

Resource efficiency and circular economy in Europe – even more from less

An overview of policies, approaches and targets of North Macedonia
in 2018

July 2019



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European Topic Centre on Waste and Materials
in a Green Economy
Boeretang 200
BE-2400 Mol
Tel.: +14 33 59 83
Web: wmge.eionet.europa.eu
Email: etcmwge@vito.be

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This country profile was prepared as part of the 2019 EEA review of material resource efficiency, circular economy and raw material supply policies, which aimed to collect, analyse, and disseminate information about experience with the development and implementation of these policies in EEA member and cooperating countries.

At the time of writing, a summary report is being finalised. The report reflects on trends, similarities and differences in policy responses, showcases selected policy initiatives from member countries and identifies possible considerations for the development of future policies.

These country profiles were compiled and finalised by members from the European Topic Centre on Waste and Materials in a Green Economy, namely Bart Ullstein, Bettina Bahn-Walkowiak, Jeroen Gillabel, Margareta Wahlström, Jutta-Laine Ylijoki, Dirk Nelen, Theo Geerken, Veronique Van Hoof and Evelien Dils. The responsible EEA project managers for the work were Pawel Kazmierczyk and Daniel Montalvo.

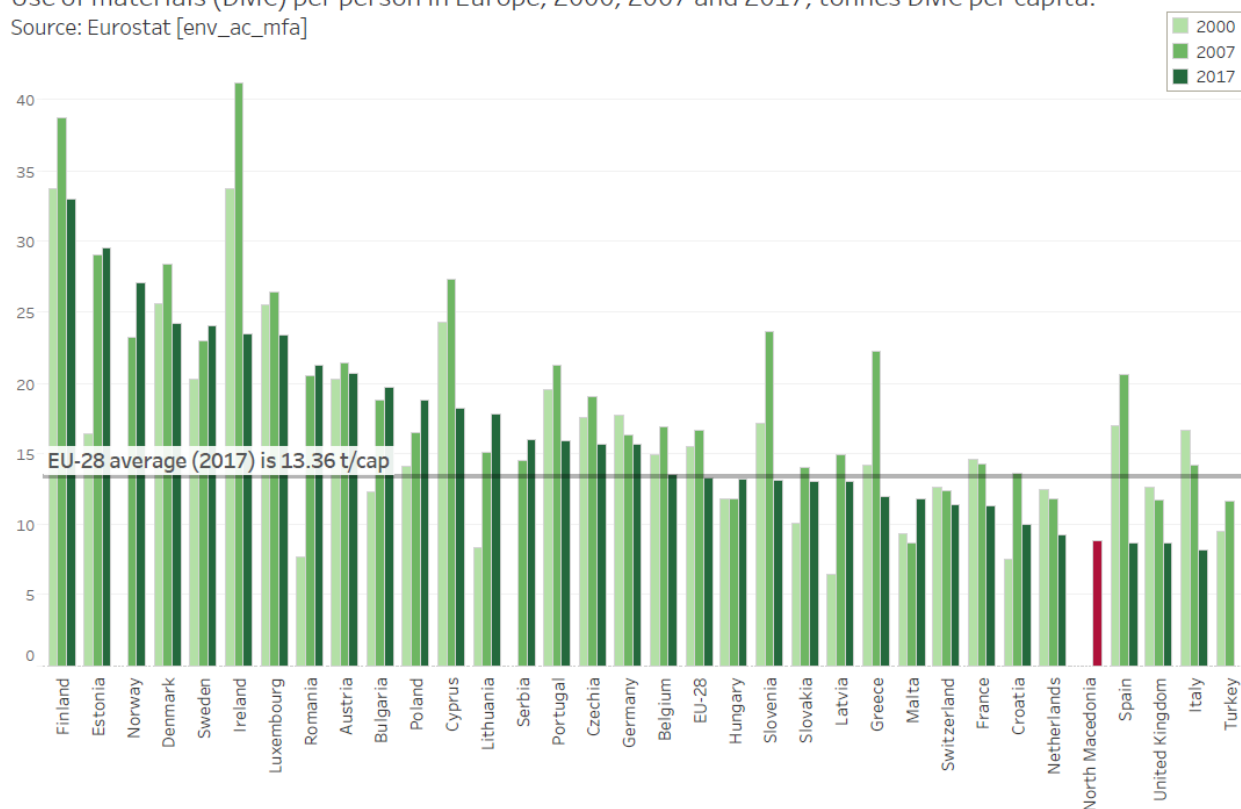
North Macedonia, facts and figures

Note: data in this section was sourced from Eurostat databases (April 2019), except where noted otherwise

