

European Environment Agency



2011 Survey of resource efficiency policies in EEA member and cooperating countries

COUNTRY PROFILE:

The former Yugoslav Republic of Macedonia

Country information on resource efficiency policies, instruments, objectives, targets and indicators, institutional setup and information needs







This country profile is based on the information provided by Margareta Cvetkovska and Risto Jordanovski from the Macedonian Ministry of Environment and Physical Planning. The information is current as of April 2011.

This country profile was prepared as part of the EEA-ETC/SCP 2011 survey of resource efficiency policies, which aims to collect, analyze and disseminate information about national experience in the development and implementation of resource efficiency policies in EEA member and collaborating countries. The work resulted in the following outcomes:

- Short 'country profiles' (this document) self assessments prepared by countries, describing the current status of resource efficiency policies, including key strategies and action plans, policy objectives, instruments, targets and indicators used, institutional setup and information needs.
- **Summary report** prepared by the EEA and ETC/SCP, the report reflects on trends, similarities and differences in policy responses, showcases selected policy initiatives from member countries and identifies information needs and knowledge gaps.
- A session on resource efficiency policies during the 2011 EIONET workshop to discuss further needs and to facilitate information sharing and experience exchange among EIONET members.

More information about resource efficiency policies, including an analytical report "Resource efficiency in Europe" and thirty one country profiles, can be found at:

http://www.eea.europa.eu/resource-efficiency





1 Resource use in the former Yugoslav Republic of Macedonia – facts and figures

1.1 General facts and figures about the country





Source: https://www.cia.gov/library/publi cations/the-worldfactbook/index.html

Population (projected inhabitants for 2010) [1] Percent of total EEA-32	2,052,722 0.35%
Surface area (km ²) [2] → Percent of total EEA-32	25,713 0.45%
GDP at market prices – Purchasing Power Standard – Current Prices (Million Euro, 2009) [3]	17,204
Percent of total EEA-32 (minus Liechtenstein)	0.13%
GDP per capita in Purchasing Power Standards (PPS) [4] EU27=100 (2008)	34
Urban population (rate of pop., 2009) [5]	67.4%
Main economic sectors and their share in total GDP (2009 est.) [2]	
Agriculture	8.7%
Industry	22.1%
Services (2010 est.)	69.2%
EU accession date [6]	N/A

Additional relevant background information on the former Yugoslav Republic of Macedonia (and on 37 other EEA member and cooperating countries) can be found at the SOER2010 website: http://www.eea.europa.eu/soer/countries/mk





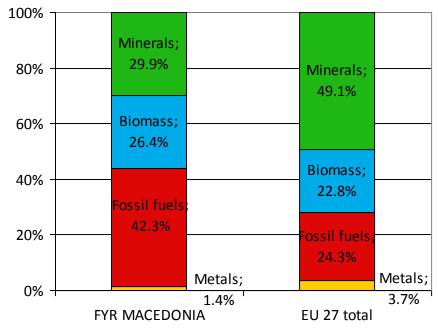
1.2 Facts and figures on resource efficiency for the former Yugoslav Republic of Macedonia

60 FYR MACEDONIA - use of resources per capita in 2000 [tonnes DMC/capita] 50 DMC per capita in tonnes 40 30 EU 27 Average 20 10 0 Ceed Republic Switterland Netrelands United Kingdom Latvia Poland Sweden Germany AUSTIA Norway reland Greece spain Iceland FYR Macedonie croatia Bulgaria trance EU21 Portugal Finland Estonia Malta HUNBar Beleium CABURS 12ally Lithuar

Use of resources per capita 2000 [tonnes DMC/capita]

Source: Eurostat, OECD, Total Economy Database and Steinberger et al, 2010. [7] The data for Use of Resources per Capita used in this profile is from 2000. As such it is not directly comparable with other country profiles.

