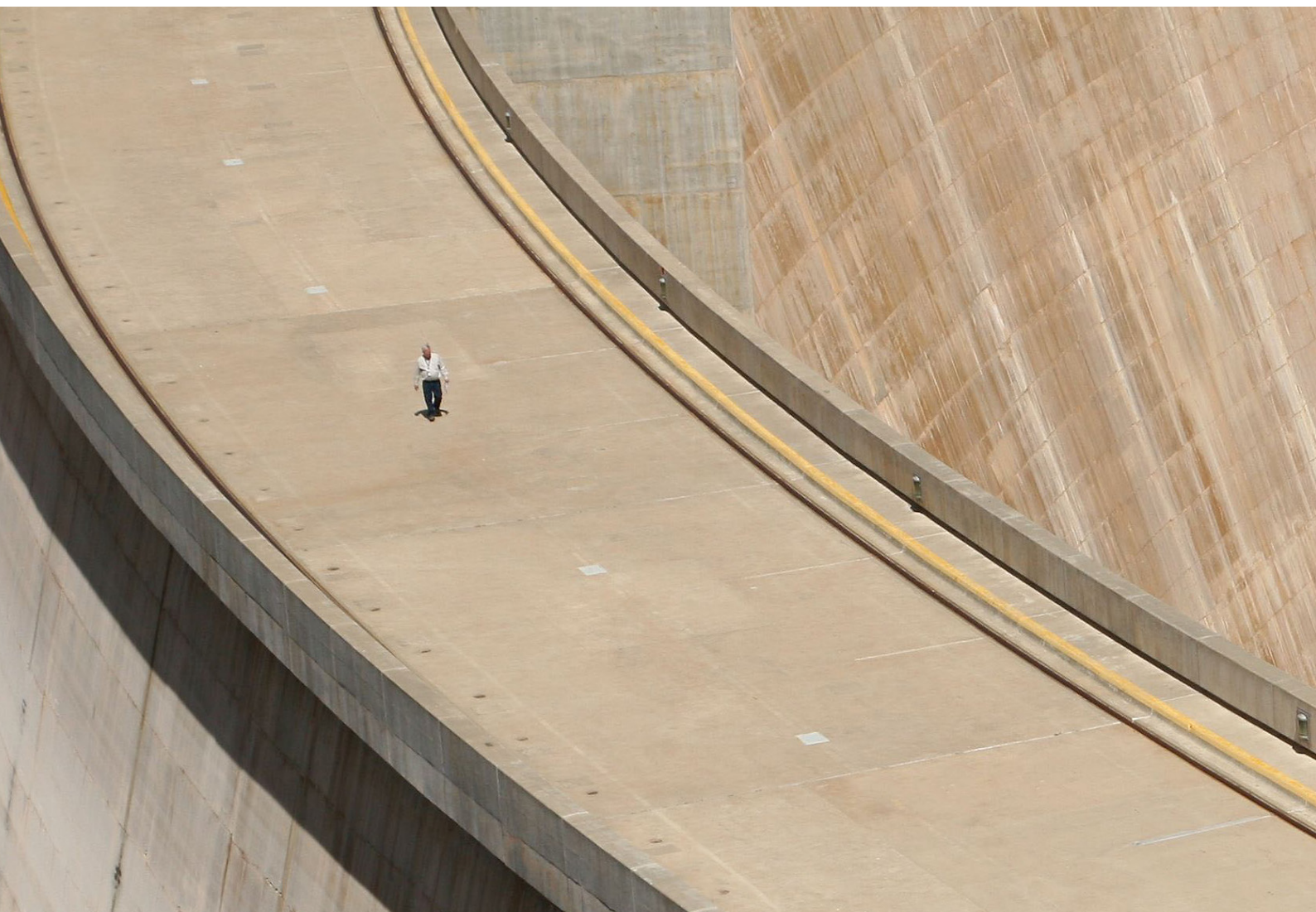


More from less — material resource efficiency in Europe
2015 overview of policies, instruments and targets in 32 countries



**the former Yugoslav
Republic of Macedonia**



May 2016



This country profile is based on information collected by M.Sc. Margareta Cvetkovska. This document should not be seen as an official list of government priorities and is not necessarily an exhaustive list of all national material resource efficiency policies, objectives, targets or activities in place. The information is current as of June 2015.

