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CORRIGENDUM
This document corrects document SWD(2019) 125 final of 04.04.2019
Footnote 55 modified
The text shall read as follows:

COMMISSION STAFF WORKING DOCUMENT

**The EU Environmental Implementation Review 2019
Country Report - LITHUANIA**

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

**Environmental Implementation Review 2019:
A Europe that protects its citizens and enhances their quality of life**

{COM(2019) 149 final} - {SWD(2019) 111 final} - {SWD(2019) 112 final} -
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Executive summary

Lithuania and the Environmental Implementation Review (EIR)

In the 2017 EIR report, the main challenges identified with regard to implementation of EU environmental policy and law in Lithuania were:

- **waste management,** with the planned new municipal waste incineration capacities potentially putting at risk Lithuania's ability to reach EU recycling targets;
- the fact that Lithuania remains a **resource and energy intensive** country.

Lithuania organised a **national EIR dialogue** with a particular focus on **waste management**.

In 2017, the Commission launched the TAIEX-EIR peer-to-peer (**EIR P2P**) as a new practical tool allowing peer-to-peer learning among environmental authorities. Lithuania participated in two P2P workshops on reducing emissions from domestic heating and air pollution.

Progress on meeting challenges since the 2017 EIR

Lithuania is taking further steps to shift to the **circular economy**. However**, waste management** remains a challenge. While Lithuania is on track towards achieving the 50 % recycling target by 2020, it will need to ensure that post-2020 recycling targets are met as well, with particular focus on separate collection. It should be careful not to acquire too much incineration or MBT (mechanical-biological treatment) capacity.

Lithuania maintains a clean environment, particularly **air** and **water** quality. For water and nitrates Lithuania needs to make further efforts to reduce eutrophication of surface freshwater. The European Commission could not assess the second generation of river management plans under the Water Framework Directive as Lithuania has not yet completed all the required reporting.

Lithuania has bmade good progress on urban waste water treatment. It has a high level of compliance with the requirements of the Urban **Waste Water Treatment** Directive in general. It needs to address the situation in one remaining agglomeration and issues linked to poorly controlled individual or other appropriate systems across the country, and this would make it fully compliant.

Lithuania could benefit from a more targeted use of the European Structural and Investment Funds (ESIF), to better implement environmental rules, particularly on waste management and wastewater treatment, and to ensure that necessary administrative capacity and skills are available.

Although Lithuania is considered to be the fastest growing European innovator, its **eco-innovation** performance still remains way below the EU average. A targeted approach and policy measures, as well as more funding, could help Lithuania further boost its eco-innovation performance, and resource productivity.

Lithuania has slightly less national land area covered by **Natura 2000** than the EU average, but a higher than average proportion of it has good status.

Examples of good practice

- The introduction of a **deposit-refund system** for single-use plastic and glass bottles and metal cans proved to be very successful, achieving its 2020 objective of 90 % collection already in 2017.
- Lithuanian LIFE programme projects on ensuring the viability of **grasslands** and **restoring hydrology** in the Amalvas and Žuvintas wetlands have been identified as success stories to showcase.
- The Ministry of Environment homepage includes a **hotline** specifically for complaints.

Part I: Thematic areas

1. Turning the EU into a circular, resource-efficient, green and competitive low-carbon economy

Measures towards a circular economy

The Circular Economy Action Plan emphasises the need to move towards a life-cycle-driven 'circular' economy, reusing resources as much as possible and bringing residual waste close to zero. This can be facilitated by developing and providing access to innovative financial instruments and funding for eco-innovation.

Following the adoption of the 2015 circular economy package with its accompanying action plan and the setting up of a related stakeholder platform[1], the European Commission adopted a second package in January 2018. This included additional measures such as: (i) an EU strategy for plastics; (ii) a Communication on how to address the interplay between chemical, product and waste legislation; (iii) a report on critical raw materials; and (iv) a framework to monitor progress towards a circular economy[2].

The circular (secondary) use of material in Lithuania was 4.5 % in 2016 (below the EU-28 average of 11.7 %). In contrast, Lithuania performs above the EU-28 average in terms of the number of people employed in the circular economy (2.71 % of total employment in 2016, EU-28 average is 1.73 %).

