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

An overview of policies, approaches and targets of Slovakia in 2018

July 2019

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Acknowledgements

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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.

Slovakia, facts and figures

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

GDP: EUR 84.8 billion (0.5 % of total EU28 in 2017)

Per capita GDP: EUR 15,600 (purchasing power standard) (52.0 % of EU28 average per capita figure in 2017)

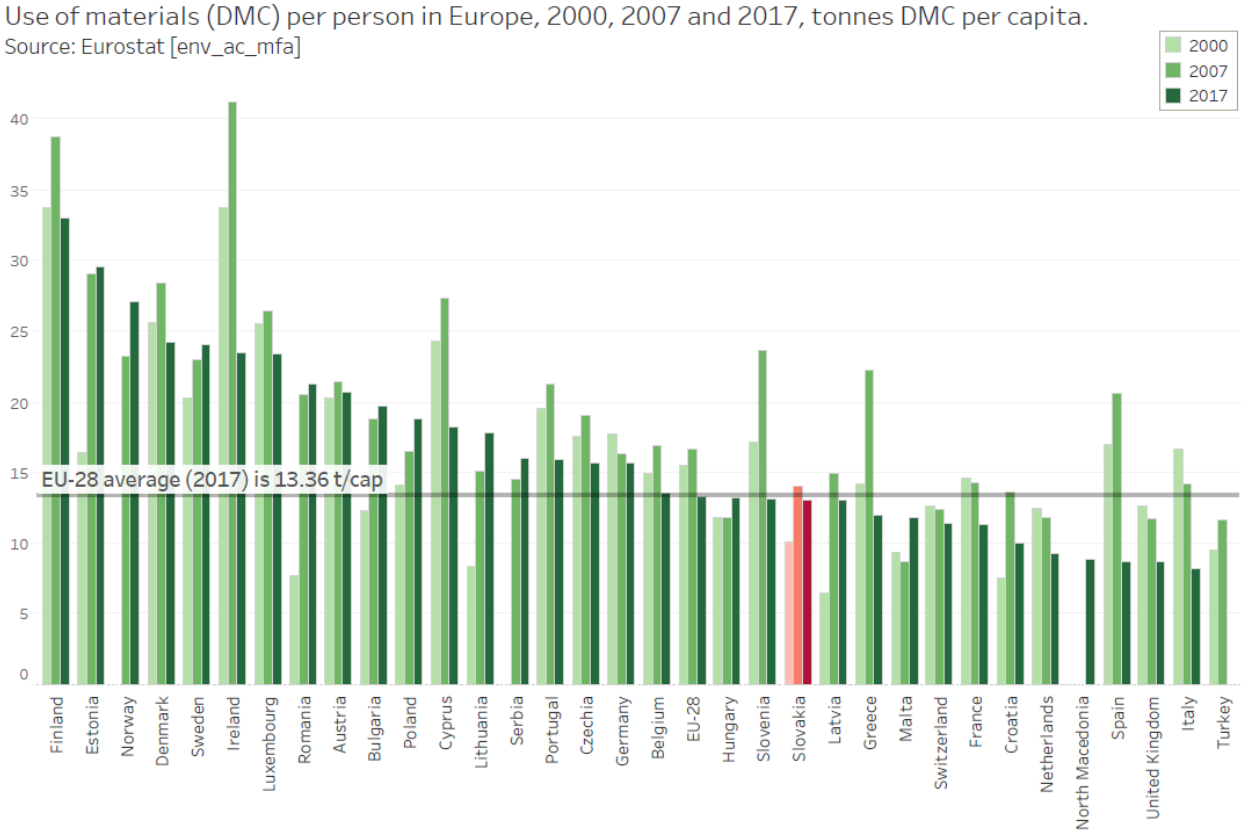
Use of materials (DMC)
71.1 million tonnes DMC (1.0 % of EU28 total in 2017)
13.1 tonnes DMC/capita (97.8 % of EU28 average per person in 2017)

Structure of the economy:
agriculture: 3.5 %
industry: 35.0 %
services: 61.5 %

Surface area: 49 thousand square kilometres (km^2) (1.1 % of total EU28)

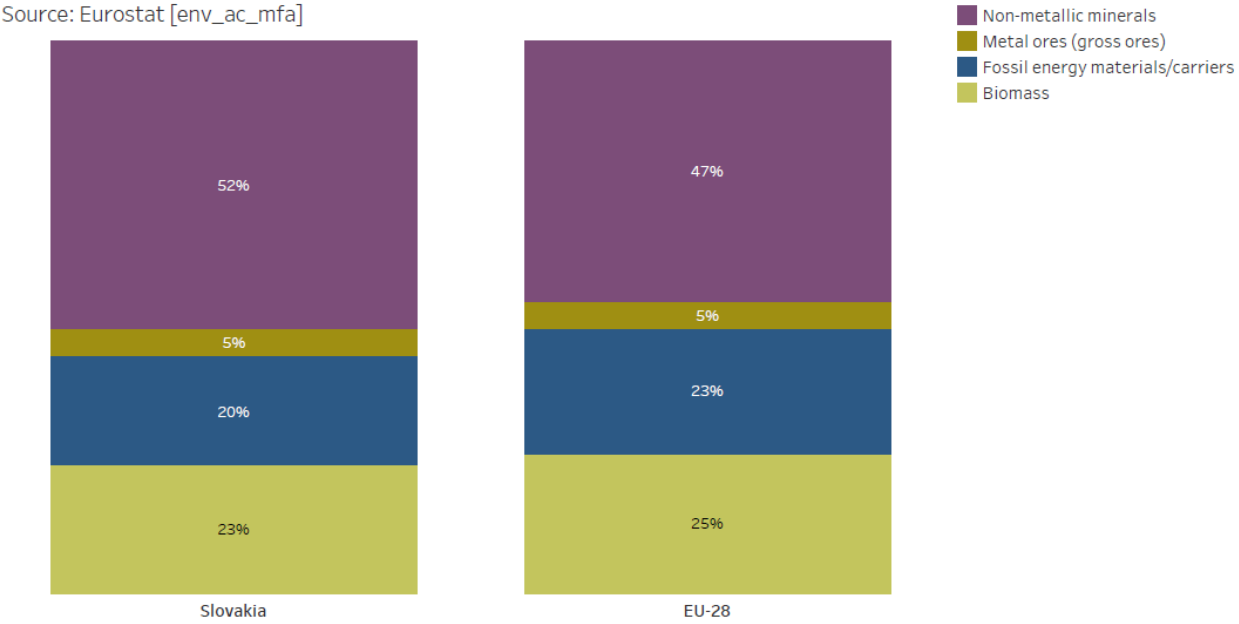
Population: 5.4 million (1.1 % of EU28 total in 2017)

Use of materials (DMC) per person in Europe, 2000, 2007 and 2017, tonnes DMC per capita.
Source: Eurostat [env_ac_mfa]



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

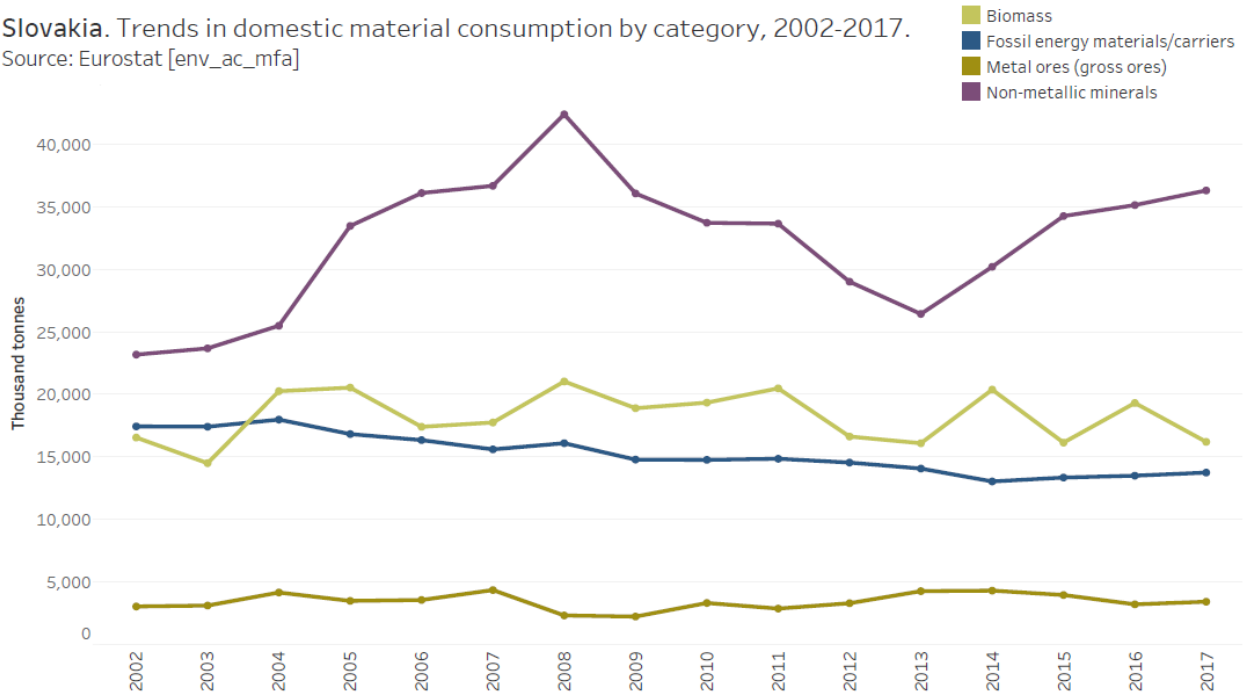
Source: Eurostat [env_ac_mfa]