 	GDP: EUR 10 billion (0.06 % of total EU28 in 2017)
	Per capita GDP: EUR 4,828 (purchasing power standard)
	Use of materials (domestic material consumption (DMC)) 18.4 million tonnes DMC (0.3 % of EU28 total in 2017) 8.9 tonnes DMC/capita (66.2 % of EU28 average per capita in 2017)
	Structure of the economy: agriculture: 9.1 % industry: 27.9 % services: 63.0 %
	Surface area: 25.7 thousand square kilometres (km ²) (0.6 % of total EU28)
	Population: 2.1 million (0.4 % of EU28 total in 2017)

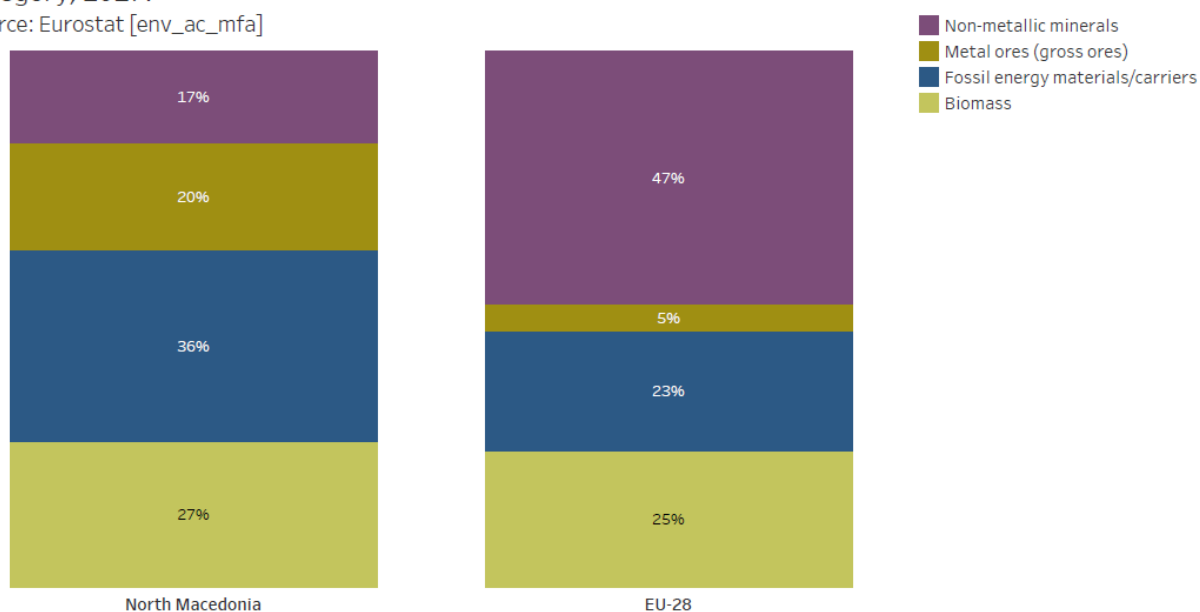
Use of materials (DMC) per person in Europe, 2000, 2007 and 2017, tonnes DMC per capita.

Source: Eurostat [env_ac_mfa]



North Macedonia & EU-28. Domestic Material Consumption by material category, 2017.