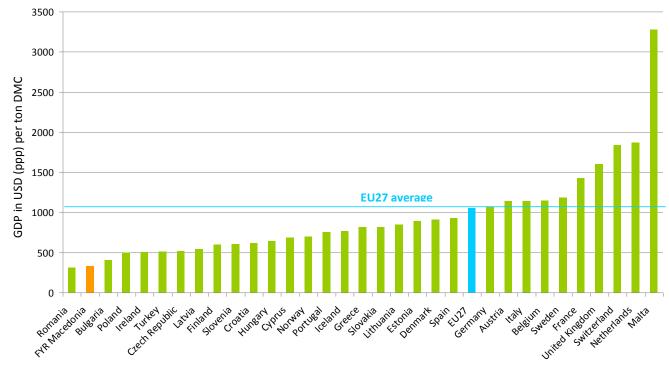
Breakdown of DMC by type of materials (2000)



Source: Eurostat and Steinberger et al, 2010. [8]







Material productivity 2000 [USD ppp/ton DMC]

Source: Eurostat, Total Economy Database, The Conference Board and Steinberger et al, 2010. [9] The data for Material Productivity used in this profile is from 2000. As such it is not directly comparable with other country profiles.





2. Evolution and main drivers for the development of resource efficiency policies

The basic legal framework and the main institutional structure in economic, social and the environment sectors is already established, although partly covering some relevant aspects of sustainable development. The development of the legal framework and institutional establishments in retrospective is characterized by adopting a framework for strengthening the goals stated in the **National Strategy for Economic Development 1997** [10], by the Government of the former Yugoslav Republic of Macedonia, with an efficient analysis of the state and future developments of the energy sector, including efficient use of energy resources.

The Government is also accounting for a program for efficient use of energy. The energy regulatory commission has also been formed, which has authority over the safe supply of energy to consumers and protection of natural resources and the environment.

The former Yugoslav Republic of Macedonia has signed the Energy Charter treaty and the Protocol on energy efficiency and related environmental aspects. With this, the former Yugoslav Republic of Macedonia aims to introduce energy efficiency policies, create a strong regulatory framework, develop and implement programs for effective institutional organization. The former Yugoslav Republic of Macedonia is a signatory of the Energy community treaty, which demonstrates the dedication to improving the environment, by rapidly increasing the use of renewable sources of energy.

The process of accession to the EU began with the signing of the Agreement for Stabilization and Association in 2002. From 2005 the former Yugoslav Republic of Macedonia has candidate Status for accession to the EU and has started internal reforms of the economic and legal systems. In that direction the **National Programme for adoption of the EU acquis (NPAA)** [11], was adopted to serve as a mechanism for coordination and control of harmonization with the EU acquis. The process of harmonization with the EU acquis has started in some sectors relevant to sustainable development (environment and physical planning, employment, forestry, energy etc.)

The **Spatial Plan of the Republic of Macedonia** [12] was adopted in 2004, defining the goals for spatial planning in the country until 2020. The plan accounts for a wide spectrum of priorities for sectoral policies and strategies related to sustainable development and serve as a basic document for integrated policy creation.

In 2006 the **National development plan of the Republic of Macedonia for the period 2007-2009** [13] was adopted, focusing on the priorities for the country's development in various segments – economic, social etc.

The **Second National Environment Acton Plan (NEAP) of the Republic of Macedonia** [14] was adopted in 2006, defining the state of environment in the country and focusing on the priorities for environmental protection.





The former Yugoslav Republic of Macedonia has signed and/or ratified numerous conventions in the segment of Environment, as well as in the investments segment, taxes, and other documents relevant to sustainable development, including the **UN Framework Convention on Climate Change,** ratified in 1997 and the **Kyoto Protocol** ratified in 2004. A large number of signed bilateral, regional and multilateral agreements relate to sustainable development, such as the **Energy Community Agreement** which was ratified in 2006. In line with the agreement, participating countries need to harmonize their laws with the existing legal framework of the EU (acquis communautaire) related to energy, environment, competition, renewable sources of energy. The former Yugoslav Republic of Macedonia has signed the IRENA Statute (International Renewable Energy Agency) and is one of the founding countries.

The **process of decentralization** also started in 2002, while fiscal decentralization was projected for 2007.

3. Overall Policy Approach for Resource Efficiency

In the former Yugoslav Republic of Macedonia there is no single Strategy or Action Plan focused specifically on resource efficiency. The topic of resource efficiency and natural resources is covered as part of the **Strategy for Sustainable Development in the Republic of Macedonia 2010** [15] and in the publication **Sustainable Development, 2010** [16] by the State Statistical Office, where the key goals and strategic measures for reaching those goals are specified and elaborated in the directions of economy and environment:

- Climate Change and Clean Energy: mitigating climate change and its negative effects to society and the environment. Use of renewable sources of energy, structural changes in the industry – benefiting those facilities that do not have large energy and electricity needs and which have cumulative lower impact on the environment;
- Sustainable Transport: ensuring that our transport system meet society's economic, social and environmental needs whilst minimizing their undesirable impacts on the economy, society and the environment;
- Sustainable Consumption and Production: to decouple economic growth from environmental degradation;
- Conservation and Management of Natural Resources: to improve management and avoid overexploitation of natural resources; recognizing the value of the ecosystems services.