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

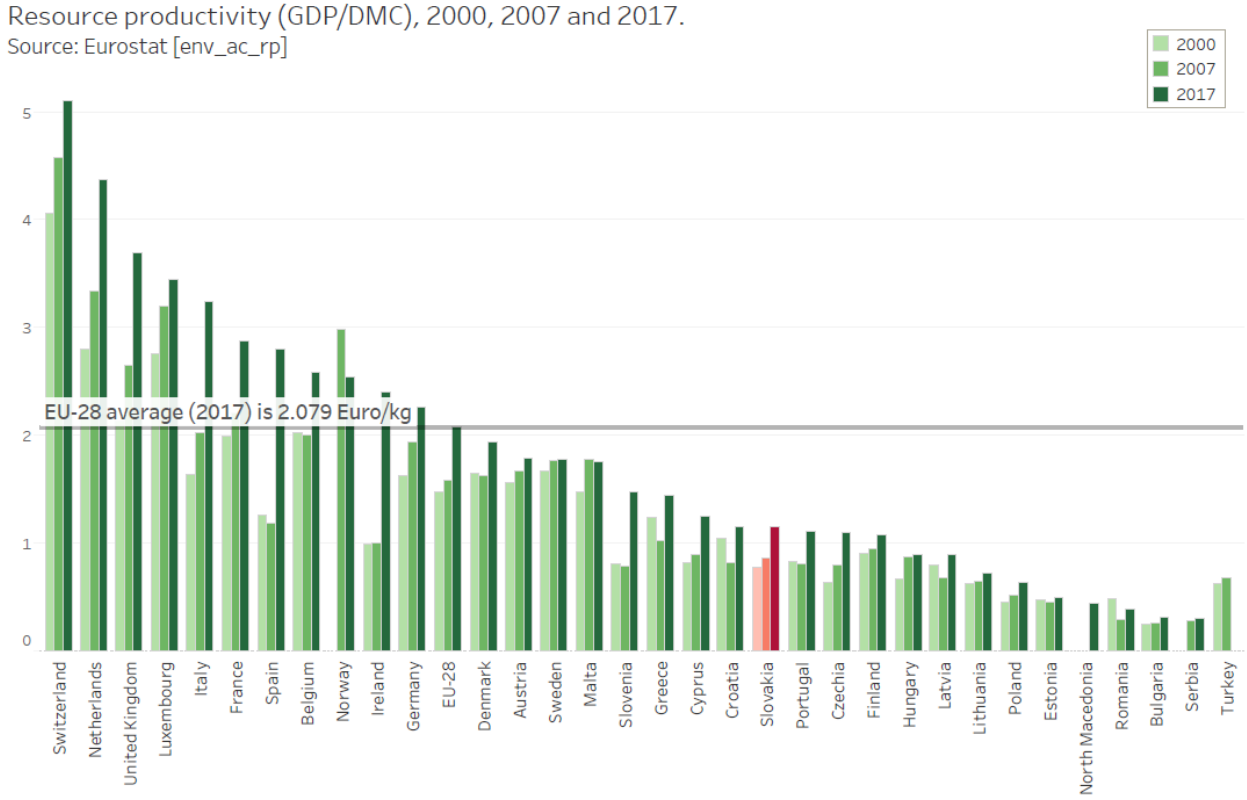
Slovakia. Trends in domestic material consumption by category, 2002-2017.

Source: Eurostat [env_ac_mfa]



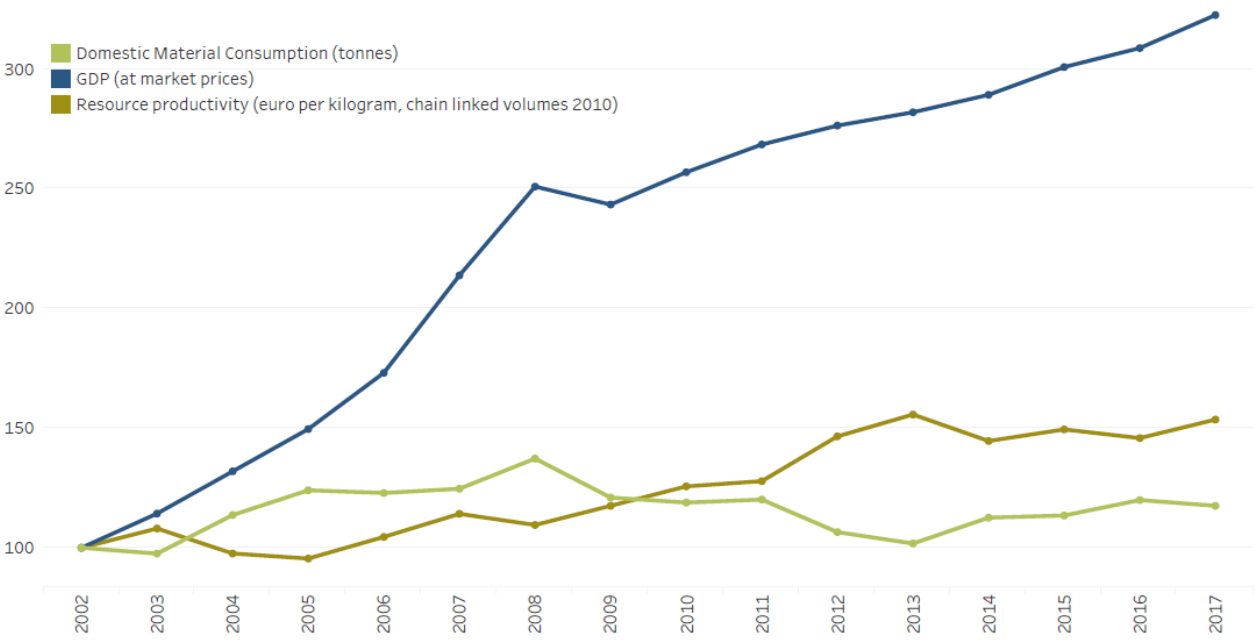
Note: The domestic material consumption categories 'other products' and 'waste for final treatment and disposal' are excluded from the figure.

Resource productivity (GDP/DMC), 2000, 2007 and 2017.
Source: Eurostat [env_ac_rp]

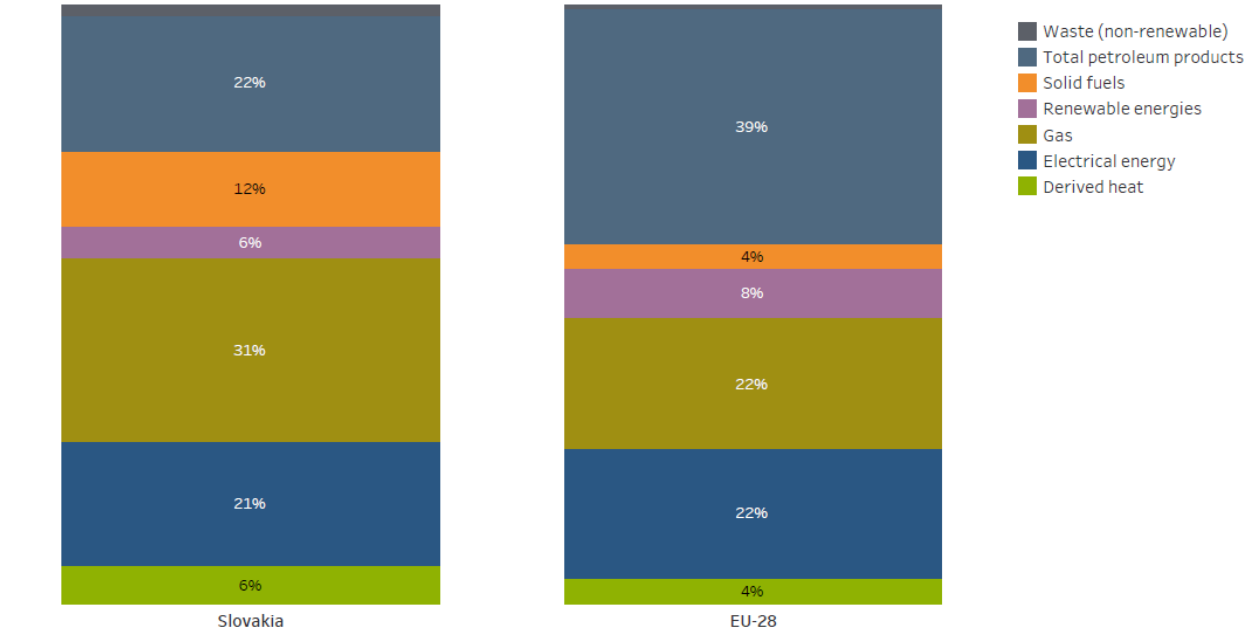


Note: GDP expressed in chain linked volumes 2010.