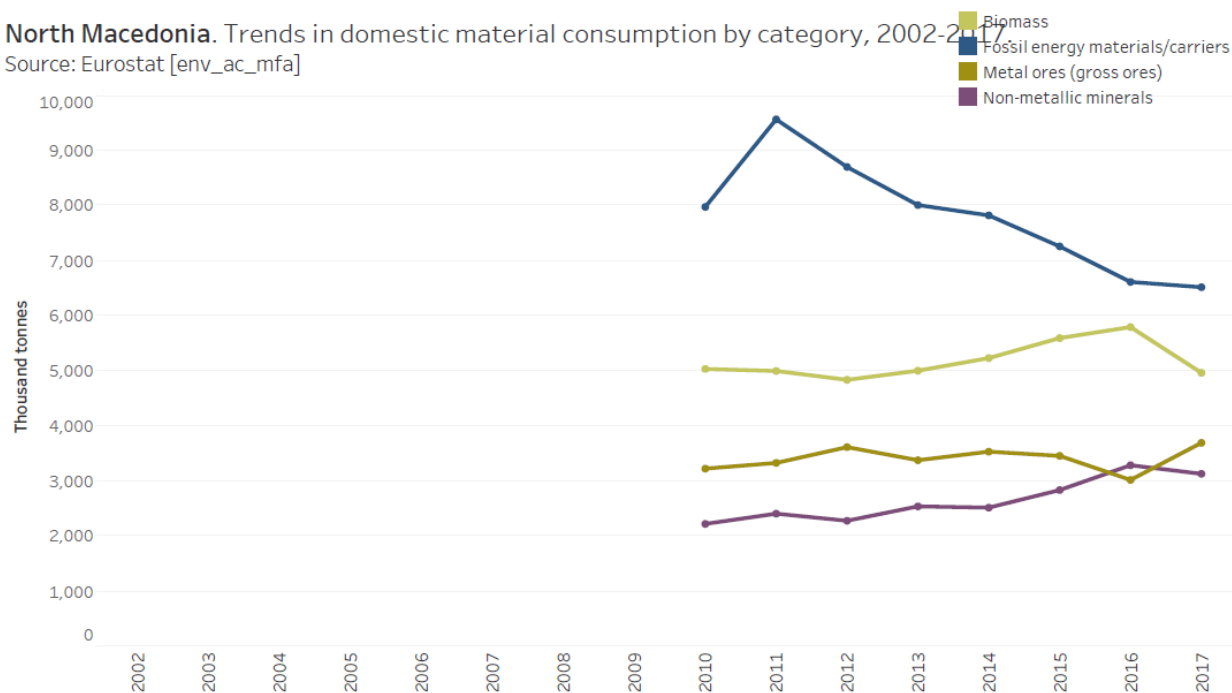
Source: Eurostat [env_ac_mfa]



Note: The domestic material consumption categories 'other products' and 'waste for final treatment and disposal' are excluded from the figure.

North Macedonia. Trends in domestic material consumption by category, 2002-2017

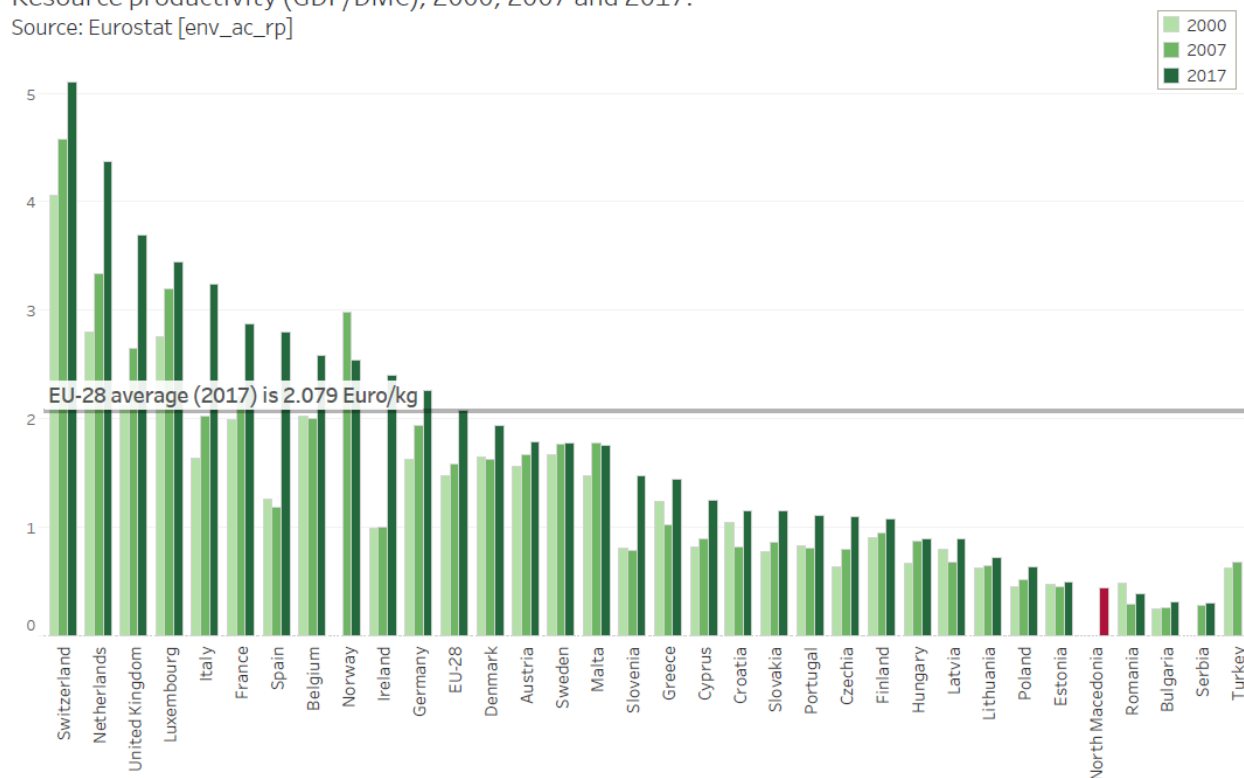
Source: Eurostat [env_ac_mfa]