In the 2017 Special Eurobarometer 468 on attitudes of EU citizens towards the environment, 88 % of Lithuanian people said they were concerned about the effects of plastic products on the environment (EU-28 average 87 %). 89 % said they were worried about the impact of chemicals (EU-28 average 90 %) [3]. There is a support for circular economy initiatives and environmental protection action in Lithuanian society.

Figure 1 shows that, at 0.75 EUR/kg (EU average is 2.04), Lithuania's resource productivity (how efficiently the economy uses material resources to produce wealth)[4] did not increase when compared with 2010.

Lithuania supports the EU circular economy package and the shift to the circular economy in general, however, it needs to take further steps in this area. As of 2018, there is no national strategy or roadmap on the circular economy. New circular economy targets on waste will be integrated into the National Waste Prevention and Management Plan for the period 2021–2027.

Figure 1: Resource productivity 2010-2017[5]
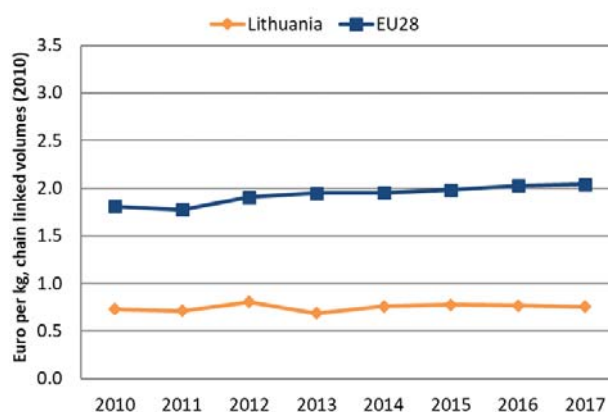
Lithuanian civil society is getting more involved in promoting circularity, with examples of fruitful cooperation with local authorities. For example, the 'Žiedinė ekonomika' (circular economy) public organization provides seminars on the circular economy for high school students in Vilnius. The project is financed by the Environmental Protection Department of the Vilnius City Municipality Administration.

The number of EU Ecolabel products and EMAS[6]-licensed organisations in a country can give a rough measurement of the circular economy transition. These two indicators show to what extent this transition is engaging the private sector and other national stakeholders. These two indicators also show the commitment of public authorities to policies that support the circular economy. As of September 2018, Lithuania had 195 products and 10 licences registered in the EU Ecolabel scheme, out of a total of 71 707 products and 2167 licences in the EU,

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[1] European Circular Economy Stakeholder Platform.
[2] COM (2018) 029.
[3] European Commission, Special 486 Eurobarometer, 'Attitudes of European citizens towards the environment', 2017.
[4] Resource productivity is defined as the ratio between gross domestic product (GDP) and domestic material consumption (DMC).

[5] Eurostat, Resource productivity.
[6] EMAS is the European Commission's Eco-Management and Audit Scheme – a programme to encourage organisations to behave in a more environmentally sustainable way.

showing a low take-up of these licences[7]. Moreover, 4 organisations from Lithuania are currently registered in EMAS[8].

SMEs and resource efficiency

Lithuanian SMEs continue to score above the EU average on environmental issues, as shown in Figure 2. Although the proportion of Lithuanian SMEs that put in place resource efficiency measures is far below the EU average, the percentage of SMEs that offer green products and services is above.

The extent to which companies taking resource efficiency measures benefit from public support is higher in Lithuania than in the EU on average. The proportion of SMEs where more than 50 % of turnover comes from green products and services is significantly higher than in most EU countries. The significant progress made in this area can be attributed to a number of financial and non-financial support schemes that have been put in place to support eco-innovation since 2008, and most notably since 2016/2017.