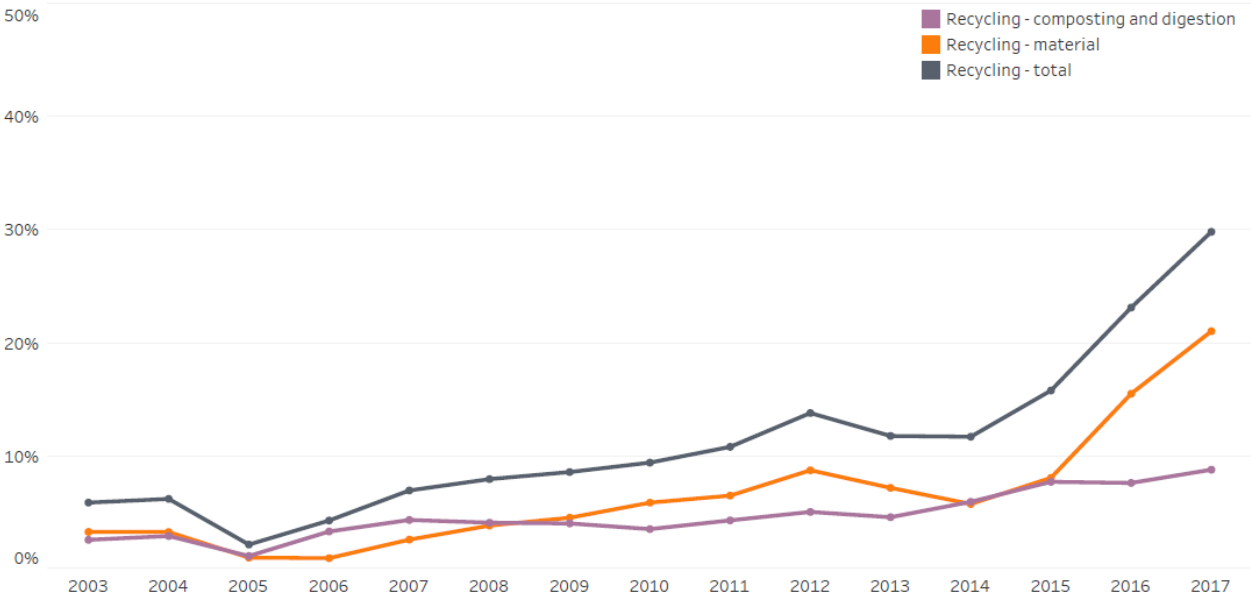
Slovakia. GDP, DMC and resource productivity trends, 2002-2017, index 2002=100.
Source: Eurostat [env_ac_mfa], [env_ac_rp] & [nama_10_gdp]



Slovakia & EU-28. Primary energy consumption by energy product, 2016.
Source: Eurostat [nrg_100a]



Slovakia. Recycling of municipal waste, 2003-2017, as share of total waste treatment.
Source: Eurostat [env_wasmun]



Note: The amount of municipal waste treatment is reported for the treatment operations incineration (with and without energy recovery), recycling, composting and landfilling.

Policy framework

Driving forces for material resource efficiency and circular economy

High dependency on imports of materials and primary energy supplies

Slovakia is an export-oriented economy in which manufacturing (especially automotive) is of great importance, but also has a high dependency on imported materials, especially metals and fossil-energy carriers, which Slovakia lacks. The country imports nearly 90 per cent of primary energy supplies, including nuclear fuel. In 2015, energy dependency reached 58.7 per cent. Moreover, **Slovakia has one of the highest municipal waste landfill rates in the EU, wasting precious resources.**

Therefore, Slovakia aims to:

1. ensure safe and reliable supplies of all forms of energy of the required quantity and quality;
2. reduce energy intensity and increase energy efficiency;
3. ensure self-sufficiency of electricity generation to cover demand on the basis of economic efficiency.

Global competition and trends

While the material intensity of Slovakia's economy is stable and close to the EU average, material productivity is far below it. Global trends show that the higher value-added and less resource-intensive sectors can provide economic prosperity as well as good conditions for environment. In order to be competitive in the global economy, Slovakia's economy will sooner or later need to become circular. Even now, particularly in mining and the steel industry, it is evident that major changes towards greater efficiency are inevitable, not only from an environmental perspective but also from an economic one; the Slovak economy is highly energy intensive and is among the most energy-dependent in the EU.

Municipal waste management

Slovakia has high landfill rates. Wastes sent to landfill or incinerated represent to a large extent resources that can no longer be used, and changing this trend seems to be one of the country's most serious challenges. The landfill rate of municipal waste was very high also thanks to very low landfill charges. These charges have been changed since January 2019.

Environmental burdens as a result of an environmentally damaging economic model

There are 1,758 locations that are considered to be 'environmental burdens', and finding a solution to the 147 most severe cases is of the highest priority. Most of them are the result of landfill and environmentally damaging industrial activities. The prevention of future burdens is closely linked to the concept of circular economy and resource efficiency.

Dedicated national strategies or roadmaps for material resource efficiency and a circular economy

Slovakia does not currently have a dedicated resource efficiency strategy, action plan or roadmap, nor does it have a dedicated national circular economy strategy, action plan or roadmap. However, special attention is paid to resource efficiency and the circular economy in new Strategy of Environmental Policy of the Slovak Republic 2030 which was adopted by Slovak government in February 2019.

Environmental Policy Strategy of Slovakia until 2030 - Greener Slovakia
(adopted on the 27 February 2019 by the Resolution of the Government No. 87/2019)

In a new Strategy of Environmental Policy of the Slovak Republic 2030, special attention is paid to resource efficiency and the circular economy.

The aim of the Strategy in the area of circular economy is to increase the recycling rate of municipal waste, including its preparation for reuse, to 60 per cent by 2030 and reduce its landfill rate to 25 per cent by 2035. By 2030, emphasis will be placed on preventing waste production, the reduction of material use, the

eco-design of products, and technologies for the treatment of certain types of waste which currently are lacking. The creation of reuse centres, where citizens will have the opportunity to hand over things that can be repaired and used, will also be encouraged. Slovakia will award green public procurement to 70 per cent of the total number of public procurement contracts.

Several national strategies address the topic. More information is given in section on Policies which include elements of material resource efficiency.

Overview of dedicated national or sectoral strategies for raw materials

The main content of the updated **Raw Material Policy** (2003, updated in 2004) is the analysis of domestic resources of fossil, metal and non-metal raw materials and raw materials for the manufacture of building materials and the determination of rules for the protection and environmentally sound utilisation of the state's mineral resources in accordance with the principles of sustainable development. Raw materials are also mentioned in new Strategy for Environmental Policy of the Slovak Republic 2030. The Slovak Republic has been perennially dependent on imports of fossil and mineral materials, and the extraction of certain types of raw materials for industry and construction has positive economic importance.

Natural resources are divided among various ministries in Slovakia, such as: raw materials – Ministry of Economy; forests and land – Ministry of Agriculture; water and biodiversity – Ministry of Environment. Hence a resource efficiency strategy or action plan must be prepared with very close cooperation between these ministries.

Policies which include elements of material resource efficiency

2013 ***Innovation Strategy of the Slovak Republic 2014–2020***
Improving commerce and adopting innovations and technologies that put Slovakia among the successful industrial countries of the 21st century.

2013 ***Measures in the Economic Policy Aimed at Supporting Economic Growth***
Supporting energy efficiency in the economy, renewable energy resources, and the creation of new jobs, including small and medium-sized enterprises, into multinational research networks.

2013 ***Research and Innovation Strategy for Smart Specialisation of the Slovak Republic***
The objective of this strategy is to deepen the integration and embodiment of key industrial sectors that increase local added value through cooperation of local supply chains and by supporting networking, and to increase research into economic growth by means of global excellence and local relevance. Creating a dynamic, open and inclusive innovative society is one of the requirements for improving quality of life and increasing the quality of human resources for an innovative Slovakia.

2013 ***Waste Prevention Programme of the Slovak Republic 2014–2018***
The main objective of the programme is a shift from material recovery, declared as a priority in the Waste Management Plan of the Slovak Republic in 2010, towards waste prevention. This means that by 2018 waste management in Slovakia will be in line with the waste hierarchy, as referred to in paragraph 3 of the amendment to the Law on Waste.

Unlike the Waste Management Plan, which sets out quantitative and qualitative objectives in the area of recycling and recovery of selected waste streams, the Waste Prevention Programme is not only an instrument for planning objectives and defining measures. Rather, it is a process of continuous assessment of the effectiveness of measures.

There are several specific objectives (formulated in a very general manner, with concrete measures identified to meet each objective) for specific waste types:

- mixed municipal waste: continuing the trend of annual reductions in mixed municipal waste;
- biodegradable municipal waste (BMW): reducing the amount generated and reducing the proportion of BMW in mixed municipal waste;
- paper waste: reducing the amount of paper waste generated and reducing the proportion of paper waste in mixed municipal waste;
- packaging waste: reducing the amount generated;
- construction and demolition: reducing the amount of waste discarded;
- hazardous waste: continuing the falling trend in the amount of hazardous waste generated;
- waste from the extractive industry: reducing the amount of waste generated by the extractive industry.

The Programme differentiates between two groups of measures: those aimed at achieving the main objective and those aimed at achieving the specific objectives set for particular waste types.
The Programme describes a variety of measures that will involve the quantitative reduction of waste.
Among the measures aimed at achieving the main objective is the following:

- improving public awareness through information and education campaigns, which will be aimed at preventing the generation of waste – municipal, paper and packaging waste and BMW; the finance for these campaigns will be secured from multiple sources.

Among the measures aimed at achieving the specific objectives are the following:
Municipal waste

- supporting the introduction of local fees for municipal waste that will depend on the amount of waste produced;
- supporting the establishment of reuse centres for items such as furniture, electrical and electronic equipment, textiles, books, compact discs (CDs) and sports equipment.