Note: The domestic material consumption categories 'other products' and 'waste for final treatment and disposal' are excluded from the figure.

Resource productivity (GDP/DMC), 2000, 2007 and 2017.

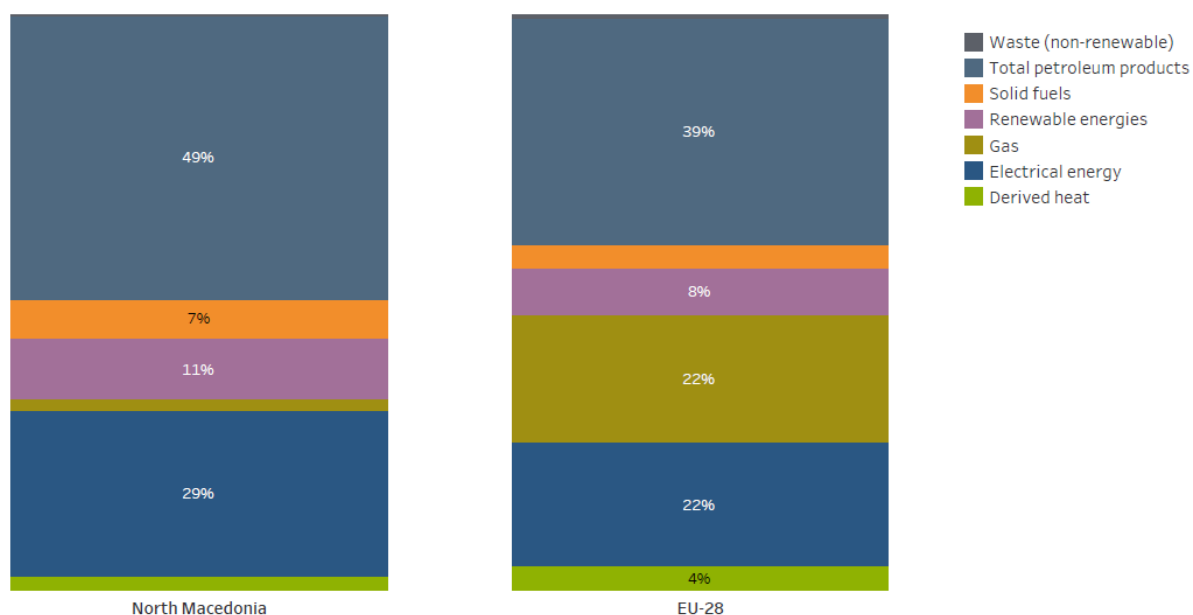
Source: Eurostat [env_ac_rp]



Note: GDP expressed in chain linked volumes 2010.

North Macedonia & EU-28. Primary energy consumption by energy product, 2016.

Source: Eurostat [nrg_100a]



Policy framework

Driving forces for material resource efficiency and circular economy

In a circular economy, systems are designed to make better use of valuable products and materials, reducing primary resource use and creating economic opportunities. The circular economy aims to protect this value by keeping products and materials circulating at the highest value for a long time, with a systematic approach to designing out negative impacts.

The transition towards a more circular economy brings opportunities for the Republic of North Macedonia and its citizens. It is an important part of efforts to modernise and transform the Macedonian economy, shifting it in a more sustainable direction. There is a strong business case behind it which enables companies to make substantial economic gains and become more competitive. It delivers important energy savings and environmental benefits. It creates local jobs and opportunities for social integration. It is closely interlinked with key European Union (EU) priorities on jobs and growth, investments, the social agenda and industrial innovation.

The wider benefits of the circular economy also include lowering energy consumption and carbon dioxide emissions. Hence, the circular economy has strong synergies with the EU's objectives on climate and is instrumental in supporting the EU's commitments on sustainability, in particular to reach UN Sustainable Development Goal (SDG) 12 on sustainable consumption and production patterns.