Figure 2: Environmental performance of SMEs[9]
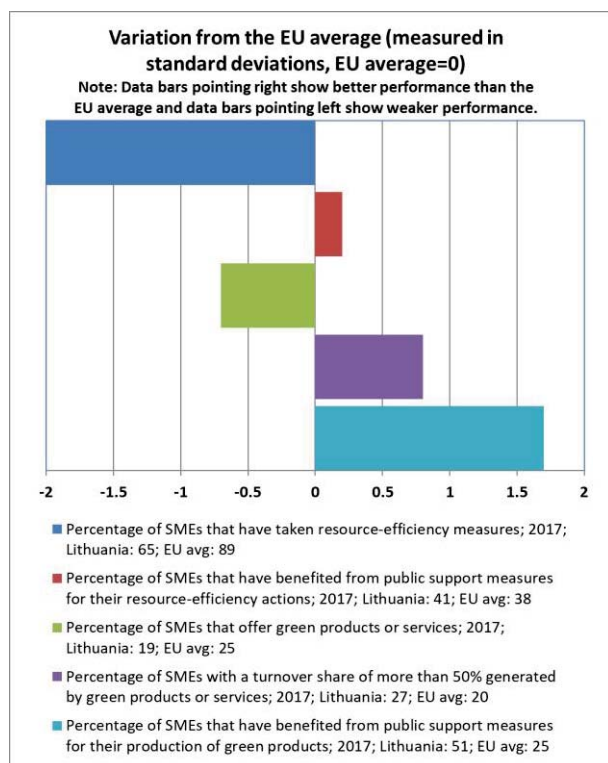
The latest Eurobarometer on 'SMEs, resource efficiency and green markets'[10] asked companies about both recent

resource-efficiency actions they had taken and additional resource-efficiency actions they planned to take in the next 2 years. The Eurobarometer then compared these responses with responses given to the same questions in 2015. Lithuanian companies show a slight decline in intentions to invest in all eight dimensions of resource efficiency compared to 2015, despite ambition levels already being low; saving energy and water are exceptions here.

Only 7 % of Lithuanian companies (compared to 22 % in the EU on average, with the range being 3 %-38 %) relied on external support in their efforts to be more resource efficient. For them, private sector consultancy and advice from business associations gained in importance, whereas public sector funding and advice lost importance compared to 2015.

There is still significant potential to raise Lithuanian SMEs' ambition to become more resource efficient and develop products and services for green markets, and their general awareness of opportunities in these areas.

Lithuanian companies engage very little in external cooperation, which makes it difficult to create pro-active environmental policies based on cooperation and incentives. The increasing importance that companies give to business associations may help address this.

Eco-innovation

In 2018, Lithuania ranked 20th on the 2018 European Innovation Scoreboard, and was the fastest growing innovator (20.1 % increase since 2010)[11]. Figure 3 shows that in 2017 Lithuania still performed below the EU average with an Eco-Innovation Index score of 82, placing it in 17th place in the overall EU ranking. However, the country has made a significant progress in the area of eco-innovation since it was in the last place according to this index in 2010.

The strongest drivers of eco-innovation in Lithuania are: an evolving innovation and entrepreneurial culture; increasing media coverage of the green economy, which continues to expand awareness of eco-innovation and the circular economy.

The Lithuanian innovation development programme for 2014-2020 and the smart specialisation strategy are the two major documents that continue to support national actions for eco-innovation. EU funds — European Regional Development Fund (ERDF), European Social

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[7] European Commission, Ecolabel Facts and Figures.
[8] As of May 2018. European Commission, Eco-Management and Audit Scheme.
[9] European Commission, 2018 SBA fact sheet - Lithuania, p. 15.

[10] Flash Eurobarometer 456 'SME, resource efficiency and green markets' January 2018. The 8 dimension were Save energy; Minimise waste; Save materials; Save Water; Recycle by reusing material internally; Design products easier to maintain, repair or reuse; Use renewable energy; Sell scrap materials to another company.
[11] European Commission, European innovation Scoreboard 2018.

Fund (ESF) and Cohesion Fund — continue to support business development that boosts innovation. Eco-innovation potential is expected to grow in the construction, solar energy, waste management and green transport sectors.