Biodegradable waste

- preparing and implementing an information campaign aimed at informing the authorities, government, households, school facilities and companies about the potential for and benefits of BMW prevention;
- promoting domestic composting;
- promoting composting at municipality/community level;
- developing and implementing an information campaign about the proper storage and use of food;
- focusing on promotional campaigns in chain stores, hotels, restaurants and catering companies, which are producers of large amounts of food waste.

Paper waste

- preparing and implementing a campaign to inform householders about the quantities of paper used in advertising materials and catalogues of various kinds;
- reducing the amount of waste from promotional materials by prohibiting delivery of materials to mailboxes, except marked mailboxes (amendment to the Act on Advertising), as well as by introducing financial responsibility for the collection and handling of advertising materials that have become waste.

Packaging waste

- developing a study aimed at increasing material efficiency and reducing the harmfulness of packaging materials, which should address the issue of inclusion of material efficiency criteria in product standards, taking into account the use of natural resources and the generation of waste during the life cycle of the product;
- establishing a working group to objectively assess several options for bans on and alternatives to disposable packaging.

Construction and demolition

- establishing a legal obligation in the construction and demolition sector to use various types of materials in such a way that they can be reused or recycled;
- making changes in legislation designed to promote recycling of construction waste;

- supporting the establishment of reuse centres and markets for used building materials.

Waste from extractive industry

- recycling waste from the extractive industry and reusing it as secondary raw material.

Proposed prevention measures

1. Supporting the approach of quantitative collection – payments according the amount of waste generated.
2. Reducing the amount of waste from promotional materials by prohibiting delivery of materials to mailboxes (amendment to the Act on Advertising), as well as by introducing financial responsibility for the collection and handling of advertising materials that have become waste.
3. Establishing a legal obligation in the construction and demolition sector to use various types of materials in such a way that they can be reused or recycled.
4. Promotion of eco-design as part of a study aimed at increasing the efficiency and reducing the harmfulness of packaging material.
5. Focusing on promotional campaigns in chain stores, hotels, restaurants and catering companies, which produce large amounts of food waste.
6. Promotion of the European Eco-Management and Audit Scheme and environmental management systems that meet ISO 14001 for hazardous waste.
7. Developing and implementing an information campaign about the proper storage and use of food.
8. Improving public awareness through information and education campaigns aimed at preventing the generation of waste – municipal, paper and packaging waste and BMW. The finance for these campaigns will be secured from multiple sources.
9. Supporting the establishment of reuse centres for such items as furniture, electrical and electronic equipment, textiles, books, CDs and sports equipment.
10. Supporting the establishment of reuse centres or markets for construction and demolition waste materials.

More details about evaluation are given in section 'Indicators to monitor progress towards a resource-efficient circular economy'.

2014 ***Energy Policy of the Slovak Republic***

Reflecting the development of energy policy in the EU. Defining the main targets and priorities of the energy sector by 2035 with a view to 2050 in order to fulfil the strategic target – achieving a competitive low-carbon energy sector ensuring safe, reliable and effective supplies of all forms of energy at reasonable cost, while taking into account customer protection and sustainable development. Utilisation and further extension of the energy audit system and implementation of measures identified in these audits will considerably influence the reduction of energy consumption in industry.

2014 ***Strategy for Adapting to Unfavourable Consequences of Climate Change***

Among other things, the objective includes proposing a complex of appropriate proactive adaptation measures and a mechanism for their implementation within sectoral policies, including the energy sector and its infrastructure, development strategies and action plans at all levels of the process.

2015 ***Water Plan of the Slovak Republic***

The Water Plan defines the framework of environmental targets, enabling long-term sustainable water management by 2021 for surface and underground water bodies, and sets out measures for achieving the targets in relation to the individual sectors of the economy.

2015 ***Programme of Waste Management in the Slovak Republic 2016–2020***

The main objective of the Programme of Waste Management is to minimise the negative effects of waste generation and management on human health and the environment. To achieve this, it is necessary, among other things, to implement the principle of extended producer responsibility for electrical

equipment, batteries and accumulators, packaging, vehicles, tyres and non-packaging products; to introduce support schemes for using materials obtained from recycled waste for the manufacture of products; and to improve market conditions for these materials. The Programme also defines targets and measures for biologically decomposable industrial waste as well as flows of waste and packaging waste. A recent evaluation of performance found that several objectives had not been reached, including the targets set for municipal waste – in particular recycling targets.

On 1 January 2016, a new ***Act on Waste*** entered into force that governs several aspects of waste management, including waste prevention, extended producer responsibility, management of municipal waste, and the ceasing of the former Recycling Fund. Parts of this Act are relevant to improving the circular economy, in particular the extended producer responsibility scheme. It is not clear whether the act itself would allow Slovakia to achieve the 2020 objectives of the Waste Framework Directive and the more ambitious objectives of the Circular Economy Package.

2016 ***National Action Plan for Green Public Procurement in the Slovak Republic 2016–2020 (NAP GPP III)***
The NAP GPP III was adopted by the government December 2016. This is the third NAP GPP at national level that contains specific state commitments for the greening of public procurement and lays down guidelines for green public procurement in Slovakia. It contains a set of ambitious targets and measures that were created in response to the inclusion of green public procurement in the Programme Statement of the Government of the Slovak Republic 2016–2020, which set out the ambition to create more favourable conditions for its use. The NAP GPP III also defines the conditions required in green contracts in Slovakia, which is an environmental requirement under core EU GPP criteria.

A strategic target stated in NAP GPP III is to reach 50 per cent greening at the central government level of product groups. for which EU GPP core criteria are recommended at national level. Beyond this, for the first time there is an effort to stipulate binding GPP criteria for specific product groups, to be finalised after market analysis. The NAP GPP III includes 12 EU GPP product groups based on EU GPP core criteria: copy and graphic paper; computers and monitors; imaging equipment; cleaning products and services; food and catering services; transport; furniture; textiles; electricity; office building design, construction and management; road design, construction and maintenance; and street lighting.

The intention to establish binding criteria refers to three product groups:

1. copy and graphic paper – focusing on recycled paper or paper based on legally and/or sustainably harvested virgin fibre, including avoidance of certain substances in paper production and bleaching;
2. computer and monitors – focusing on reducing energy consumption through energy-efficient models, reparability and substitutability (lifetime extension), and reduction of packaging;
3. transport – focusing on reducing emissions through environmentally friendly and energy-efficient vehicles.

To reach these targets and ambitions, defined measures and activities in NAP GPP III are focused on three main areas:

1. support of public authorities in GPP – GPP seminars, GPP helpdesk, GPP materials;
2. observing of GPP progress/development – GPP monitoring;
3. cooperation with relevant EU and national institutions – NAP template.

Strategy of Economic Policy of the Slovak Republic until 2030
(adopted on the 27th June 2018 by the Resolution of the Government of the SR No. 300/2018)

The main strategic target of the adopted Strategy of Economic Policy until 2030 (HP 2030) is to increase the competitiveness of the Slovak economy with the emphasis on the growth of productivity of all production factors by means of priority key areas.
The basic concept of the circular economy is reflected in two identified key areas:

1. technological changes in and support for the innovative potential of the Slovak Republic; and
2. environmental and energy efficiency of the economy.

HP 2030 understands the circular economy initiative not only as an issue of consumption and handling of products in their final phase of lifetime, but it puts production itself at the centre. It is necessary to primarily perceive the initial condition of products, which includes reducing the use of primary raw materials, energy efficiency of production as well as a decrease in the generation of waste even in the production phase, solution possibilities for the future reuse of a product and its individual parts and materials, recycling optimisation.

2019 Environmental Policy Strategy of Slovakia until 2030 – Greener Slovakia
(adopted on the 27 February 2019 by the Resolution of the Government of the SR No. 87/2019)

Aim of Strategy in the area of circular economy is to increase the recycling rate of municipal waste, including its preparation for reuse, to 60 per cent by 2030 and reduce its landfill rate to 25 per cent by 2035. By 2030, emphasis will be placed on preventing waste production, reduction of material use, eco-design of products, and the now lacking technologies for the treatment of certain types of waste. The creation of reuse centres will be encouraged as well, where citizens will have the opportunity to hand over things that can be repaired and used. Slovakia will ensure GPP in up to 70 per cent of the total number of public procurement contracts.

2019 Waste Prevention Program for the years 2019-2025
(adopted on the 27 February 2019 by the Resolution of the Government of the SR No. 86/2019)

The Ministry of Environment has prepared a new Waste Prevention Programme for the years 2019–2025 (PPVO). Waste prevention is at the top of the hierarchy of waste management. The document focuses on mixed municipal waste, biodegradable municipal waste, food waste, paper waste, bulk waste, plastics, construction waste, hazardous waste and waste from the extractive industry. The primary objective for all specific waste streams is to reduce their quantity. The prepared PPVO takes into account the newly adopted legislation on waste management, and the waste package already mentioned by that, as well as the European Strategy for Plastics in a Circular Economy, including the proposed directive on the reduction of the environmental impact of certain plastic product

Other tools:

Landfill fees
In January 2019 has entered into effect the increase of the landfill fees and the measures will rise gradually every year until 2021. Waste landfill fees are effective economic tools that help to divert waste streams from landfilling to more acceptable handling operations in line with the principles of the circular economy.