The Republic of North Macedonia, as a candidate country for EU membership, is under an obligation to prepare a National Strategy for Sustainable Development. Together with the Spatial Planning Strategy from 2004, the National Strategy for Sustainable Development from 2010 provides the country's first integrated planning approach. These two strategies¹ are the overall umbrella for all other strategies and policies in various fields.

The National Strategy for Sustainable Development of the Republic of Macedonia sets a vision, mission and objectives for economically, socially and environmentally balanced development. By joining the global movement for sustainable development, the Republic of North Macedonia needs to provide its citizens with a clear direction and roadmap for the country's development, as well as motivate their hope and trust in the future. In the current situation of unfavourable demographic trends represented through rapid aging of the population and intense emigration abroad, the sustainable development concept is extremely important for achieving national sustainability of human capital.

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 North 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 domains of environmental protection, economy, sustainable development and investment. The conventions provide a basis for acceleration of the EU accession process and approximation with the EU 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.

¹ <http://www.moepp.gov.mk/wp-content/uploads/2014/12/NSSD-1-EN.pdf> (English)
<http://www.moepp.gov.mk/wp-content/uploads/2014/12/NSSD-2-EN.pdf> (English)

The Republic of North 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 North Macedonia's 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.

Policies which include elements of material resource efficiency

The Republic of North Macedonia has 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 and in the State Statistical Office publication *Sustainable Development, 2010*, in which the key goals and strategic measures for reaching those goals are specified and elaborated in terms of economy and the environment.

In the Strategy for Sustainable Development, the natural environment, geo-diversity, renewable sources of energy, and the variety of high-quality traditional agricultural and forest products are identified as areas with potential for sustainable growth. Tourism, cultural heritage, traditional architecture, craftworks, and the economy based on small and medium-sized enterprises (SMEs) 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 regional development.

An imperative theme and focus in the Strategy are the need for structural change relating to the available energy sources and energy prices, as well as the utilisation of potential renewable energy sources and the diversity in traditional and quality agricultural and forest products².

Agriculture

The National Strategy and Action Plan for Organic Agriculture of the Republic of Macedonia (2008–2011) emphasises goals to develop organic farming and products, strengthening cooperation with all relevant parties, market-oriented organisations and forms of cooperation.

Forestry

The National Strategy for Sustainable Development of Forestry (2006) addresses the contribution of the forestry sector to the national economy and rural development, emphasising sustainable management of forest resources, and securing the protection of the local environment as part of global heritage.

² <http://www.moepp.gov.mk/wp-content/uploads/2014/12/NSSD-1-EN.pdf> (English)
<http://www.moepp.gov.mk/wp-content/uploads/2014/12/NSSD-2-EN.pdf> (English)

Industry

The Industrial Development Policy of the Republic of Macedonia (2009–2020) focuses on North Macedonian industry and its capacity for applied research in the sustainable production of organic products, specialised technological products, and services that satisfy the needs of international markets. It includes a projection to 2020 of the development of sustainable and authentic industries such as organic wine and food, eco-steel, eco-construction, medical equipment and tourism in the Republic of North Macedonia.

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

Energy

- The Strategy for Energy Efficiency in the Republic of Macedonia (2003) is still in force and complements the new Strategy on Energy Efficiency (2010–2020).
- The Energy Development Strategy of the Republic of Macedonia until 2030 initiates a large spectrum of programmes that aim to increase energy efficiency, and are relevant to government, public or municipal administrations, businesses in general, the civil society and households.
- The Strategy for Use of Renewable Sources of Energy in the Republic of Macedonia until 2020 exploits the potential and opportunities for renewable energy sources.
- The Strategy for Increasing Energy Efficiency in the Republic of Macedonia until 2020 develops a framework for enhanced adoption of practices for energy efficiency in a sustainable way, through the implementation of programmes and initiatives that aim to decrease 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 the energy efficiency of specific products and construction facilities. This will assure that newly-built facilities comply with 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 government of the Republic of North Macedonia launched a National Programme for Energy Efficiency in Public Buildings (2012–2018) to achieve energy efficiency improvements in the buildings sector and meet the strategic targets outlined in the Energy Development Strategy of the Republic of Macedonia until 2030, the Energy Efficiency Strategy until 2020, and the national Energy Efficiency Action Plan (2010–2018). The National Programme for Energy Efficiency in Public Buildings, coordinated by the Ministry of Economy, aims to retrofit existing public buildings and to lead by example in the implementation of energy efficiency measures. Its targets are public buildings that are used for administrative and other activities of public interest and that are fully owned by government institutions or municipalities. This report focuses on the financing mechanisms that are considered the best fit with the institutional environment to achieve the goals of the National Programme for Energy Efficiency in Public Buildings and describes in detail the implementation of the proposed financing mechanisms: a full-service energy efficiency fund, a dedicated credit line, and a municipal energy efficiency improvement programme implemented within the government. The national target is a 9 per cent saving in final energy consumption by 2018, compared to average energy consumption in 2002–2006.
- The Second Energy Efficiency Action Plan of the Republic of Macedonia ran to 2015, and the Third Energy Efficiency Action Plan was adopted in July 2017.