In the Strategy for Sustainable Development, the natural environment, geo-diversity, renewable sources of energy, the variety of high quality traditional agricultural and forest products are being identified as areas with potential for sustainable growth. Tourism, our cultural heritage, traditional architecture, craftworks, and the economy based on small and medium sized enterprises, are all factors identified as the country's potential for sustainable development. Among the key priorities are also the pan-European corridors as a solid basis for the regional development.

An imperative direction and focus in the strategy is given to the needs for structural changes relating to the available energy sources and the energy prices, as well as the utilization of the potential in renewable energy sources and the diversity in traditional and quality agricultural and forest products.





4. Strategies or action plans to improve resource efficiency for individual economic sectors, products or product groups

The following strategies and plans contain directions for efficient use of resources in specific sectors:

Energy:

- Strategy for Energy Efficiency in the Republic of Macedonia (2003)[17], is still in force and complements the new strategy from 2010; initiates a large spectrum of programs that aim to increase energy efficiency, and which are related to government, public administration or municipal administration, and businesses in general, civil sector and households.
- Strategy for use of renewable sources of energy in the Republic of Macedonia until 2020
 [18]; exploits the potential and opportunities for renewable energy sources.
- Strategy for increasing energy efficiency in the Republic of Macedonia until 2020 [19]; develops a framework for enhanced adoption of practices for energy efficiency in a sustainable way, and through implementation of programs and initiatives which are related to decreasing the dependence on imports, energy intensity and unproductive consumption of energy, with maximum participation from the private sector.

Specific sub-laws are in effect and regulate energy efficiency of specific products and construction facilities. This will assure that newly built facilities will comply with the energy efficiency requirements. The energy efficiency standards for electrical appliances for households will also allow for an appropriate estimation of the energy consumption of each product.

The following are the web-links to the by-laws:

http://www.economy.gov.mk/WBStorage/Files/Pravilnik za EE uredi za domakinstva SV85-2007-07-09.pdf

http://www.economy.gov.mk/WBStorage/Files/Pravilnik za energetska efikasnost na gradezni objekti SV143 20081113.pdf

Waste management:

- Waste management strategy of the Republic of Macedonia 2008-2020 [20]; defines the fundamental directions in the area of waste management, based on the hierarchy of principles in waste management as well as the basic principles of sustainable use of natural resources.
- National plan for waste management in the Republic of Macedonia 2009-2015 [21]; in which specific measures and activities are defined relating to the legal, institutional, organizational and economic aspects, as well as technical infrastructure for implementation of waste management policies and accounting for the priorities in waste management and sustainable use of resources, prevention and waste recycling.





Agriculture:

 National strategy with action plan for organic agriculture of the Republic of Macedonia 2008-2011 [22]; emphasizes goals to develop organic farming and products, strengthening cooperation with all relevant parties and strengthening of the market oriented organizations and forms of cooperation.

Forestry:

- National strategy for sustainable development of forestry 2006 [23] ; In this strategy, as a basis we see how the contribution from the forestry sector to the national economy and rural development is addressed, through emphasis on sustainable management with forest resources, and securing the protection of the local environment as part of the global heritage.

Tourism:

A specific sub-law is in force, relating to eco-labels for tourist facilities, with which the limit values in energy and water consumption are defined, as well as the regulation of waste generation in tourist facilities. Further on, support is extended for the use of renewable sources of energy and the promotion of environmental education.

The following is the web-link for the by-law: http://www.moepp.gov.mk/WBStorage/Files/Pravilnik%20za%20kriteriumite%20koi%20sto%20tr eba%20da%20se%20ispolnat%20za%20dobivanje%20na%20eko%20oznaka%20za%20turist.%20s mestuvanje.pdf

Water management:

The Strategy on water management in the former Yugoslav Republic of Macedonia is still being developed.