Deposit Refund System
Although polyethylene terephthalate (PET) and aluminium represent less than 2 per cent of the weight of all municipal waste, the issue of a mandatory deposit-refund system for single-use packaging has been opened on a regular basis in Slovakia. As they are not biodegradable, disturb ecosystems in the long term, float on the surface of water and reduce the aesthetic value of territories, the public perceive them very sensitively. According to Ministerial Institute for Environmental Policy estimates, about 1 billion pieces of single-use PET beverage packaging and roughly 345 million beverage cans are placed on the Slovak market annually. About 62 per cent of PET bottles are collected through separate collection. The deposit-refund system is an instrument that can increase the quantity of collected PET bottles to more than 90 per cent and it also contributes to the reduction of the quantity of litter. The Ministry of Environment will submit a new law to the government for approval in the second half of 2019 and Deposit Refund System is planned to be launched in 2022.

Circular Economy is also covered by documents such as National Investment Plan 2018–2030 and Agenda 2030 implementation; the National Reform Programme 2018; the Waste Act amendment; the proposed deposit refund scheme; and the Green Education fund.

Institutional setup and stakeholder engagement

Natural resources are divided among various ministries in Slovakia, such as: raw materials – Ministry of Economy; forests and land – Ministry of Agriculture; water and biodiversity – Ministry of Environment. Hence a resource efficiency strategy or action plan must be prepared with very close cooperation between these ministries.

The **circular economy in Slovakia** should progress from the policy perspective as it has been listed as a priority. Policymakers are focused on trying to decrease the energy intensity of the Slovakian economy (as it is double the EU average) as well as improving waste management and decreasing the high landfill rate. This will help with resource productivity – Slovakia is currently below the EU average.

A government manifesto adopted by the new government in April 2016 includes, as one of the main objectives of its environmental agenda, the preparation of conditions for a steady transition towards a competitive and resource-efficient low-carbon economy. However, this is formulated with no clear timetables for implementation and/or with unclear financial backing, apart from the priorities already agreed in the Slovak Partnership Agreement or Operational Programmes 2014–2020. This implies a high degree of reliance on EU funds for public investments in general.

As regards the instruments in Slovakia, the focus appears to remain on traditional environmental approaches, such as environmental management systems, environmental labelling and GPP. However, even these voluntary instruments are largely implemented and promoted by public administration bodies, and in particular by the Ministry of Environment.

The Ministries of Economy, Environment, and Agriculture and Rural Development, and their special organisations – for example the Slovak Environment Agency[1] and the Slovak Innovation and Energy Agency[2] – in cooperation with other ministries are mainly responsible for the implementation of resource efficiency policies.

Key responsibility for energy policy preparation and implementation in the Slovak Republic lies with the Ministry of Economy; the policy is approved by government and implemented by other relevant ministries – mainly the Ministry of Environment and the Ministry of Transport and Construction of the Slovak Republic. The Ministry of Environment covers environmental issues linked with circular economy, resource efficiency and voluntary tools of the environmental policy.

The Working Group on Circular Economy was established in 2016 by the Ministry of Environment. The working group cooperates on both internal, within the Ministry, and external, with other ministries, levels. The group or groups work very informally, according to specific needs and issues. Official meetings are not organised, with direct communication with relevant stakeholders being preferred.

As part of the preparation of the Environmental Strategy for 2030, the **Working Group for Green Economy**, including material effectiveness and circular economy, was set up and has prepared the final draft of the document. The Working Group consisted of the representatives of all involved interest groups from government, municipalities and non-governmental organisations (NGOs).

[1] www.sazp.sk (Slovak)

[2] http://www.siea.sk (Slovak)

Ministry of Environment, Slovak Business Agency and other stakeholders currently cooperate on emergence of a new Slovak Circular Economy Hotspot.

The **Circular Economy Institute**[3] (INCIEN) is a civic association that has been operating in Slovakia since March 2016. The purpose of this not-for-profit organisation is to disseminate information about the circular economy and implement its principles in real life. INCIEN is a team of waste and environmental management professionals who are also active members of Solved's international clean technology platform. It has had several successful initiatives and collaborations, particularly with local government, private companies and schools.

Approaches to resource efficiency and circular economy policy evaluation

Value for Money is a project of the Ministry of Finance that reviews past, present and future expenses within different chapters and themes of the state budget. Environment is one of the areas that has already been reviewed. The aim of the project is to check the effect of policies and propose better solutions with lower costs and/or greater value.

Strategic documents in the field of waste management are evaluated periodically.
Waste Management Plan
The Waste Management Plan is drawn up by the Ministry of Environment for each 10-year period and an evaluation of the plan's implementation is presented to the government for approval every five years.

Sectoral indicator reports
A specific series of reports on the environment in the Slovak Republic involves the so-called sector reports – reports on the state of implementation of environmental measures in selected sectors of economic activity.

The integration of environmental policy in sectoral policies was initiated at the Cardiff European Council in 1998. The Council of Ministers of the EU was obliged to draw up a set of measures for connecting sectoral and environmental policies, and the sector reports are the mechanism for monitoring these processes.

The first sector reports were drawn up by the Slovak Environment Agency in 2005 and have since been evaluated and published every two years. During this period, more changes were made either to process, content or presentation. The last revision of the whole process of evaluating the impact of selected sectors on the environment was performed by the Slovak Environment Agency in 2014.

The six sectors of the economy that are evaluated – **industrial production, energy, transport, agriculture, forestry,** and **tourism –** are considered the most important in terms of their impact on the environment and resource utilisation. Evaluations are based on the methodologies of international organisations – the Organisation of Economic Co-operation and Development (OECD) and the EEA – and apply a set of indicators grouped into units according to the following key questions.

- Does the implementation of environmental principles and targets in each sector reflect strategic documents at the Slovak and EU levels?
- What is the condition and direction of the sector in relation to the environment?
- What are the interactions of the sector and the environment?
- What is the response of society to mitigating or compensating for the negative consequences of the sector on the environment?

[3] http://www.incien.sk/ (Slovak)

The latest sector report, drawn up in 2017, is a joint one titled ***Are the sectors of the economy of the Slovak Republic becoming greener?***[4], which brings together the most important information and findings of the individual indicator sector reports.

Monitoring and targets

Targets for resource efficiency and circular economy

Waste-related targets which go further than is required in EU directives:

- Objectives for packaging wastes :The objective for recycling metal packaging waste is 55 per cent and 25 per cent for wood-based packaging waste.

Waste-related targets that aim at waste streams for which there are no targets in EU directives:

- Objectives and measures for biodegradable industrial wastes
  The objectives for biodegradable industrial wastes are set for all biodegradable wastes except municipal biodegradable wastes and sewage sludge from the treatment of municipal waste waters and waste waters with properties similar to municipal waste waters. The objective for biodegradable industrial wastes is to reach 75 per cent material recovery by 2020, with 10 per cent energy recovery and a maximum of 5 per cent landfill.
- Objectives and measures for ferrous and non-ferrous metals
  The objective for wastes from ferrous and non-ferrous metals is 90 per cent material recovery by 2020, with zero energy recovery and a gradual decrease in landfill to a maximum of 1 per cent.
- Objectives and measures for waste tyres
  The objective for waste tyres is 80 per cent material recovery by 2020, with 15 per cent energy recovery and a gradual decrease in landfill to a maximum of 1 per cent.
- Objectives and measures for waste oils
  The objective for waste oils is 60 per cent material recovery by 2020, with 15 per cent energy recovery and zero landfill.

Within the framework of the Waste Prevention Programme 2019-2025, several measures for preventing waste have been adopted. Objectives and measures adopted in prevention programmes focuses on mixed municipal waste, biodegradable municipal waste, food waste, paper waste, bulk waste, plastics and packaging, construction waste, hazardous waste and waste from the extractive industry.
Examples of the objectives:

- establish a ban on landfilling of food waste from wholesale, retail and distribution in the Waste Act with effect from 1.1.2023;
- introduction of legislation concerning a mandatory supply of beverages only in returnable deposit packaging for all government bodies;
- the prohibition of the use of disposable plastic food containers that are not recyclable or compostable – the separate collection and recycling of compostable packaging;
- the prohibition of single-use kitchenware and cutlery in permanent operations and at public events;
- take measures to help increase the share of reusable packaging placed on the market within systems for the reuse of packaging in an environmentally sound manner;

Indicators to monitor progress towards a resource-efficient circular economy

Within the Slovak Environment Agency, the Environmental Assessment Department is responsible for assessing the condition and development of Slovakia's environment. Assessment is carried out through two instruments.

[4] http://enviroportal.sk/spravy/detail/8002 (English)

- Reports on the environment: the processing of various types of printed and electronic reports regarding the environment[5].
- Environmental indicators: building a broad repository of environmental indicators in the form of indicator sheets[6].

SOE 2016, Theme of the year – Circular Economy
Report: ***Are the sectors of the economy of the Slovak Republic becoming greener?***[7]
A specific product of reports on the environment of the Slovak Republic are the so-called sector reports or reports on the state of implementation of environmental measures in selected sectors of economic activity. The first sector reports were drawn up at the SEA in 2005. The development in the six selected sectors of the economy, **industrial production, energy sector, transport, agriculture, forestry, and tourism,** is evaluated**.**
The last sector report that was drawn up in 2017 is the joint report *Are the sectors of the economy of the Slovak Republic becoming greener?*. The publication contains the most important information and findings in the individual indicator sector reports.

The Slovak Environment Agency processes and periodically evaluates different sets of indicators, namely:
- key indicators;
- sectoral indicators;
- sustainable development indicators;
- green growth indicators;
- resource efficiency indicators;
- circular economy indicators

Circular Economy Indicators: according to the Eurostat methodology – European monitoring framework on circular economy (only in Slovak)[8].
The monitoring framework established by the European Commission consists of indicators broken down into four thematic areas: production and consumption, waste management, secondary raw materials, competitiveness and innovation.