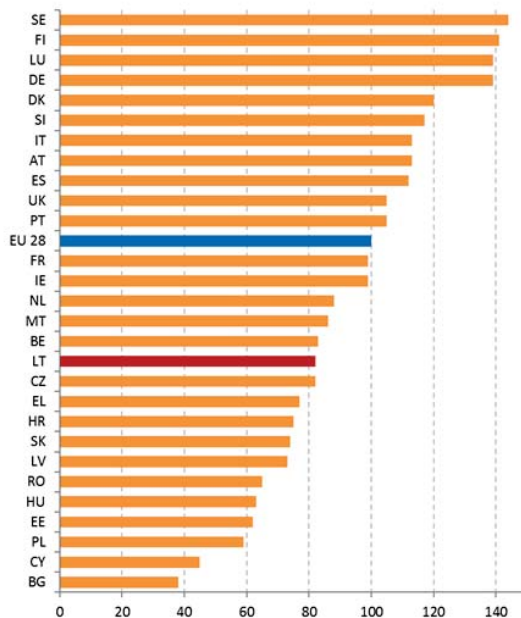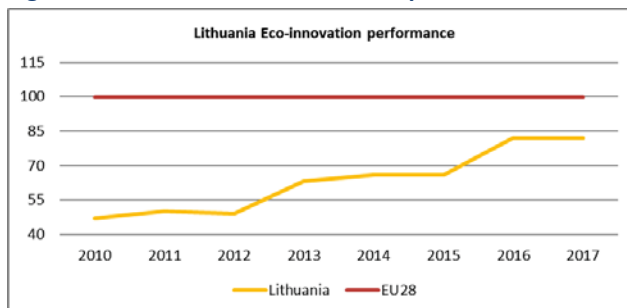**Figure 3: 2017 Eco-innovation index (EU=100)**[12]

Figure 4: Lithuania's eco-innovation performance

One of the expected future developments encouraged by the smart specialisation strategy is connected to the building of bio-refinery plants in Lithuania. Due to government actions and business initiatives, the waste recycling sector continues to expand.

Perhaps the biggest new trend in Lithuania is the emergence of either business-led or NGO-led initiatives, which were designed to support recycling and waste management and have also been drivers of eco-innovation[13].

Waste management

Turning waste into a resource is supported by:
(i) fully implementing EU waste legislation, which includes the waste hierarchy, the need to ensure separate collection of waste, the landfill diversion targets, etc.;
(ii) reducing waste generation and waste generation per capita in absolute terms; and
(iii) limiting energy recovery to non-recyclable materials and phasing out landfilling of recyclable or recoverable waste.

This section focuses on management of municipal waste[14] for which EU law sets mandatory recycling targets[15].

In 2017, municipal waste generation in Lithuania remained below the EU average (455 kg/y/inhabitant compared to around 487 kg)[16]. Figure 5 shows Lithuania's municipal waste by treatment in terms of kg per capita.

Lithuania has achieved significant progress regarding waste management, as it halved its landfilling rate since 2014, to 33 % (still above the EU average of 25 %). Recycling and composting (48 %) have become the main treatment option, slightly above the EU average of around 46 %. This development is in large part due to the increase in composting, to 24 %, an almost 150 % increase since 2014, which ranks Lithuania as one of the top performers in the EU (average composting rate in the EU is around 17 %).

A significant decrease in landfilling has been achieved by increasing incineration with energy recovery capacity (the second least favourable option for waste treatment), the rate of which doubled since 2014 to 18 % (still below the EU average of 24 %); it may still increase in the future as new facilities are under construction.

Lithuania is well on its way to compliance with the 50 % recycling 2020 target, as shown in Figure 6[17].

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[14] Municipal waste consists of mixed waste and separately collected waste from households and from other sources, where such waste is similar in nature and composition to waste from households. This is without prejudice to the allocation of responsibilities for waste management between public and private sectors.
[15] See Article 11.2 of Directive 2008/98/EC. This Directive was amended in 2018 by Directive (EU) 2018/851, and more ambitious recycling targets were introduced for the period up to 2035. These targets will be taken into consideration to assess progress in future Environmental Implementation Reports.
[16] European Commission, Eurostat, Municipal waste by waste operations.
[17] Member States may choose a different method than the one used by ESTAT (and referred to in this report) to calculate their recycling rates and track compliance with the 2020 target of 50 % recycling of municipal waste.

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[12] Eco-innovation Observatory: Eco-Innovation scoreboard 2017.
[13] European Commission, Eco-Innovation Observatory: Eco-innovation Country Profiles 2016-2017.

An important factor that contributed to the increase in the recycling of the dry recyclable fraction was the introduction of a deposit-refund system for single-use plastic and glass bottles and metal cans. The system is very successful, achieving its 2020 objective of 90 % collection already in 2017. There are specific plans to further improve and optimise the separate collection system: by the end of 2021, it is planned to optimise the collection points network and continue providing individual households with separate collection containers. Since 2015 Ministry of Environment conducts a public survey which indicates that the public opinion on waste management system (separate collection, access to containers, awareness rising) becomes more favourable every year.