Industry:

- **The Industrial Development Policy of the Republic of Macedonia 2009-2020 [24]** puts emphasis on the Macedonian industry and its ability for applied research in sustainable production of organic products, specialized technological products, and services that satisfy the needs of the international market segments. It includes a projection to 2020 of the development of sustainable and authentic industries such as: organic wine and food, ecosteel, eco-construction, development of ICT technologies, medical equipment, and tourism in the former Yugoslav Republic of.

Among the key documents is also **The National strategy for Clean Development Mechanism 2007** [25], for promoting the usage of a mechanism for clean development in a time frame 2008-2012.





Economy:

- **The National Strategy for Economic development of the Republic of Macedonia 1997 [10]** highlights the need for efficient economic national policies as key factors in achieving national development goals with minimum energy consumption and at the same time points out the positive effects on the environment resulting from more efficient energy utilization.

5. Individual types of resources identified as priority for national or sector-specific resource efficiency policies

In the **Strategy for sustainable development of the Republic of Macedonia 2010** [15], specific resources have been identified as priorities:

- The natural environment and geo-diversity: improving the management and avoiding excessive natural resource exploitation; recognizing the value of the ecosystems services, development of the international corridors that secure economic, social and environmental needs;
- 2. **Renewable sources of energy**: increasing the share of renewable energy use from water, the sun, wind, and biomass;
- 3. **Diversity in traditional high quality agricultural and forest products**: putting an accent on organic farming and agriculture, production of healthy food and traditional products such as cheese, wine, honey, spices, etc. Integrated management of agriculture and forestry, based on sustainable economic and environmental approach;
- 4. Valorization and promotion of **Cultural heritage:** including traditional architecture, craftworks and development of eco-tourism.
- 5. **Intellectual energy and human resources**: with special emphasis on preventing such resource loss due emigration.

6. Strategic objectives, targets and indicators on resource efficiency

Part of the goals for sustainable development aim at:

Rural areas: from the Strategy for sustainable development of the Republic of Macedonia 2010[12]

- eco-tourism development;
- organic and traditional food production and improving the irrigation methods and infrastructure for improved quantity and quality of agricultural products;





- efficient use and utilization of natural resources, meaning efficient use of resources by managing investments effectively, orientation towards technical developments along institutional reforms in harmony with contemporary needs of the present and future generations. Creating conditions for efficient and profitable state of forestry according to the principles of sustainable development;
- Prevention of water pollution and loss of volume during transport through leakage;
- Establishment of an integrated waste management system.

Urban areas: from the Strategy for sustainable development of the Republic of Macedonia 2010[15]

- Adoption and implementation of urban eco-management policies; in land use, infrastructure management, municipal financing and administration. This means, assessment of the environmental infrastructure in terms of waste management, implementation of by laws regarding waste management and the best available technologies, for securing the protection of the environment and preventing the negative effects on human health;
- Development of available, reliable and efficient public transportation system;
- Support for implementation of projects that raise awareness for benefits of alternative transport means (ex. bicycle);
- Reducing the loss of water during transport and distribution in the water supply system;
- Building new waste water treatment plants for all agglomerations with more than 2.000 inhabitants;
- Establishing modern regional systems for waste management.

Energy: from the Strategy for sustainable development of the Republic of Macedonia 2010 [15], and the Strategy for increasing energy efficiency in the Republic of Macedonia until 2020 [19]

- Decreasing the dependence on energy imports and decreasing the unproductive consumption of electricity;
- Progressive change in the usage of current energy sources (emphasis on usage on natural gas and other renewable energy sources in the production of electricity);
- Stimulus for structural Industrial changes, with benefits for lower energy intensive industries, improvement in technologies, equipment and the systems that control the production, distribution and consumption processes;
- Promotion of the combined production of heating and electricity energy;
- Stimulus for the participation of the private sector in securing services for improvement of the energy efficiency from commercial aspects;
- Introduction of market prices for energy (rationalization of energy prices) as a means to improve the operating condition of the energy producers which should result in significant motivation for saving energy (public and private).

Transport: from the Strategy for sustainable development of the Republic of Macedonia 2010[15]

- Improvement of the urban flow and traffic, securing the urban transport infrastructure's role in reducing the green house gas emissions;
- Implementation of environmental noise protection, and support for a transport system that efficiently plans land use while preserving vital habitat and biodiversity;





- Undertaking measures that improve the economic and ecological sustainability of transport.