Key indicators
The purpose of selected key indicators is to improve the awareness of both the professional and non-expert public regarding the environment in the Slovak Republic, with particular reference to current environmental problems. The selected key indicators provide a sound basis for assessing developments in the condition of the environment and are priority issues for achieving the objectives of sustainable development at a national and international level.

A set of key indicators includes 11 thematic areas of the environment – environmental components and factors including instruments of environmental care – with a total of 29 indicators.

Thematic areas and key indicators concerning resource efficiency or circular economy[9].
- **Rocks** (use of mineral resource).
- **Soil** (land use).
- **Waste** (collection of separated components of municipal and biodegradable municipal waste, generation of waste, waste disposal, waste streams).
- **Material flows** (productivity of resources).

[5] http://enviroportal.sk/spravy-en/index/en (English)
[6] http://enviroportal.sk/indicators (English)
[7] https://www.enviroportal.sk/spravy/detail/8002 (English)
[8] https://www.enviroportal.sk/indicator/321?langversion=sk (Slovak)
[9] http://enviroportal.sk/indicator/101?langversion=en (English)

- **Economic instruments.**
- **Environmental management and audit.**

Sectoral indicators
Sectoral indicators are a means of assessing progress in implementing sectoral policies in relation to the environment and the degree of integration of environmental aspects into sectoral policies. On the basis of an analysis of the indicators developed and regularly evaluated by the EEA, the OECD and the Eurostat, and after assessing their relevance to the Slovak Republic, indicators were selected for six sectors: industrial production, energy, transport, agriculture, forestry and tourism.

For each sector, individual indicators are grouped into three groups. The first group consists of indicators describing the trends and development of the sector relevant to the environment. The second set describes the sector's interactions with the environment, including the sector's demand for resources as well as its impact on the environment. The last group concerns indicators reflecting political, economic and social aspects, such as society's response to mitigation, to compensate for the negative environmental consequences of the sector[10].

Green growth indicators[11]
The set of green growth indicators based on OECD methodology characterises the baseline situation in the Slovak Republic in terms of green growth and serves as a measure when considering further steps in the implementation of this strategy and for a comprehensive assessment of the future direction of the Slovak economy. The current set of green growth indicators includes 32 indicators, four of which are national indicators that describe the voluntary instruments of the environmental strategy.

Selected thematic areas and key indicators

- **Environmental and resource productivity:** energy productivity, carbon dioxide productivity, energy intensity in sectors of the economy.
- **Carbon and energy productivity:** share of energy from renewable sources in gross final energy consumption, contribution of electricity produced from renewable energy sources, volume of generated municipal waste and recovery rate, volume of generated waste (excluding municipal waste) and recovery rate.
- **Resource productivity:** water productivity, nitrogen and phosphorus balances, material productivity.
- **Natural asset base:** intensity of surface water resources exploitation.
- **Renewable stocks:** forest growing stock, intensity of ground water resources exploitation, trend in the size of forest land.
- **Non-renewable:** geological mineral reserves, changes in the use of lands, soil erosion.

Resource-efficiency indicators[12]
Resource-efficiency benchmarking is a statistical support tool for implementation of the Resource-Efficient Europe initiative, one of seven initiatives for smart, sustainable and inclusive growth under the Europe 2020 strategy. The Resource-Efficient Europe Initiative sets a long-term framework for action in many policy areas, supporting policy programmes on climate change, energy, transport, industry, raw materials, agriculture, fisheries, biodiversity and regional development. This should increase the certainty needed to stimulate investment and innovation and ensure that all relevant policies make a balanced contribution to resource efficiency.

[10] http://www.enviroportal.sk/indicator/123?langversion=sk (Slovak)
[11] https://www.enviroportal.sk/indicator/111?langversion=en (English)
[12] http://www.enviroportal.sk/indicator/112?langversion=sk (Slovak)

Indicators are needed to monitor progress towards the objectives of the initiative, highlight the relationship between resource use and the economy, represent a tool to promote stakeholder engagement, and allow comparisons between Member States.

Indicators and data will be updated at regular intervals by Eurostat. Guidance in this area is also more closely evaluated by Eurostat in the EU Resource Efficiency Scoreboard. The set of indicators was compiled by Eurostat on the basis of the requirements of the European Commission, and is structured as follows:

- the main indicator of resource productivity;
- basic selected indicators for materials, soil, water and carbon;
- a set of specific indicators focusing on the EU Roadmap to a Resource-Efficient Europe – transforming the economy; nature and ecosystems; and the key areas of food, buildings and mobility.

Waste Prevention Programme of the Slovak Republic 2014–2018 (PPVO SR) evaluation (see section on Policies which include elements of material resource efficiency for more information)

Proposed waste prevention indicators

The set of waste prevention indicators for monitoring the effectiveness of PPVO SR measures for 2014–2018 is on two levels – a main indicator and a range of supplementary indicators. The main indicator monitors decoupling of total waste production from GDP and DMC.

Main objective and indicator

- **Shifting from material recovery to waste prevention** – total waste generation to GDP per person, population, and DMC.

The supplementary indicators more specifically describe the development of the main indicator and evaluate the effectiveness of the PPVO. Based on the methodological guidance published in October 2012 – Preparing for the Waste Prevention Programme – and the analytical part of the PPVO (Chapter 4.2), specific objectives were set for seven selected waste streams, namely mixed municipal waste, biodegradable municipal waste, paper waste, packaging waste, construction and demolition wastes, hazardous waste, and wastes from the extractive industry.

Supplementary objectives and indicators

- **Continue the trend of year-on-year reduction of mixed municipal waste** – mixed municipal waste and municipal waste generation to total GDP and population.
- **Reduce waste from packaging** – generation of packaging waste relative to the quantity of packaging placed on the market.
- **Reduce the amount of discarded construction and demolition waste** – construction and demolition waste generation relative to GDP; amount of discarded construction and demolition waste.
- **Continue the established trend of reducing the generation of hazardous waste** – generation of hazardous waste.
- **Reduce waste from extractive industries** – generation of waste from extractive industries.

Objectives and proposed indicators for which the methodology for data collection and processing needs to be developed

- **Reduce the generation of** biodegradable municipal waste **and its share in mixed municipal waste** – amount of biodegradable municipal waste and the share of biodegradable municipal waste in mixed municipal waste.
- **Reduce paper waste generation and reduce the proportion of paper in mixed municipal waste** – amount of paper waste generated and the proportion of paper in mixed municipal waste.

The main and supplementary indicators that monitor the effectiveness of PPVO SR measures for 2014–2018 were evaluated numerically, while additional indicators to evaluate the effectiveness of individual measures were only evaluated verbally.

For each indicator it is necessary to define:

- what the indicator describes /evaluates;
- a description of its possible use focusing on monitoring areas;
- the effectiveness of the indicator by describing its advantages and disadvantages from the viewpoint of implemented measures and the fulfilment of objectives;
- using the indicator and assessing its feasibility and the availability of the data needed to calculate the indicator, and recommendations for implementing additional data collection if needed.

Evaluation of the PPVO has been undergoing government approval.

Resource efficiency, circular economy and the 2030 Sustainable Development Goals

The government of the Slovak Republic approved the ***starting points for the implementation of the 2030 Agenda for Sustainable Development*** on 2 March 2016. The concept of shared responsibility for the implementation of Agenda 2030 in the Slovak Republic was approved by the Government Office of the Slovak Republic (national implementation) and the Ministry of Foreign Affairs and European Affairs of the Slovak Republic (activities of the Slovak Republic and Slovak entities abroad).

Slovakia run a series of participatory meetings to get feedback on five UN Sustainable Development Goals (SDGs) priorities defined for Slovakia by Slovak Academy of Sciences. A sixth priority was added by experts and citizens during the meetings – rule of law, democracy and security.

The six priorities for Slovakia are: education for a life in dignity, transformation towards knowledge-based and sustainable economy in the face of changing demography and global context, poverty reduction and social inclusion, sustainable settlements, regions and countryside in the face of climate change, rule of law, democracy and security, good health.

Additionally, a way of evaluating the fulfilment of sustainable development objectives in Slovakia was approved, with the first comprehensive evaluation of the implementation of Agenda 2030 in the Slovak Republic to be undertaken by 31 December 2019 at the latest. The Statistical Office of the Slovak Republic will provide the sustainable development indicators in line with the production of the European Statistical System and will cooperate in monitoring these indicators[13].

In December 2016 the Statistical Office of the Slovak Republic published ***The Slovak Republic and the 2030 Agenda for Sustainable Development***[14]**.** This is the first comprehensive statistical overview of the fulfilment of Agenda 2030 in the Slovak Republic. It describes Slovakia's current position within the EU with respect to the 17 SDGs and 169 targets of Agenda 2030. Indicators include productivity of resources (SDG12.2) and domestic material consumption (SDG12.4).

