do not value it and if possible would be willing to follow the material lifestyle of the industrialized countries, should also be take into account when designing sustainable consumption strategies.

## **6 Overall conclusion**

The countries of the EE&C region share a common legacy of the Soviet past. They present, however, differs: the Baltic States are fully integrated in the EU and the rest of the region is only undergoing pro-European reforms with an ambition to join the EU in the future. The EU factor seems to be critical for advancing sustainable development principles in the region, with those countries being already Member-States showing the biggest progress in terms of integrating sustainable consumption and production principles in their national policies and legislation. However EU accession does not address the growth effect which is the main driver behind increasing consumption related environmental pressures. Therefore Baltic States in the region have the highest per capita ecological footprints.

Among non-EU regional countries, those which are most advanced in negotiating Association Agreements with the EU (Armenia, Moldova and Ukraine) also seem to be more

willing to introduce certain elements of SCP principles in their legislation. This could be explained both by soft pressure of the EU in setting reform agendas and by EU and other international technical assistance, in particular, in drafting of relevant legislation or implementation of pilot projects, including transfer of technologies.

Nevertheless, despite the EU support, we can speak only about fragments of SCP policy in the countries of the region. None of the countries use integrated holistic approach to SCP; indeed, most of them even failed to develop proper sustainable development strategies (unlike the Baltic States which have been obliged to develop such strategies as part of their EU accession homework). Still, some SCP principles are scattered in the national energy, construction, transport and other sectoral policies.

However SCP policy in the EE&C region is in its infancy and there is a long way to go from this mosaic of policy elements to a coherent policy with an adequate institutional support and funding mechanism. Perspectives of its development are gloomy if governments are left without external (EU integration agendas, international technical assistance, international agreements) and internal (NGOs and interested business) pressure. Yet, the European integration, being a driving force for policy changes, could also add more challenges for SCP: as the countries further integrate into the world economy and, in particular, into EU markets due to perspective free trade agreements, a production growth is expected, including through transfer of EU production facilities with heavy environmental impact to EE&C due to lower environmental standards. Therefore, the importance of SCP policy development and introduction of stricter production regulation is ever increasing. Cooperation between the countries under Eastern Partnership programs, as well as learning from successes and mistakes of other countries of the region that are more advanced in providing for SCP like the Baltic States could fasten the overall region's progress towards sustainable development and SCP in particular.

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