Consumption and Production: from the Strategy for sustainable development of the Republic of Macedonia 2010[15]

- Starting a green tax reform, and restructuring taxes from labor and investments towards investments in green economy where inefficient use of energy and resources is decreasing. From taxes for the "good" (employment) towards taxes for the "bad" (inefficient energy consumers);
- Implementing policies that enhance eco-efficiency and provide incentive for leading sustainable production and consumption patterns. For example, policies that will allow for more green products and availability while enhancing the customer awareness for such products;
- Improving resource management: water supply, recycling, renewable energy facilities, forestry, fisheries and eco-tourism.

Natural resource management: from the Strategy for sustainable development of the Republic of Macedonia 2010[15]

- Securing environmental protection in the former Yugoslav Republic of Macedonia based on the principles of "Natura 2000" network;
- Promotion of a new network for environmental monitoring;
- Securing air quality control and mitigating the effects on human health and the ecosystems;
- Establishing water resource management and decreasing the loss of volume during transport through leakage and pollution. Development of river basin management plans;
- Introducing waste management policies that decrease the amounts of generated waste, whilst favoring recycling and pollution prevention control;
- Supporting eco-tourism and the production of organic and healthy food as a trademark of the former Yugoslav Republic of Macedonia in the globalization process.

Goals defined for waste management: from the Strategy for waste management in the Republic of Macedonia 2008-2020[20] and the National plan for waste management 2009-2015 [21].

Table no. 1 Targets for specific identified activities.

Activity / waste stream	Target	To be achieved by
Improvement of collection and source		
segregation efficiency:		
- mixed municipal waste	collection efficiency 90%	2014
 segregation of hazardous and non- 		
hazardous waste fraction	segregation efficiency 100%	2010
(manufacturing/service sector)		
Landfill of waste:		
- landfill of MSW on temporary	100 % of collected MSW	2014
facilities (after conditioning)		
- landfill of MSW on facility compliant	50% of the total MSW	2014





with EU standards ¹		
- reduction of biodegradable waste	reduction to 75%	2014
disposed on landfills (transition		
period needed)		
- reduction of the greenhouse gas	reduction for app 25% of CO2	2014
emissions (landfills only)	eg.	
- diversion of industrial hazardous		2010
waste streams from non-hazardous	100 % effect	
landfills		

Table no. 2 Targets for specific waste streams

Activity / waste stream	Target	To be achieved by
Special waste streams		
 packaging waste of all 3 categories (transition period needed) 	recovery 50% recycling 25%	(2018) (2018)*
- used tyres	collection efficiency 90% energy recovery 100%	2014 2014
- batteries /accumulators	ban on import and sale of the Hg& Cd batteries and batteries containing too high Pb content	2010
- end of life vehicles	collection 90% recovery or reuse 70% recovery or reuse 85%	2014 (2018) (2018)
 waste electric & electronic equipment 	collection 90%	2014
- PCB/PCT waste	Inventory complete destruction	2009 (2018)
 C&D waste collection / recovery/ recycling facilities & landfill 	collected 30 % recovered/recycled 10% disposal 90%	2014

Defined goals in the energy sector: from the Strategy for increasing the energy efficiency in the Republic of Macedonia until 2020[19], and from the Strategy for use of renewable sources of energy in the Republic of Macedonia until 2020 [23]

 $^{^{1}}$ Most of our landfills are not compliant with EU standards and we need a transition period for the process of compliance. At the moment we have about 77% collection of MSW which is stored both at temporary facilities and land-filled on permanent landfills.





- Energy savings amount to 9% of the average consumption registered in the period of five years (2002-2006) until year 2018, with continuous promotion of energy efficiency and monitoring until 2020;
- Increasing the share of renewable energy sources from 13,8% in 2005, up to 21% in 2020, in the total energy consumption;
- Consumption of bio-fuels until 2020 is planned to reach 10% of the total fuel consumption in the transport sector.