[13] http://www.rokovania.sk/Rokovanie.aspx/BodRokovaniaDetail?idMaterial=25381 (Slovak)

[14] https://slovak.statistics.sk/wps/portal/cc9dcd58-f806-4e30-9725-95170588ec1e/!ut/p/z1/rVNJc4IwFP41PWIehCUccSlgxSkoKLl0AFFTZFGp1n_f0HE6vQh0pu-U5X3LvHxBFK0RLaIL20U1K4vowPchVd9czSbDoWgAaMoY7Kk_ds2FLoIMaPXdAA_KAET5teG67mIWBGAG0jPYWDRh7vsAnnbH_wiQuTcBe2m8mt5U5gJKK36p3vEj07BkbQZAZqYCtmH5nu5iDAbup98i0II3HdyObxo69ANEEU2Kuqr3KCzjc7QXztkTVB_xgWVRwtInuJzTOrv9PkkSfZNsFCJsCaiCnGIQdE1SBF0RNVAISRMxbXirhG1Q2Ku7fQ7cKO2Tg5YG2h6TVeO34yW7OGhXWOZWmaco5Fa1h1ZfJLS6sPSK_KI85fwLLP44SQvQFFEW54Nrkg9gIEpEU2VJlIkuYb5u_pR0ckbOjtNG9V5gxbZE617cHMrej0dq8MyURZ1-1mj9r6Gpcr-pnOAbEzKPOBMs0_h2_QJdpd6W/dz/d5/L2dBISEvZ0FBIS9nQSEh/ (English)

The Strategy of Environmental Policy of the Slovak Republic 2030 was adopted by government in February 2019. The strategy is, among others, proposing activities that will help Slovakia meet the SDGs, and including specific chapters dedicated to the policies heading towards circular economy and energy efficiency.

Examples of innovative approaches and good practice

Examples of good practice and innovative approaches

In the framework of the Slovak Presidency of the Council of the European Union, the Slovak Ministry of Environment organised an international conference, **T2gE – Transition to the Green Economy** on 6–7 September 2016. It was to attract the attention of more than 500 stakeholders from 32 countries and to create a space for informed discussion of the key issues of the transition to a green economy. The focus of the discussions was on action taken by key stakeholders, including financial and investment measures. As a result of the discussions participants called for the establishment of a regular discussion forum on the green economy, the **T2gE** - **Bratislava Green Economy Process** (Forum).

Conferences, workshops and other events within T2gE process:

Circular economy – a business model of the future, 30 November 2018, Banská Bystrica

- Focus and purpose: Provide Slovak participants with information on the establishment and functioning of the Holland Circular Hotspot; interactive seminar and three roundtable discussions of core partners of the emerging Slovak Circular Economy Hotspot.
- The 47 participants included:
  - representatives of business associations, clusters and chambers wanting to understand how to promote circular economy principles among businesses, sectors, regions;
  - companies wishing to know more on how to make the circular economy integral to their business cases;
  - activists and representatives of sustainable communities and cities wishing to enhance their activities;
  - representatives of public and knowledge institutions wanting to understand circular economy's practical and business implications.
- Organisers and partners: Ministry of Environment of the Slovak Republic, Embassy of the Netherlands in Bratislava, Slovak Business Agency, Institute for Circular Economy, Slovak Environment Agency, Slovak Chamber of Commerce and Industry – Banská Bystrica Regional Chamber and Waste management section of the Slovak Chamber of Commerce and Industry, Slovak Plastic Cluster, National Recycling Agency and the City of Banská Bystrica, Freek van Eijk, director of the Holland Circular Hotspot and Bart van de Laar, representative of the Circle Economy.
- Outcomes: *press release "Dutch experts brought an inspiration how to support circular economy in Slovakia*

Workshop: State of the environment in the Slovak Republic – Information support of care for natural environment and transition to circular economy, 3 May 2018, Bratislava

- Focus and purpose: showcase existing approaches and results of the work in the field of integrated environmental assessments and environmental information in the Slovak Republic and Czech Republic, present main findings about the state of the Slovak environment and discuss main outcomes of the topic of the year (2016) – the circular economy.
- Participants: 80 experts: representatives of state administration, municipalities, business sector, universities, expert organisations and NGOs. Ministry of Environment of the Czech Republic and CENIA (Czech Environment Information Agency) shared their experience,

- Organizers and partners: the Slovak Environment Agency and Ministry of the Environment organised it as a side event of the Ekotopfilm-Envirofilm 2018 film festival about sustainable development

Driving towards Circularity: International Conference on Circular Economy in Automotive Industry, 6–7 November 2017, Bratislava

- Focus and purpose: raise awareness about innovations in automotive industry towards green and circular economy in order to improve the environmental performance of businesses throughout the whole supply chain; create a platform allowing link between businesses from Slovakia and other European countries through information sharing, exchange of experience and best practices, and contribution to development of business partnership.
- Participation: targeting actors in the whole supply chain including developers, suppliers, processors, manufacturers, retailers, processing and recycling businesses.
- Organisers and partners: organized by the Ministry of the Environment jointly with UNIDO and in cooperation with the Embassy of the Netherlands in Bratislava, the Royal Norwegian Embassy in Bratislava and the Ministry of Economy of the Slovak Republic.
- Outcome: report from the Driving towards circularity conference[15].

Informal EU workshop on Resource efficiency and Circular economy, 19–20 October 2017, Bratislava

- Purpose and focus: share the best practice and inform on circular economy activities at the member states´ and EU level, information on the implementation of the policy priorities of the EU Action plan for circular economy (2015) and discussion on how the next policies for circular economy will look after 2019 and 2020.
- Participation: EU Commission; EU Member States Austria, Czech Republic, France, Germany, Italy, and the Netherlands; EEA, representatives of innovative business in Slovakia implementing circular economy principles in practice,
- partners: organised by the Ministry of the Environment in a close co-operation with the Netherlands

National workshop: Transition to Green Economy: challenges and opportunities from business sector perspective, 26 January 2017, Bratislava

- Focus and purpose: present financial mechanisms, showcase research and innovation activities, green technologies, green jobs creation and other measures to increase resource efficiency and decrease environmental impact; back-to-back workshop to discuss conclusions of the T2gE conference with special focus on business sector

Workshop: Improved Waste Management – an Integral Part on the Transition to a Circular Economy, 29 November 2016, Bratislava

- Focus and purpose: on the challenges and perspectives of waste management towards the circular economy of the Visegrad region, following the direction of the European Community, innovation and its use in the business sphere and possible cooperation with Norway.
- Participants: representatives of ministries, the business and non-profit sectors of the Visegrad Group.
- Partners: Ministry of the Environment, Embassy of Norway.

National conference: Eco-innovative Slovakia, 19–20 October 2016, Bratislava

- Purpose and focus: 1) policies and financial mechanisms, 2) best practice examples.
- Participation: 89 experts from Slovakia and the Czech Republic representing public service, research institutions, universities, business sector and civil society.

[15] http://www.t2ge.eu/sites/www.t2ge.eu/files/attachments/final_report_-_driving_towards_circularity.pdf (English)

- Organisers and partners: organised by the Slovak Environment Agency with the support of the Ministry of the Environment.

International conference: Transition to Green Economy (T2gE), 6–7 September 2016, Bratislava

- Focus and purpose: flagship event of the Slovak presidency of the Council of the EU, Bratislava Green Economy Process kick-off.
- Participation: 500 experts, representatives of international organisations, universities, the business sector, civil society and investors from 32 countries.
- Organisers and partners: organised by the Ministry of Environment of the Slovak Republic and SEA together with European Commission, EEA, OECD, and Royal Norwegian Embassy.
- Outcomes: *Conclusions from the conference*[16] and *Euractiv special report (SAJ version*[17]*)*

Festival without Waste: Good market

- The Good market Festival is a pioneer in setting and implementing of zero waste and a circular economy festival strategy. Building on their experiences, the organisers and cooperating experts have started to train other organisers of public events how to become zero waste and circular.

Other initiatives:

Making the Slovak Republic more resource efficient economy Policy paper – joint study of the Institute for Environmental Policy and OECD[18]:

This policy paper identifies a number of options for improving resource efficiency in the Slovak Republic. Starting from the 2011 OECD Environmental Performance Review of the Slovak Republic, it builds on lessons from OECD work on sustainable materials management, resource productivity and green growth, developments in the European Union concerning the circular economy, and the outcomes of the 2016 high-level international Conference on the Transition to the Green Economy (T2gE) organised under the Slovak EU Presidency.

Slovakia without plastic bags

As the consumption of plastic bags in Slovakia, 466 plastic bags per person per year, is more than double the EU average, the Ministry of Environment announced the initiative Slovakia Without Plastic Bags. Retail companies are committed to actively contributing to the reduction of plastic bags. The long-term goal is to eliminate the use of plastic bags.

Parliament passed ban on giving out free plastic bags. Retailers can no longer give these bags away for free and must provide other types, paper, textile or reusable bags, as an alternative from January 2018.

Green Education Fund

The Ministry of Environment of Slovakia has launched the Green Education Fund – an innovative instrument bringing together businesses, civil society and state administration. The initiative is intended to provide a systemic, longer-term solution, supporting environmental awareness and eco-education projects. The pilot phase started at the end of 2017 (first call for projects up to 1 December). Focus areas are climate action and low-carbon mobility, circular economy, quality of life and green infrastructure, and eco-innovation. Expected co-benefits and outcomes are:

- promotion of environmental awareness and eco-education through practical training, competitions, interactions and education programmes;
- promotion of public awareness and participation, with the focus on climate action and low-carbon mobility, circular economy, green infrastructure and eco-innovation;
- incentivise the interest and participation of youth in environmental issues and sustainable practices.

[16] http://www.t2ge.eu/content/downloads (English) and

[17] https://www.euractiv.com/section/energy/special_report/transition-to-green-economy/ (English)

[18] http://www.minzp.sk/files/iep/policy-paper-making-slovak-republic-more-resource-efficient-economy.pdf (English)

The first year of Green Education Fund financially supported 25 projects. In the second year, the Global Environment Facility (GEF) supported awarded EUR 171,000 to 28 projects. Focus areas are: water for sustainable development; green and smart cities, and transition to circular economy; prevention and mitigation of negative impacts of climate change; improving air quality; clean mobility and healthy and sustainable buildings.