Tourism

A specific sub-law is in force relating to ecolabels for tourist facilities, which defines consumption limits for energy and water as well as the regulation of waste generation in tourist facilities. Furthermore, support is extended for the use of renewable sources of energy and the promotion of environmental education.

(Pravilnik za kriteriumite koi treba da se ispolnuvat za dobivawe na ekološka oznaka za turističko smestuvawe – 2009)³.

Waste management

A key component of the Law on Waste Management is the waste hierarchy, the primary purpose of which is to minimise the adverse environmental effects of waste and to increase resource efficiency in waste management and policy.

The Law on Waste Management also specifies requirements for waste management plans and strategies that set out the current waste management situation, as well as the measures to be taken to improve reuse, recycling, recovery and disposal of waste.

- The Waste Management Strategy of the Republic of Macedonia (2008–2020) defines the fundamental approach to waste management, based on the hierarchy of principles in waste management as well as the basic principles of sustainable use of natural resources.
- The National Plan for Waste Management in the Republic of Macedonia (2009–2015) defines specific measures and activities relating to legal, institutional, organisational and economic matters, as well as technical infrastructure for the implementation of waste management policies, while accounting for the priorities in waste management and sustainable use of resources, and waste prevention and recycling.

The Law on Managing Waste Batteries and Accumulators creates the market conditions for high levels of collection and treatment. As a result, the first collective schemes for managing waste batteries and accumulators have been established.

The Law on Waste Electrical and Electronic Equipment (WEEE) defines the obligations on producers and importers. All WEEE must be subject to separate collection, and consumers have the option to return end-of-life equipment to the retailer.

The Law on Packaging and Packaging Waste was adopted in 2010 and affords packaged goods producers and importers the opportunity to set up an individual scheme, join a collective scheme or pay fees when producing or importing packaging, with the aim of meeting the following targets.

Basis	Target (%)	Year
Treatment/recovery	60	2020
Recycling	55–80	2020
Plastic	22.5	2018
Glass	60	2020
Paper and cardboard	60	2020
Metal	50	2020
Wood	15	2020

The proportion of packaging waste recycled in 2014 was 27.08 per cent. More needs to be done, though, to meet the targets.

³ <http://www.moepp.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> (Macedonian)

Institutional setup and stakeholder engagement

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

- Government of the Republic of North Macedonia⁴;
- Ministry of Economy⁵;
- Ministry of Finance⁶;
- Ministry of Environment and Physical Planning⁷;
- Ministry of Agriculture, Forestry and Water Management⁸;
- Ministry of Transport and Communications⁹;
- Ministry of Local Self Governance¹⁰;
- ZELS – Community of the Units of Local Self-Government of the Republic of Macedonia¹¹;
- Macedonian Energy Agency¹²;
- Energy Regulatory Commission¹³.

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-Government and the Alliance of Economic Chambers, as well as the North Macedonian Energy Agency and its role in promoting energy efficiency and the use of renewable sources of energy. The Energy Regulatory Commission also has a role in this process.

With the goal of effective implementation of the National Strategy for Sustainable Development, 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 national government and proactive municipalities. The Agency will be 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 proposed institutional arrangement to support the implementation of sustainable development in the Republic of North Macedonia is also based on the University Campus for Sustainable Development, responsible for research, analysis and demonstration of knowledge in sustainable development, as adopted by the government and the National Investment Bank for Sustainable Development.