Indicators in the energy sector: from the Strategy for increasing the energy efficiency in the

Republic of Macedonia until 2020 [19] and publication Environmental Indicators in the Republic of Macedonia 2008 [26]

- National indicator for energy savings on the basis of the average final consumption of energy for the five years 2002-2006 (ktoe/yr);
- Calculation of the indicative goal of energy savings in the residential sector 2002-2006 (ktoe/yr);
- Calculation of the indicative goal of energy savings in the commercial and services sectors (public buildings and facilities) 2002-2006 (ktoe/yr);
- Calculations of the indicator for energy savings in the industrial sector 2002-2006 (ktoe/yr);
- Calculation of the indicative goal for energy savings in the transport sector 2002-2006 (ktoe/yr);
- Energy consumption in the transport sector in the Republic of Macedonia; types of energy and types of transport 2000-2006 ktoe/year);
- Final energy consumption by sector 1995-2005 (ktoe/yr, %);
- Total energy intensity 1995-2005 (%);
- Total energy consumption by fuel 1995-2005 (ktoe/yr, %);
- Renewable energy consumption 1995-2005 (ktoe/yr, %);
- Trend gross electricity consumption and renewable electricity 1995-2005 GWh;
- Electricity production from renewable sources 1995-2005 (%).

Indicators in the sector of waste management, soil contamination and agriculture: from the publication Environmental Indicators in the Republic of Macedonia 2008 [26]

- Municipal waste generation (kg/person/year, percentage);
- Progress in management of contaminated sites (shows progress in five main steps);
- Land take (km2, percentage %);
- Forest fires (area seized by fire is expressed in ha, wood mass seized by fire is expressed in m3);
- Areas under organic farming (ha, percentage %);
- Mineral fertilizer consumption (kg/ha);
- Consumption of pesticides (kg/ha).





7. The institutional setup for the development and implementation of resource efficiency policies

Relating to the subject of sustainable development and efficient use of resources, and the formulation and implementation of policies for sustainable development, several Ministries have jurisdiction and responsibilities:

- Government, <u>www.vlada.mk</u>
- Ministry of Economy, <u>www.economy.gov.mk</u>
- Ministry of Finance, <u>www.finance.gov.mk</u>
- Ministry of Environment and Physical Planning, <u>www.moepp.gov.mk</u>
- Ministry of Agriculture, Forestry and Water Management, <u>www.mzsv.gov.mk</u>
- Ministry of Transport and Communications, <u>www.mtc.gov.mk</u>
- Ministry of Local Self Governance, <u>www.mls.gov.mk</u>

There is a shared responsibility and jurisdiction between the Ministry of Economy and Ministry of Environment and Physical Planning.

As a result of the process of decentralization in the country, numerous responsibilities, obligations and authority in sustainable development are delegated to the municipalities. Other institutionally affiliated actors in the process of sustainable development and efficient use of resources is the *Community of units of local self governance, the alliance of economic chambers,* as well as *the Macedonian Energy Agency* and its role in promotion of energy efficiency and use of renewable sources of energy. The *Energy Regulatory Commission* also has a role in the same process.

With the goal of effective implementation of the National strategy for sustainable development in the former Yugoslav Republic of Macedonia, an additional institutional arrangement is foreseen for the future:

- 1. National Agency for Sustainable Development
- 2. National Investment Bank for Sustainable Development
- 3. University campus for sustainable development

The National Agency for Sustainable Development will be founded as a limited liability company (DOO) with shares owned by the Government of the former Yugoslav Republic of Macedonia and the proactive municipalities. The National Agency for Sustainable Development is operationally responsible for the implementation of sustainable development according to the National strategy for sustainable development, as adopted by the Government. The National council on sustainable development will supervise the Agency, acting as a supervisory board.

The National Agency for Sustainable Development, at a national level, closely cooperates with the offices for sustainable development at local municipal level. As with the Agency, the local municipal offices have the assignment of designing and implementing projects for sustainable development. The offices should be supported by a communication network and further capacity support by the Community of units of local self-governance. The Agency as well as the offices for sustainable development will be connected to the National Investment Bank for Sustainable



Development, which will be part of the projects, activities cycles and finances available for sustainable development.

The proposed institutional arrangement for support in implementation of sustainable development in the former Yugoslav Republic of Macedonia is also based upon the University campus for sustainable development, responsible for research, analysis and demonstration of knowledge in sustainable development, as adopted by the Government.