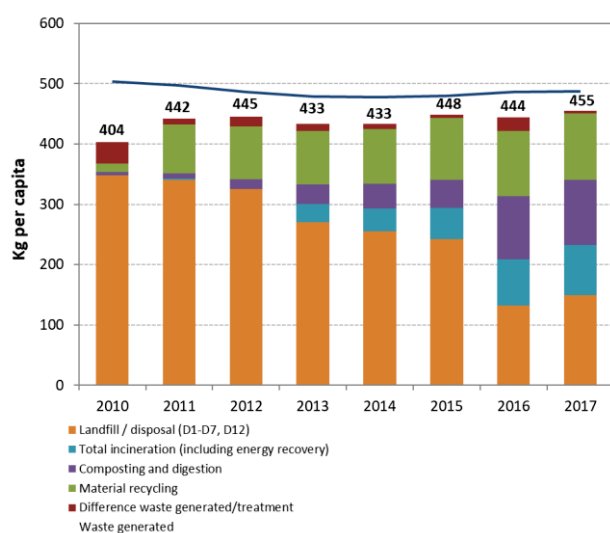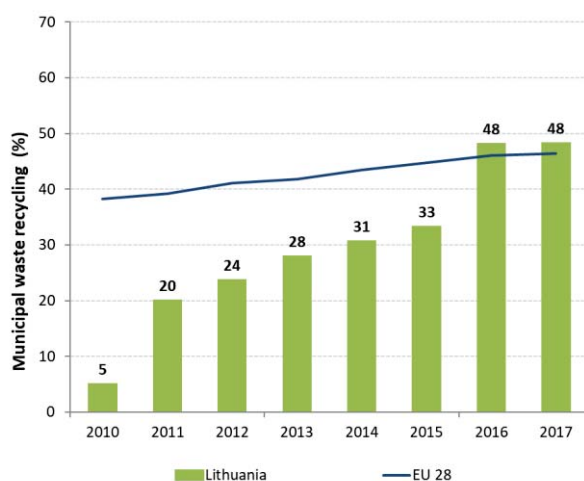**Figure 5: Municipal waste by treatment in Lithuania 2010-2017**[18]

Figure 6: Recycling rate of municipal waste 2010-2017[19]

The increase in composting is due to the opening of green waste composting sites, where citizens can bring garden and similar waste free of charge. Separate collection of food waste in cities with more than 50 000 inhabitants is planned for 2019. The Ministry of Environment is also considering the most appropriate ways of treating food waste.

However, more efforts will be needed for Lithuania to comply with post-2020 recycling targets[20], in particular as regards capturing more waste through separate collection and decreasing reliance on MBT and waste incineration plants for the treatment of the biodegradable fraction and other recyclable fraction.

Lithuania has one of the lowest landfill fees in the EU. The plans to progressively increase the landfill tax for non-hazardous waste to 27.5 EUR/t by 2020 were postponed for the second time at the end of 2018. The tax rate thus remains at 5 EUR/t in 2019, and is to increase to 27.5 EUR/t by 2020. The low tax rate combined with landfill gate fees is an obstacle to improving the economic viability of recycling, as landfilling remains the cheapest waste treatment option. Once the tax reaches the level of at least 20 EUR/t, but preferably more, the measure should become more effective.

Lithuania has made the pay-as-you-throw (PAYT) scheme mandatory in all municipalities. Under PAYT, payment for the waste management service should consist of two components: fixed and variable. The rules determining and explaining the scheme's implementation are quite vague, however, and each municipality has a lot of flexibility in how to implement it. In practice, the fixed component of the fee is often predominant, and the variable part is not always linked to the amount of waste.

It is important that Lithuania gains clarity on the real needs and plans for waste incineration in the next period. This will improve information needed for energy recovery and for waste management stakeholders.

2019 priority actions

- Introduce new policy instruments, including economic instruments, to promote prevention, make reuse and recycling more economically attractive.
- Set mandatory targets for recycling and/or on generation of residual waste at municipal level, with penalties for non-compliance. Develop and run implementation support programmes for municipalities to help support their efforts to

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[18] European Commission, Eurostat, Municipal waste by waste operations.
[19] European Commission, Eurostat, Recycling rate of municipal waste.

[20] Directive (EU) 2018/851, Directive (EU) 2018/852, Directive (EU) 2018/850 and Directive (EU) 2018/849 amend the previous waste legislation and set more ambitious recycling targets for the period up to 2035. These targets will be taken into consideration to assess progress in future Environmental Implementation Reports.