This country profile was prepared as part of the 2015 EEA review of material resource efficiency policies, that aimed to collect, analyse and disseminate information about the development and implementation of material resource efficiency policies in EEA member and cooperating countries. The work resulted in the following outcomes:



32 short country profiles (this document) – self assessments prepared by countries, describing the current status of material resource efficiency policies including key strategies and action plans, policy objectives, instruments, targets and indicators, and the institutional setup. Countries were also invited to share reflections on the future direction of resource efficiency policies.

EEA report *More From Less – material resource efficiency in Europe* – prepared by the EEA and ETC/WMGE, the report analyses trends, similarities and differences in policy responses, showcases selected policy initiatives from the countries, and offers some considerations for the development of future policies.

The EEA report *More from less – material resource efficiency in Europe* and the 32 country profiles are available at: <http://www.eea.europa.eu/resource-efficiency>


For information about trends and policies on municipal waste management in the participating countries, please visit: <http://www.eea.europa.eu/publications/managing-municipal-solid-waste>

Information about EU Member States' waste prevention programmes can be found at: <http://www.eea.europa.eu/publications/waste-prevention-in-europe-2015>

For information on climate- and energy-related policies, including those on energy efficiency, in the participating countries, please visit: <http://www.eea.europa.eu/themes/climate/ghg-country-profiles>

Macedonia, facts and figures

Source: Eurostat

 	<p>GDP: EUR 8.5 billion (equivalent to 0.1 % of EU-28 total in 2014)</p> <p>Per person GDP: EUR 10,100 (in purchasing power standard) (37 % of EU-28 average per person in 2014)</p> <p>Use of materials: Data not available</p> <p>Structure of the economy: agriculture: 8.8 % industry: 21.3 % services: 69.9 % (2014 est.)</p> <p>Surface area: 25,700 square kilometres (equivalent to 0.6 % of EU-28 total)</p> <p>Population: 2.1 million (equivalent to 0.4 % of EU-28 total)</p>
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Introduction

The Republic of Macedonia does not currently have a dedicated national resource efficiency strategy or a related action plan.

Scope of material resource efficiency

The term 'resource efficiency' and the scope of the term are not explicitly defined. There are some strategic documents where issues of material resource efficiency are covered, for example:

- Waste Management Strategy of the Republic of Macedonia 2008–2020 defines the fundamental approach to waste management, based on the principles of the waste management hierarchy as well as on principles of sustainable natural resource use.
- National Plan for Waste Management in the Republic of Macedonia 2009–2015 defines specific measures and activities related to legal, institutional, organisational and economic aspects of waste management and the technical infrastructure required for implementing waste management

policies, as well as priorities in waste management and sustainable use of resources, prevention and waste recycling.

Driving forces of material resource efficiency

The main drivers of policy relate to the process of harmonising national legislature with the EU *acquis* and related sector-specific concerns. Most of the strategic and planning documents on waste management, renewable sources of energy, sustainable development, organic agriculture and the clean development mechanism – amongst others – which have been adopted in the Republic of Macedonia follow the same pattern of adoption and application as similar EU documents.

There is also a substantial number of signed and ratified conventions in the domain of environmental protection, economy, sustainable development and investments. The conventions provide a basis for acceleration of the EU accession process and approximation with the *acquis*.

Regarding the energy sector, there are programmes and initiatives for decreasing dependence on energy imports, energy intensity and unproductive energy consumption. There is also a need for an integrated approach towards economic, social and environmental concerns and coherence in using existing instruments for better regulation.

The Republic of Macedonia aims to preserve nature's capacity to provide for all species and habitats while maintaining nature's wealth in the wider context, and recognises the need to secure a high level of environmental protection, including protecting and preserving the planet from unsustainable natural resource use.