8. Selected policy instruments or initiatives on resource efficiency presented in more detail

The adoption of preferred tariffs for electricity produced by small hydropower plants, and electricity produced from wind and biomass is considered to be important. In light of future success, two tenders for small hydropower plants, wind powered plants and biomass, announced by the Ministry of Economy. The first tender had 40 locations available and the second had 28 locations.

http://www.economy.gov.mk/Uploads/files/sektorskiDok/energetika/Public call water HC.pdf

In order to stimulate the use of solar energy in the country, the Government has started a subsidies scheme through which the Ministry of Economy covers 30% of the supply value for solar panels for the first 500 solar panel purchases, adequately installed in households.

Some of the Government's reforms include the changes in the law for VAT which accounts for a reduction in the VAT from 18% to 5% for thermal solar panel systems and components.

With the adoption of the Law on Environment in 2005 [27], a tax reform was introduced and this meant that for every motor vehicle and sailing/boat object registration, an additional tax has to be charged for those units that do not have catalysts, and a lower tax was accounted for those units that comply with new technological standards and have cleaner technical specifications (e.g. efficient catalysts). Additional taxes are introduced relating to the creation of industrial non-hazardous waste. This is 0.5% additional cost to the actual price for collecting waste, as well as additional compensation in the production and imports of tobacco, oil derivatives, plastics and plastic products. The additional taxes also affect those who exploit timber.

With the Law on Environment, additional taxes were introduced for the import of used motor vehicles, used electrical and electronic equipment and products, specific hazardous waste, ozone depleting substances, as well as for export of certain protected or endangered plants and animals.

The introduction of these new taxes has the goal of decreasing the production and imports of those products which have a negative environmental footprint and have implications on human health and natural resources. The intention is also to stimulate a process of decreasing the amounts of industrial non-hazardous waste, which also provides incentives for efficient use and protection of various resources.





With the introduction of the project "*Multimedia educative package in the environment and sustainable development-Green package*" by the Regional Environmental Centre – Country Office Macedonia [28], the goal was to improve the environmental education base in the former Yugoslav Republic of Macedonia by:

- 1. Developing a modern model of environmental education for the national education system;
- 2. Raising the environmental awareness of pupils and teachers and via them that of society as a whole;
- 3. Investing in human resources and capacity-building for sustainable development.

9. Topics of interest and information needs for follow up work

A possible topic or part of a future agenda and activities could be: The possibility for the establishment of a waste management system with the need to integrate the basic characteristics of sustainable management of natural resources, together with the policies for integrated products and integrated pollution and prevention control.

The aim of possible future activities could relate to the operations of waste management that could prevent emissions into the environment, as well as the harmful and negative effects for ecosystems; having in mind the use of efficient and effective technologies related to collection, transport, separation, temporary storage, and treatment of different waste, as well as the optimal usage of the materials and energy derived from the waste compounds.





10. References

10.1 Facts and figures about the country

[1] Eurostat, 2011 [demo_pjan]

http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjan&lang=en

[2] CIA World Factbook (2009 est.) https://www.cia.gov/library/publications/the-world-factbook/index.html

[3] Eurostat, 2011 [nama_gdp_c] http://appsso.eurostat.ec.europa.eu/nui/show.do

[4] Eurostat 2011 [tsieb010]

http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsieb010 &plugin=0

[5] World Bank, Migration and Remittances Factbook 2011

http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROSPECTS/0,,contentMDK:21352 016~pagePK:64165401~piPK:64165026~theSitePK:476883,00.html

[6] European Commission 2008

http://europa.eu/abc/12lessons/key_dates/index_en.htm visited December 15, 2008

[7] Eurostat, OECD, Total Economy Database and Steinberger et al., 2010
 DMC data from Eurostat Database, Material Flow Accounts, and OECD, Population data from
 Eurostat Database, Population, and The Conference Board — Total Economy Database, September
 2010. <u>www.conference-board.org/data/economydatabase/</u>

DMC data for FYR Macedonia: Steinberger, J., F. Krausmann, N. Eisenmenger, 2010. The global patterns of materials use: a socioeconomic and geophysical analysis. Ecological Economics 69(5), 1148-1158.

[8] Eurostat and Steinberger et al., 2010

Material flow accounts, env_ac_mfa, uploaded June 2010

DMC data for FYR Macedonia: Steinberger, J., F. Krausmann, N. Eisenmenger, 2010. The global patterns of materials use: a socioeconomic and geophysical analysis. Ecological Economics 69(5), 1148-1158.

[9] Eurostat, Total Economy Database, The Conference Board and Steinberger et al, 2010 GDP data from The Conference Board — Total Economy Database, September 2010, <u>www.conference-board.org/data/economydatabase/</u>; DMC data from Eurostat Database on Environmental Accounts, and OECD.