Seeking synergies with other policy areas

Green Economy Information Platform

One of the practical examples by which the Ministry of Environment of the Slovak Republic, in cooperation with SEA, contributes to the promotion and support of the green economy, green companies and local authorities and their solutions is the operation of the Green Economy Information Platform (IP GE). The operation of the Slovak version of IP GE was launched in 2017, and in 2018 it underwent changes in design and its English version was launched in order to extend its scope throughout the European Union[19].

IP GE offers the following.

- Database of companies and local authorities and their environmental solutions. The user will get information about companies and their solutions by simply selecting from the pre-set areas. The areas that IP GE is dedicated to are in line with the principles of green economy/circular economy.
- Information on the green economy/circular economy. There is a list of publications in Slovak related to the theme of the green economy. Relevant strategic documents are available. It provides the user with basic definitions and information on green concepts at the international level such as green growth, sustainable development, circular economy and resource efficiency. At the same time, a selection of financial resources is available, from which green solutions can be funded. News and interesting facts are regularly updated, as well as a calendar of events related to the green economy.
- Database of current calls. An overview of individual financial resources related to the issue of the green economy. Individual financial options can be selected according to the IP GE areas.
- Space for a free presentation of the company's business or local authorities and its green solutions, which the user can select by simply entering the required areas. Inclusion in the database is possible by completing a simple questionnaire.

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

Publication: ***Circular Economy – Future of the Development Of Slovakia*** (February 2019)[20]

The publication aims to provide information on the importance of the transition to the circular economy, its economic, environmental and social impacts and benefits, international starting points and situation in Slovakia. At the same time through presenting positive examples of performed activities and projects it has the ambition of becoming a means for making experience accessible and its experience as well as its presentation, at both national and international levels.

This publication is one of the contributions of the Ministry of the Environment to support the introduction of the principles of the circular economy to the Slovak economy.

It provides all interested groups with:

- trends: a description of the current situation in the area of the circular economy at national and European levels;
- interviews with representatives of state administration, the scientific community and the non-profit organizations;
- examples of good practice that highlight selected municipalities, business entities and non-profit organisations whose activity is in line with the needs of the environment;
- projects to promote the acceleration of the transition to a circular economy.

[19] http://zelene-hospodarstvo.enviroportal.sk/en (English)

[20] https://www.enviroportal.sk/spravy/detail/9265 (Slovak)

The Green Mercury Competition
The Green Mercury Competition is designed for organisations, especially small and medium-sized businesses (SMEs) developing their economic or social activities in the Banská Bystrica region (Banskobystrický samosprávný kraj), entrepreneurs or legal entities registered in the country who produce products or technologies supporting the principles of the circular economy. It focuses on innovation, innovative product solutions and technologies, and marketing or organisational innovation.

The new Green Mercury Competition is focused on various environmental activities and the environmental behaviour of companies. Its objective is to support and make visible the organisations that develop their activities in line with the objectives of sustainable development in striving to balance socio-economic development and the efficient use of natural resources. Criteria for evaluating business activities will be the development and implementation of initiatives supporting the circular economy. An additional criterion will be participation in voluntary schemes.

Green Households (Zelená domácnostiam)
The national Green Households programme, a scheme to support small renewable energy sources in households, is being prepared under the EU Operational Programme Environmental Quality and managed by the Ministry of Environment of the Slovak Republic. The project is part of the Priority Axis 4 to promote an energy-efficient and low-carbon economy in all sectors.

The Green Households programme is the first phase of support for small renewable energy sources in family and apartment buildings with a budget of EUR 45 million. However, the total amount earmarked for this form of support amounts to EUR 115 million from European and national sources.

Implementation of the support scheme is in the remit of the Slovak Innovation and Energy Agency (SIEA), which is a contributory organisation of the Ministry of Economy of the Slovak Republic. Small power plants, namely photovoltaic panels and wind turbines, as well as heat generators such as solar collectors, biomass boilers and heat pumps, are supported by the scheme. The aim of the project is to increase the share of renewables in household energy use and make the associated reductions in greenhouse gas emissions.

MOVECO – Mobilising Institutional Learning for Better Exploitation of Research and Innovation for the Circular Economy
The Slovak Business Agency has been cooperating on the MOVECO Interreg project to explore the potential of extended producer responsibility schemes to improve the design of products. MOVECO is a response to the circular economy concept and aims to improve the framework conditions and policy instruments for eco-innovation and the transition to a circular economy, fostering smart and sustainable growth and reducing the disparities between different areas of the Danube region.
The MOVECO partnership is made up of representatives from various backgrounds, including policymakers, business support organisations, research and development institutions as well as civil society organisations – all committed to unleashing the potential of the circular economy in the Danube region.

Ministry of Environment, Slovak Business Agency and other stakeholders currently cooperate on the emergence of a new Slovak Circular Economy Hotspot.

The **Circular Economy Institute**[21] (INCIEN) is a civic association that has been operating in Slovakia since March 2016. The purpose of this not-for-profit organisation is to disseminate information about the circular economy and implement its principles in real life. INCIEN is a team of waste and environmental management professionals who are also active members of Solved's international clean technology

[21] http://www.incien.sk/ (Slovak)

platform. INCIEN has had several successful initiatives and collaborations, particularly with local governments, private companies and schools.

Other resources

Examples of policies which go beyond "material resources"

2014 ***Action Plan for Agricultural Development of the Slovak Republic 2014–2020***
The Action Plan sets out the concept of agricultural development of the Slovak Republic for 2014–2020. It specifies an efficient set of instruments and measures, addressing, among other things, the loss of agricultural land.

2014 ***Rural Development Programme of the Slovak Republic 2014–2020***
This is the programme document for drawing funds from the European Agricultural Fund for Rural Development (EAFRD) for 2014–2020, by means of a set of measures grouped around six rural development priorities.

2014 ***Updated National Strategy for the Protection of Biodiversity up to 2020***
The updated National Strategy for the Protection of Biodiversity defines valid targets for all sectors. The most important aims of the Strategy from the manufacturing perspective include:
– ensuring integration of biodiversity protection into strategies, planning and decision-making processes in various sectors;
– improving cooperation of environmental and sectoral policies for measures aimed at reducing the ecological footprint in accordance with international cooperation and support of awareness, education and research in this sphere.

2015 **Development Strategy for Electromobility in Slovakia**
With an increasing share of renewable energy in Slovakia's energy mix, the savings in emissions are expected to increase considerably as a result of electromobility. Electromobility brings a significant improvement in terms of environmental impacts.

2015 **Principles and Priorities of the Slovak Republic Water Management Policy up to 2027**
Approved by the government, this basic framework document for water management policy in Slovakia addresses planning processes and implementation to 2027. Measures for achieving the goals of water management policy are addressed in planning and conceptual documents, mainly basin management plans or the **Water Plan of Slovakia** (2016), which together represent a comprehensive system of water management.

2018 **Strategy for the Adaptation of the Slovak Republic to Climate Change** - Update, approved on 17 October 2018 by Government Resolution No. 478/2018.
The main objective of the updated adaptation strategy is to increase resilience and improve the preparedness of the Slovak Republic to face the adverse effects of climate change and establish an institutional framework and coordination mechanism to ensure effective implementation of adaptation measures at all levels and in all areas.

2017 **Energy Efficiency Action Plan 2017-2019 with an Outlook up to 2020**
The Action Plan is the fourth implementing measure under the Energy Efficiency Policy, adopted by Government Resolution No 576/2007, and follows on seamlessly from the previous three Action Plans. The Action Plan sets out to evaluate energy efficiency measures for the previous three-year period and the fulfilment of energy savings targets, and to plan measures for the pursuit of set energy efficiency targets in the next period. The Action Plan also reports on the implementation of selected measures of Directive 2012/27/EU.

The way forward

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

This systemic change brings new technological solutions, innovative approaches and the creation of new jobs, while also increasing demands on research and development and thus on financial measures and initiatives supported by the state. The main challenge, however, is the incorporation of circular economy and resource efficiency principles at all levels of the economy, starting with planning and compiling strategic and conceptual documents.

Making use of the principles of green growth should become a natural part of any agenda at all levels of public administration. It is necessary to increase state support by introducing new environmentally friendly technologies through adequate funding, including for research and development.

To promote the circular economy in practice, it is necessary to engage all stakeholders in active work to develop a strategy for moving from a linear to a circular economy, which will be binding to all concerned. This strategy should include:

- instruments for the implementation of a circular economy – such as eco-design and expansion of product requirements, so that during their life cycle products use secondary raw materials obtained from waste in their production, are reusable and easily repairable with spare parts available to all, thus having the least impact on the environment and causing the least waste;
- economic instruments for the functioning of the circular economy – to motivate the separation of waste, extending the life of products and the use of environmentally friendly products, focusing on the promotion of products and services that have improved features such as eco-labelling;
- a circular economy raw materials strategy – which would be focused on preserving domestic natural resources and would help develop the recycling industry and the quality of recycled waste output, so that these could be used as secondary raw materials;
- the correct and timely transposition of waste legislation – the national legislation on waste packaging.

All activities should have a specific time horizon and should be controlled by the government or parliament if necessary. Long-term consistency and coherence of policies that reflect real needs are essential for making this transition. Aligning policies across sectors is key to achieving prosperity. Sectoral policies need to be reviewed, to be better aligned and designed in such a way that they create a sustainable, circular economy.

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