The reduction of pressure on the environment and support of sustainable consumption and production, as well as the need to decouple economic growth and environmental impacts, form part of the country's strategy for sustainable development:

- climate change and clean energy – mitigating climate change and its negative effects on society and the environment through the use of renewable sources of energy and structural change in industry, benefiting facilities that do not have large energy and electricity needs and which have a cumulatively lower impact on the environment;
- sustainable transport – ensuring that our transport system meets society's economic, social and environmental needs whilst minimising its undesirable impacts on the economy, society and the environment;
- sustainable consumption and production – decoupling economic growth from environmental degradation;
- conservation and management of natural resources – improving management and avoiding the overexploitation of natural resources, while recognising the value of ecosystem services.

Priority material resources, sectors and consumption categories

Priority materials

In the Strategy for Sustainable Development of the Republic of Macedonia 2010, specific resources have been identified as priorities:

- the **natural environment** and **geo-diversity** – improving management and avoiding excessive natural resource exploitation, recognising the value of ecosystem services, and developing international corridors that secure economic, social and environmental needs;
- **renewable sources of energy** – increasing the share of renewable energy use from water, sun, wind and biomass;
- diversity in traditional high-quality **agricultural and forest products** – emphasising organic farming and agriculture, production of healthy food and traditional products such as cheese, wine, honey and spices, and integrated management of agriculture and forestry based on a sustainable economic and environmental approach.

Priority industries and economic sectors

The main policies in the Republic of Macedonia focus on the **construction industry** and improving the energy efficiency of **public institutions**, prioritising schools and hospitals, as well as subsidies for the renewal of residential buildings.

The construction industry is part of long-term strategic policy, both in terms of the use of raw materials as well as aspects related to energy efficiency. Specific sub-laws are in effect and regulate the energy efficiency of specific products and construction facilities. This will ensure that newly built facilities comply with energy efficiency standards.

The generation of power from renewable resources, greater use of renewable energy and increased energy efficiency are clearly outlined as part of the energy sector. Subsidies for photovoltaic panels and thermal collectors in households are available, as well as for the production of energy from renewable sources.

Agriculture, tourism and transport have also been identified as priority sectors in relation to resource efficiency and sustainable development.

Priority consumption categories

Strategic documents explicitly identify consumption aspects of energy, housing, transport and construction in the public and residential sectors and consumption of electricity in the industry and public sectors, as well as sustainable development goals and the use of natural resources.

Policy framework

National strategies or action plans for material resource efficiency

Specific national policies or strategies that address resource efficiency among other topics include the following documents:

Strategy for Sustainable Development in the Republic of Macedonia 2010,
<http://www.moepp.gov.mk/wp-content/uploads/2014/12/NSSD-2-EN.pdf>

Sustainable Development (2010), by the State Statistical Office,
http://www.stat.gov.mk/Publikacii/Odrzliv_razvoj_2010.pdf

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

First Macedonian Progress Report on the Promotion and Use of Energy from Renewable Sources,
https://www.energy-community.org/portal/page/portal/ENC_HOME/DOCS/3590146/Macedonia_RES_Progress_Report_05.02.2015.pdf

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

National Programme on Energy efficiency of Public Buildings in Republic of Macedonia, 2012–2018,
www.economy.gov.mk/ministerstvo/sektori_vo_ministerstvo/sektor_za_energetika/3093.html

First National Energy Efficiency Action Plan 2010–2018, www.energy-community.org/portal/page/portal/ENC_HOME/DOCS/2784180/1st_NEEAP_of_FYR_of_Macedonia.pdf

Second Energy Efficiency Action Plan of the Republic of Macedonia until 2015, https://www.energy-community.org/portal/page/portal/ENC_HOME/DOCS/3354154/Draft_second_EEAP.pdf

Waste Management Strategy of the Republic of Macedonia 2008–2020,
<http://www.moepp.gov.mk/wp-content/uploads/2014/12/Final-Strategija-za-otpad-mak.pdf>

National Plan for Waste Management in the Republic of Macedonia 2009–2015,
<http://www.moepp.gov.mk/wp-content/uploads/2014/12/Waste-Management-Strategy-of-the-RM-2008-2020.pdf>