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organise separate collection and further improve recycling performance.

- Introduce an incineration and MBT tax to shift reusable and recyclable waste towards recycling.
- Extend and enforce pay-as-you-throw scheme, provide incentives and support to households to participate in separate collection.
- Improve the functioning of extended producer responsibility systems, in line with the general minimum requirements on extended producer responsibility[21].
- Avoid building excessive infrastructure capacity for the treatment of residual waste, such as mechanical treatment plants, incinerators and landfills.

Climate change

The EU has committed to undertaking ambitious climate action internationally as well as in the EU, having ratified the Paris Climate Agreement on 5 October 2016. The EU targets are to reduce greenhouse gas (GHG) emissions by 20 % by 2020 and by at least 40 % by 2030, compared to 1990. As a long-term target, the EU aims to reduce its emissions by 80-95 % by 2050, as part of the efforts required by developed countries as a group. Adapting to the adverse effects of climate change is vital to alleviate its already visible effects and improve preparedness for and resilience to future impacts.

The EU emissions trading system (EU ETS) covers all large greenhouse gas emitters in the industry, power and aviation sectors in the EU. The EU ETS applies in all Member States and has a very high compliance rate. Each year, installations cover around 99 % of their emissions with the required number of allowances.

For emissions not covered by the EU ETS, Member States have binding national targets under the Effort Sharing legislation. Lithuania had lower emissions than its annual emission allocations (AEAs) in each of the years 2013-2016. According to preliminary data, emissions in 2017 were slightly higher than the AEA. For 2020, Lithuania's national target under the EU Effort Sharing Decision is to avoid increasing emissions by more than 15% compared to 2005. For 2030, Lithuania's national target under the Effort Sharing Regulation will be to reduce emissions by 9% compared to 2005.

In the work with the national energy and climate plan, Lithuania intends to build on existing regional cooperation in the Baltic Energy Market Interconnection Plan (BEMIP), the Baltic Environmental and Energy Councils. On the basis of the analysis prepared in 2015 the National Energy Independence Strategy (2012) was

updated by the Parliament in July 2018. Lithuania expects the Baltic Energy Technology Scenario study, of which a first draft was ready in October and finalized in December 2017, to support the development of the NECP.

Figure 7: Change in total greenhouse gas emissions 1990-2017 (1990=100%)[22].
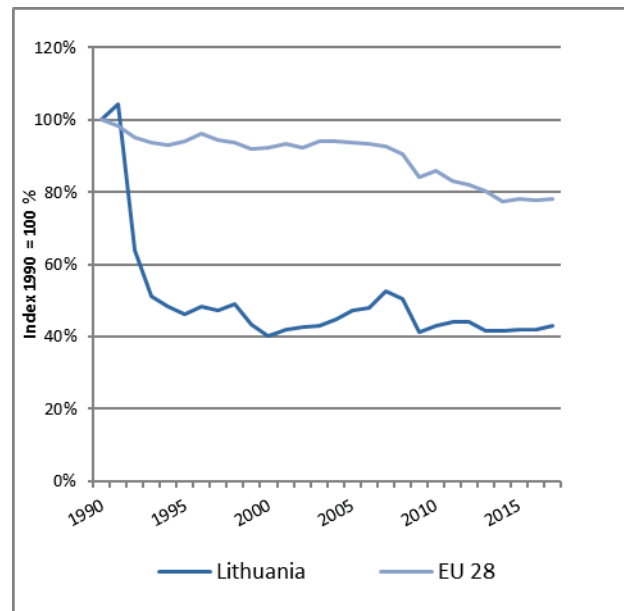
The Strategy for the National Climate Change Management Policy lays down the targets and objectives for climate change mitigation and adaptation by 2050. The Strategy lays down indicative medium-term and long term climate change mitigation targets that Lithuania will contribute towards, i.e. the implementation of the EU greenhouse gas emission reduction targets: reducing these emissions by at least 40% by 2030, 60% by 2040 and 80% by 2050, compared to 1990 levels. Upon the adoption of EU legal acts on the implementation of the EU 2030 climate and energy framework, the Strategy has been started to revise.

Transport represents almost a quarter of the EU's GHG emissions and is the main cause of air pollution in cities.Transport emissions in Lithuania increased by 25 % from 2013 to 2016."