DMC data for FYR Macedonia: Steinberger, J., F. Krausmann, N. Eisenmenger, 2010. The global patterns of materials use: a socioeconomic and geophysical analysis. Ecological Economics 69(5), 1148-1158.





10.2 Resource Efficiency Policy References

[10] National Strategy for Economic Development 1997; no web link available

[11] National Programme for adoption of the EU acquis (NPAA) <u>http://www.sobranie.mk/en/WBStorage/Files/00%20NATIONAL%20PROGRAMME%202009%20%</u> 2029.05.2009.pdf

[12] Spatial Plan of the Republic of Macedonia

http://www.coe.int/t/dg4/cultureheritage/heritage/cemat/compendium/SpatialPlanMacedonia.p df

[13] National development plan of the Republic of Macedonia for the period 2007-2009 http://www.sobranie.mk/en/WBStorage/Files/National Development Plan 2007-2009%2015.02.2007.PDF

[14] Second National Environment Acton Plan (NEAP) of the Republic of Macedonia http://www.moepp.gov.mk/WBStorage/Files/Second%20NEAP,%20en,%20finalen%20dokument% 20za%20pecatenje,juni%202007.pdf

[15] Strategy for Sustainable Development in the Republic of Macedonia 2010 <u>http://www.moepp.gov.mk/default-en.asp?ItemID=CBB3AF354AB04A4291A87CEA7279857A</u>

[16] Sustainable Development (2010), by the State Statistical Office <u>http://www.stat.gov.mk/Publikacii/Odrzliv_razvoj_2010.pdf</u>

[17] Strategy for Energy Efficiency in the Republic of Macedonia (2003) http://www.economy.gov.mk/WBStorage/Files/Strategija%20za%20energetska%20efikasnost%20 na%20Republika%20Makedonija.pdf

[18] Strategy for use of renewable sources of energy in the Republic of Macedonia until 2020 (2010)

http://www.economy.gov.mk/Uploads/files/sektorskiDok/energetika/Strategija OIE final mk.pdf

[19] Strategy for increasing energy efficiency in the Republic of Macedonia until 2020 http://www.economy.gov.mk/Uploads/files/sektorskiDok/energetika/Strategy_for_IEE_EN.pdf

[20] Waste management strategy of the Republic of Macedonia 2008-2020 http://www.moepp.gov.mk/WBStorage/Files/Waste%20Management%20Strategy%20of%20the% 20RM%202008-2020.pdf

[21] National plan for waste management in the Republic of Macedonia 2009-2015 <u>http://www.moepp.gov.mk/WBStorage/Files/NWMP_2009-2015_%20of%20RM_finaL.pdf</u>





[22] National strategy with action plan for organic agriculture of the Republic of Macedonia 2008-2011

http://www.mzsv.gov.mk/files/NSAP%20Mkd.pdf

[23] National strategy for sustainable development of forestry 2006 http://www.sekira.org.mk/index.php?option=com_remository&Itemid=14&func=finishdown&id=9

[24] Industrial Development Policy of the Republic of Macedonia 2009-2020 http://www.economy.gov.mk/Home?article=d64eb679-37dc-4469-aae7-bfdbe7bcf3fb&lang=3

[25] National strategy for Clean Development Mechanism 2007 http://www.moepp.gov.mk/WBStorage/Files/Nacionalna%20strategija%20Kyoto%20Protocol,%20 mkd.pdf

[26] Environmental Indicators in the Republic of Macedonia 2008 http://www.moepp.gov.mk/default-en.asp?ItemID=309DA236BE11F04FB48AD66944E6A970

[27] Law on Environment 2005 http://www.moepp.gov.mk/WBStorage/Files/Law%20on%20Environment.pdf

[28] "Multimedia educative package in the environment and sustainable development-Green package" by the Regional Environmental Centre – Country Office Macedonia <u>http://www.rec.org</u>







Resource efficiency in Europe

Policies and approaches in 31 EEA member and cooperating countries

Further information about resource efficiency policies, including the analytical report and thirty-one detailed country profiles, are available on the EEA website:

http://www.eea.europa.eu/resource-efficiency

Selected examples of resource efficiency policies, instruments or targets presented in the thirty one detailed country profiles