National Strategy with Action Plan for Organic Agriculture of the Republic of Macedonia 2008–2011,
<http://www.mzsv.gov.mk/files/NSAP%20Mkd.pdf>

National Strategy for sustainable Development of Forestry 2006,
http://www.sekira.org.mk/index.php?option=com_remository&Itemid=14&func=finishdown&id=9

Industrial Development Policy of the Republic of Macedonia 2009–2020,
<http://www.economy.gov.mk/Home?article=d64eb679-37dc-4469-aae7-bfdbe7bcf3fb&lang=3>
<http://www.economy.gov.mk/dokumenti/strategii/3361.html>

National Strategy for Clean Development Mechanism 2007,
<http://www.moepp.gov.mk/wp-content/uploads/2014/12/National-Strategy-Kyoto-Protocol.pdf>

Water Strategy for the Republic of Macedonia,
http://www.moepp.gov.mk/?page_id=3197&lang=en

The circular economy and closing material loops

A specific policy approach towards material loops and the circular economy is not explicitly addressed in relevant documents, but there is considerable emphasis on policies related to waste streams, the material potential of the waste generated, recycling and waste management.

More specific policies fall into the domain of energy efficiency, including renewable energy sources, sustainable development and investments, and priorities in public and residential building.

General policy objectives for material resource efficiency

General policy objectives are directed towards the management and protection of natural resources in the broad sense, including biodiversity, air, water, soil, forest and land cover, alongside reductions in water pollution, air pollution and waste generation, as well as greater reuse and recycling. Other objectives pertain to the protection of natural resources used in agricultural production, including soil and water, increasing forest cover and rehabilitation of abandoned agricultural sites across the country.

Institutional set-up and stakeholder involvement

Institutional set-up for material resource efficiency policies

Several institutions have responsibilities, competence and key roles in relation to strategic documents as well as implementation and enforcement of legislation regarding material resource efficiency:

- Government of the Republic of Macedonia, www.vlada.mk
- Ministry of Economy, www.economy.gov.mk
- Ministry of Finance, www.finance.gov.mk
- Ministry of Environment and Physical Planning, www.moep.gov.mk
- Ministry of Agriculture, Forestry and Water Management, www.mzsv.gov.mk
- Ministry of Transport and Communications, www.mtc.gov.mk
- Ministry of Local Self Governance, www.mls.gov.mk
- ZELS – Association of the units of local self-government of the Republic of Macedonia, www.zels.org.mk
- Macedonian Energy Agency, www.ea.gov.mk/
- Energy Regulatory Commission, www.erc.org.mk/

In relation to energy efficiency, the Ministry of Economy, Macedonian Energy Agency and Energy Regulation Commission have key roles and responsibilities.

Process to ensure stakeholder participation

The Ministry for Environment and Physical Planning has competences in relation to efficient use of resources in the areas of waste, waters, soil, land, use of fossil fuels, eco-tourism labelling and the use of clean mechanisms in industry.

The Ministry of Agriculture, Forestry and Water management has competences in organic production, forestry and pastures.

For the efficient use of mineral resources, energy and economic development, competences lie with the Ministry of Economy and the Ministry of Transport and Communications.

Suggestions for international support mechanisms to exchange experience

The exchange of experience is probably key to developing an effective approach for efficient material resource use, and such a process should involve co-operation with international stakeholders such as the United Nations Economic Commission for Europe (UNECE), instruments under the Intergovernmental Panel on Climate Change (IPCC), co-operation with the Joint Research Centre of the EU Commission, and co-operation with the EEA. Through capacity-building workshops and training, the country is strengthening its institutional capacity and learning how to respond to emerging policy challenges in the EU *acquis* as well as national legislation.