The F-gas Regulation requires Member States to run training and certification programmes, introduce rules for penalties and notify these measures to the Commission by 2017. Lithuania has notified both measures.

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[21] Directive (EU) 2018/851.

[22] Annual European Union greenhouse gas inventory 1990–2016 (EEA greenhouse gas data viewer). *Proxy GHG emission estimates for 2017Approximated EU greenhouse gas inventory 2017* (European Environment Agency). Member States national projections, reviewed by the European Environment Agency.

Figure 8: Targets and emissions for Lithuania under the Effort Sharing Decision and Effort Sharing Regulation[23]
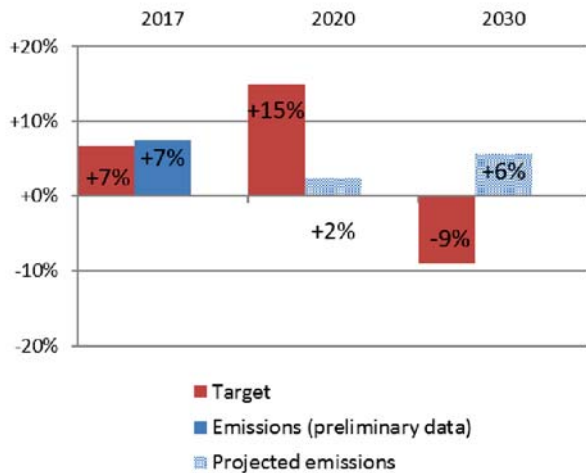
The accounting of GHG emissions and removals from forests and agriculture is governed by the Kyoto Protocol. A preliminary accounting exercise for 2013-2016 shows net credits of, on average, -1.9 Mt CO_2-eq, which corresponds to 1.7% of the EU-28 accounted sink of -115.7 Mt CO_2-eq per year. Lithuania is one of eight EU Member States which exceed the cap of 3.5% from emissions of the base year (1990).

Figure 9: Greenhouse gas emissions by sector (Mt. CO2-eq.). Historical data 1990-2016. Projections 2017-2030[24]

Lithuania adopted a 'Strategy for National Climate management Policy 2013-2050' in 2012. An Interinstitutional Action Plan on the implementation of the goals and objectives of this Strategy was adopted for the period of 2013-2020. The following priority sectors have been identified: energy, transport, industry, agriculture, landscape, spatial planning, ecosystems and biodiversity, fisheries and aquaculture sector, forestry, tourism, groundwater resources, and waste management. Every two years, the Government of the Republic of Lithuania prepares a report on the implementation of the Strategy. The outcomes of the monitoring, reporting and evaluation scheme will feed into further development of the Action Plan and the update of the Strategy.

The total revenues from the auctioning of emission allowances under the EU ETS over the years 2013-2017 were EUR 118 million. 86 % of the auctioning revenues have been spent on climate and energy purposes.

2019 priority action

In this report, no priority actions have been included on climate action, as the Commission will first need to assess the draft national energy and climate plans which the Member States needed to send by end of 2018. These plans should increase the consistency between energy and climate policies and could therefore become a good example of how to link sector-specific policies on other interlinked themes such as agriculture-nature-water and transport-air-health.

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[23] *Proxy GHG emission estimates for 2017 Approximated EU greenhouse gas inventory 2017* (European Environment Agency). Member States national projections, reviewed by the European Environment Agency.
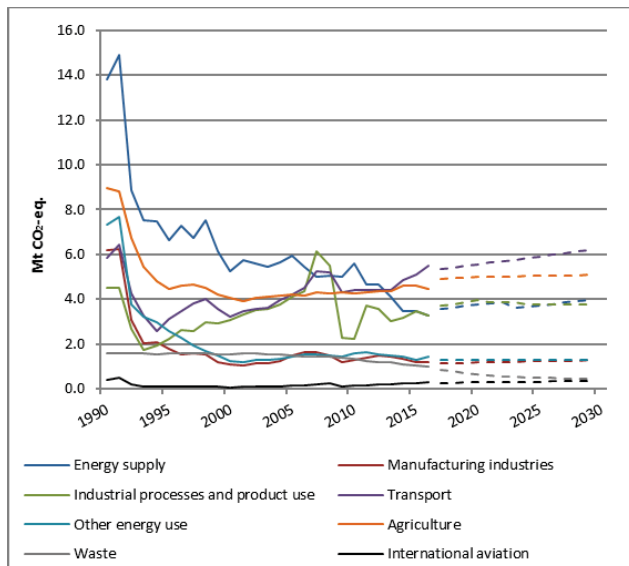[24] Annual European Union greenhouse gas inventory 1990–2016 (EEA greenhouse gas data viewer). *Proxy GHG emission estimates for 2017Approximated EU greenhouse gas inventory 2017* (European Environment Agency). Member States national projections, reviewed by the European Environment Agency.