⁴ www.vlada.mk (Macedonian)

⁵ www.economy.gov.mk (Macedonian)

⁶ www.finance.gov.mk (Macedonian)

⁷ www.moepp.gov.mk (Macedonian)

⁸ www.mzsv.gov.mk (Macedonian)

⁹ www.mtc.gov.mk (Macedonian)

¹⁰ www.mls.gov.mk (Macedonian)

¹¹ www.zels.org.mk (Macedonian)

¹² www.ea.gov.mk (Macedonian)

¹³ www.erc.org.mk (Macedonian)

Strengthening institutional capacity in the Ministry, Agency, etc. is important, as existing structures and human resources proved to be insufficient during realisation of the first Energy Efficiency Action Plan.

Monitoring and targets

Targets for resource efficiency and circular economy

The following targets have been defined:

- a reduction in biodegradable waste sent to landfill to 75 per cent by 2014 – unfortunately the target was not achieved;
- a reduction in greenhouse gas emissions (carbon dioxide equivalent) from landfill of approximately 25 per cent by 2014 – unfortunately the target was not achieved;
- 50 per cent recovery and 25 per cent recycling of three categories of packaging waste – packaging from retail sales is primary packaging, group packaging is secondary packaging, packaging for transport is tertiary packaging) by 2018;
- 100 per cent energy recovery from used tyres through incineration by 2014 – unfortunately the target was not achieved;
- 70 per cent recovery or reuse of end-of-life vehicles (ELVs) by 2018;
- energy savings of up to 9 per cent of average consumption registered for 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 per cent in 2005 to 21 per cent in 2020;
- increasing the share of biofuels in total fuel consumption in the transport sector to 10 per cent by 2020.

Indicators to monitor progress towards a resource-efficient circular economy

Indicators in the energy sector

From the Strategy for Increasing Energy Efficiency in the Republic of Macedonia until 2020 and the publication Environmental Indicators in the Republic of Macedonia 2008:

- the national indicator for energy savings is based on the average final consumption of energy for the five years 2002–2006 – kilotonnes of oil equivalent per year (ktoe/year);
- calculation of the indicative goal of energy savings in the residential sector 2002–2006, ktoe/year;
- calculation of the indicative goal of energy savings in the commercial and services sectors (public buildings and facilities) 2002–2006, ktoe/year;
- calculation of the indicator for energy savings in the industrial sector 2002–2006, ktoe/year;
- calculation of the indicative goal for energy savings in the transport sector 2002–2006, ktoe/year;
- energy consumption in the transport sector; types of energy and types of transport 2000–2006, ktoe/year;
- final energy consumption by sector 1995–2005, ktoe/year, per cent;
- total energy intensity 1995–2005, per cent;
- total energy consumption by fuel 1995–2005, ktoe/year, per cent;
- renewable energy consumption 1995–2005, ktoe/year, per cent;
- trend in gross electricity consumption and renewable electricity 1995–2005, gigawatt hours (GWh);
- electricity production from renewable sources 1995–2005 (per cent).

Indicators in the sector of waste management, soil contamination and agriculture

From the publication Environmental Indicators in the Republic of Macedonia 2008:

- municipal waste generation, kilograms per person per year (kg/person/year), per cent;

- progress in management of contaminated sites, progress is measured in five main steps;
- land take, square kilometres, per cent;
- forest fires, area destroyed by fire is expressed in hectares (ha), wood mass destroyed by fire is expressed in cubic metres; ;
- areas under organic farming, ha, per cent;
- mineral fertilizer consumption, kg/ha;
- consumption of pesticides, kg/ha.

Examples of innovative approaches and good practice

Examples of good practice and innovative approaches

The Energy Efficiency Action Plan (EEAP) covers the whole country and applies to all end-users. The second Energy Efficiency Action Plan sets a less ambitious indicative overall energy savings target of 147.2 ktoe or 9 per cent by 2018, compared to 12.2 per cent in the first EEAP.

Municipalities are required to prepare energy-efficiency programmes and it is mandatory to report them to the Energy Agency. Municipal programmes focus mainly on the public sector, with very few or no measures for the commercial and residential sectors, and these usually include improvements to insulation and lighting. There are also minimal measures for the transport sector – mainly the cars and buses that belong to the municipality. The municipalities are heavily involved in energy efficiency on a local level. Through the 2011 Law on Energy they are responsible for preparing three-year programmes on energy efficiency and yearly action plans and must inform the Energy Agency on how they are implementing the programmes. The second EEAP also proposed the establishment of two important new bodies, the Energy Efficiency Fund and a Supervisory Committee. The Fund, when established, is expected to strongly support the implementation of energy efficiency measures.