Policy instruments

Policy instruments commonly used for material resource efficiency

Regulatory

1. Specific sub-laws regulate the energy efficiency of specific products and construction facilities. This ensures that newly built facilities comply with energy efficiency requirements. Energy efficiency standards for domestic electrical appliances also allow an estimation of the energy consumption of each product
(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_grade_zni_objekti_SV143_20081113.pdf).
2. A specific sub-law is in force relating to eco-labels for tourist facilities, defining limits on energy and water consumption, as well as regulating waste generation in tourist facilities, mainly in the proper classification, selection and transport of waste. Additionally, support is extended for the use of renewable sources of energy and the promotion of environmental education
(<http://www.moep.gov.mk/WBStorage/Files/Pravilnik%20za%20kriteriumite%20koi%20sto%20treba%20da%20se%20ispolnat%20za%20dobivanje%20na%20eko%20oznaka%20za%20turist.%20smestuvanje.pdf>; <http://www.moep.gov.mk/wp-content/uploads/2014/09/Pravilnik%20za%20kriteriumite%20koi%20sto%20treba%20da%20se%20ispolnat%20za%20dobivanje%20na%20eko%20oznaka%20za%20turist.%20smestuvanje.pdf>).

Information based/public awareness

1. Awareness raising among Macedonian manufacturers and consumers for investment in ecological and organic products and services.
2. Collaborative research, development and commercialisation of new ecological products and services, as a result of co-operation between industry and research-based entities.
3. Technical support, through infrastructure development for sustainable industrial resources and the formation of local offices as centres for sustainable development. Adoption and implementation of urban eco-management policies in land use, infrastructure management, municipal financing and administration, including 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 negative effects on human health; development of available, reliable and efficient public transport; support for projects that raise awareness of the benefits of alternative transport such as bicycles; reducing the loss of water in the supply system; building new waste water treatment plants for all agglomerations of more than 2 000 inhabitants; and establishing modern regional systems for waste management.

Economic instruments

1. Green procurement – conducting and favouring green procurement by the public administration; and gaining competitive advantage for business through the supply of green materials, energy-efficient services or the use of recycled materials.

Examples of good practice

The agricultural sector plays a very important role in the Macedonian economy with a share of up to 10 % of gross domestic product (GDP). This also means that the sector is among the largest waste generators in the country. The use of bioenergy, especially the production of biogas from agricultural waste, could become a substantial alternative energy source with no ecological footprint. The potential for bioenergy from the large amounts of organic waste generated would complement the production of energy for heating and electricity through an anaerobic digestive process that would effectively and sustainably make a shift towards the greening of the economy by converting one of its waste streams into a reliable and long-term bioenergy source.

A practical example of currently available opportunities through the clean development mechanism is the option to obtain financial support for the construction and development of bio-digesters as facilities that would utilise the potential of biogas from livestock farms. This type of project supports the reduction of emissions of methane (CH₄), the most potent greenhouse gas whose potential for global warming is 21 times larger than that of carbon dioxide (CO₂). This type of project also has huge potential as an incentive for green business, as well for addressing environmental concerns in both the national and global contexts. The farming and livestock sector also holds promise for local rural communities and economies as it and provides incentives for job creation.

Targets and indicators

Targets for material resource efficiency

The following targets have been defined:

- reduction of biodegradable waste sent to landfill to 75 % by 2014; unfortunately the target was not achieved.
- reduction of greenhouse gas emissions (landfill only) by approximately 25 % (CO₂ equivalent) by 2014; unfortunately the target was not achieved.
- recovery (50 %) and recycling (25 %) of packaging waste of all three categories (for sale is primary packaging, group packaging is secondary packaging, for transport is tertiary packaging) by 2018;
- energy recovery (100 %) of used tyres through incineration by 2014; unfortunately the target was not achieved.
- recovery or reuse (70 %) of end-of-life vehicles by 2018;
- energy savings of up to 9 % of the average consumption registered in the five-year period 2002–2006 by 2018, with continuous promotion of energy efficiency and monitoring until 2020;
- increasing the share of renewable energy sources in total energy consumption from 13.8 % in 2005 to 21 % in 2020;
- increasing the share of bio-fuels in total fuel consumption in the transport sector to 10 % by 2020.

Indicators to monitor the use of materials and resource efficiency

No indicators are currently produced to monitor material resource use and improvements in material resource efficiency, but certain sector-specific indicators are available, for example:

- area under organic production (hectares and share (%) of total farmed area);
- a national indicator on renewable energy consumption.