Some of the government's reforms include changes in the law on value added tax (VAT), including a reduction in VAT from 18 per cent to 5 per cent on thermal solar panel systems and components.

With the adoption of the Law on Environment in 2005, a tax reform was introduced and this meant that for every motor vehicle and sailing/boat registration, an additional tax has to be charged for those units that do not have catalytic converters, and a lower tax for those that comply with new technological standards and have cleaner technical specifications, for example, efficient catalytic converters. Additional taxes have been introduced relating to the creation of industrial non-hazardous waste. This is a 0.5 per cent additional cost to the fee 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 2005 Law on Environment, additional taxes were introduced for the import of used motor vehicles, used electrical and electronic equipment and products, specific hazardous waste, and ozone-depleting substances, as well as for the 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 for 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.

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.

A specific sub-law is in force relating to ecolabels for tourist facilities, defining limits on energy and water consumption, as well as regulating waste generation in tourist facilities, mainly through 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. There is also a rulebook on the criteria needed to receive an ecolabel for tourist accommodation¹⁴.

Seeking synergies with other policy areas

The main policies in the Republic of North 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 and 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 through:

- the Rulebook for Energy Efficiency of Buildings;
- the Programme for the Promotion of Renewable Sources of Energy and Energy Efficiency in Households (2018).

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.

Addressing consumption and production, the Strategy for Sustainable Development of the Republic of Macedonia (2010) included:

- starting a green tax reform and restructuring taxes from labour and investments towards investments in a green economy, through which the inefficient use of energy and resources is decreasing – taxes are shifted from goods, employment, towards the bad, inefficient energy consumers;
- implementing policies that enhance eco-efficiency and promote sustainable production and consumption patterns – for example, policies that allow for greater availability of green products while enhancing customer awareness of such products;
- improving resource management, including water supply, recycling, renewable energy facilities, forestry, fisheries and eco-tourism.

Resource efficiency and circular economy policy initiatives from subnational to local level

The municipality of Karpos is a leading example in the field of energy efficiency measures. Its first energy efficiency programme covered the period 2008–2012, and its second 2013–2015. Karpos stands out since, besides the usual measures such as lighting and improved insulation of public buildings, it also has many measures for increasing the use of renewables, efficiency measures for the residential sector, and initiatives for improving the local energy market/local heating. According to Analytica's paper in 2010, two projects in Karpos were completed, one that implemented a double regime for sidewalk lighting on the bank of the river Vardar, and one that installed of a solar system for charging traffic lights at crossroads. Several further projects are ongoing:

- integrated systems for managing and monitoring street lighting in the municipality – 128 separate measures for street lighting outside the transformer stations;

¹⁴ <http://www.moepp.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> (Macedonian)

- reconstruction of street lighting with economical light bulbs, 3,600 in total);
- a new objective for municipal buildings to be constructed according to the highest energy efficiency standards.

In addition, this municipality is one of the few that has formed a Unit for Energy Efficiency that is officially part of the Sector for Environmental Protection.

Activities for reuse or exchange, especially for materials such as textiles and clothes, WEEE and furniture, are ongoing. These take place in second-hand centres, either private or owned by charities. In local communities with low incomes, very little is wasted and a number of shops sell or give away second-hand items including books and compact discs (CDs). Such shops also serve as places for the exchange of concerns and ideas, and may help to battle poverty and long-term exclusion from work.

Other resources

Examples of policies which go beyond “material resources”

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

1. The natural environment and geo-diversity: improving management and avoiding excessive natural resource exploitation; recognizing the value of ecosystems services, development of 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; integrated management of agriculture and forestry, based on a sustainable economic and environmental approach.
4. Valorisation and promotion of cultural heritage: including traditional architecture, craftworks and of ecotourism development.
5. Intellectual energy and human resources: with special emphasis on preventing such resource loss due emigration.

The way forward

Reflections on future directions of policies on resource efficiency and circular economy

If international standards are in place and some incentive is provided on the use of sustainable materials, business could more easily adjust or promote the circular economy.

National policies could be adopted and implementation could more closely follow certain resource allocations.

Strengthening institutional capacity in ministries, agencies, etc., is important, as existing structures and human resources proved to be insufficient during realisation of the first Energy Efficiency Action Plan.

European Topic Centre on Waste and Materials
in a Green Economy

Boeretang 200
BE-2400 Mol
Tel.: +14 33 59 83
Web: wmge.eionet.europa.eu
Email: etcwmge@vito.be

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