2. Protecting, conserving and enhancing natural capital

Nature and biodiversity

The EU biodiversity strategy aims to halt the loss of biodiversity in the EU by 2020. It requires full implementation of the Birds and Habitats Directives to achieve favourable conservation status of protected species and habitats. It also requires that the agricultural and forest sectors help to maintain and improve biodiversity.

Biodiversity strategy

In 2015, Lithuania adopted an action plan on the conservation of landscape and biological diversity for 2015-2020[25].

Nature in Lithuania is in a relatively good state. The condition of its air, water and soil is assessed as good — there are no significant ecological problems. Considering this, Lithuania can develop it ecological compensation system based on the 'where it is necessary' principle rather than the 'where it is left' principle.

There are two Lithuanian projects that have been chosen as success stories to showcase. One of them is an integrated planning tool that can be used to ensure the viability of grasslands. The project has: (i) identified common policy shortcomings and eliminated them to make sure grassland biodiversity is maintained in the long-term; (ii) restored around 140 ha of grasslands to create the preconditions for sustainable grassland management; (iii) set up a capacity-building programme on applying the integrated planning tool, which led to the training of 400 people. The second project is on the restoration of hydrology in the Amalvas and Žuvintas wetlands; it succeeded in reversing degradation processes in 1 158 ha of targeted wetland in the Žuvintas

biosphere reserve. This example of successful wetland restoration can be easily replicated[26].

Setting up a coherent network of Natura 2000 sites

The Birds and Habitats Directives require Member States to establish a coherent national network of Natura 2000 sites. The Commission assesses compliance with this requirement individually for each species and habitat type occurring on the national territory of the Member States. The latest update of this assessment was carried out by the Commission with the assistance of the European Environment Agency (EEA). This latest update identified several insufficiencies in Lithuania's terrestrial Natura 2000 network.

In early 2017, 13 % of Lithuania's land area was covered by Natura 2000 (EU average 18.1 %). The list of Special Protection Areas (SPAs) in Lithuania comprises 84 sites covering a total area of over 658 561 ha, while the list of Sites of Community Importance (SCIs) consists of 475 sites covering 724 708 ha. With the establishment of the last marine SPA in July 2015, the Lithuanian network of SPAs is considered as having been completed. However, the latest assessment[27] of the SCI part of the Natura 2000 network shows that there are insufficiencies when it comes to designation.

Designating Natura 2000 sites and setting conservation objectives and measures

A national habitat inventory was carried out between 2011-2015 in order to determine the exact localisation of natural habitats and to collect the necessary data needed for establishing favourable reference values and relevant conservation objectives for each habitat type. The results of the exercise strongly suggest that the information on the present SCIs will have to be substantially reviewed to reflect the current reality. It also indicates that the current SCI network might be incomplete for some habitat types and species.

Lithuania continues to develop species conservation plans and management plans for protected areas as required by EU legislation. At present, there are 104 adopted management plans for Natura 2000 sites, and 142 are in preparation, at different stages of

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[25] Order on the Approval of the Action Plan on the Conservation of Landscape and Biological Diversity for 2015-2020.

[26] LIFE programme - Country Factsheet for Lithuania.
[27] For each Member State, the Commission assesses whether the species and habitat types on Annexes I and II of the Habitats Directive, are sufficiently represented by the sites designated to date. This is expressed as a percentage of species and habitats for which further areas need to be designated in order to complete the network in that country. The current data, which were assessed in 2014-2015, reflect the situation up until December 2013.

development. The lack of financial resources for the surveillance of species and habitats and for activities related to habitat restoration and maintenance remains a key difficulty in carrying out the required nature management activities in the Natura 2000 network[28].

Progress in maintaining or restoring favourable conservation status of species and habitats

Considering that Member States report every 6 years on the progress made under both directives, no new information is available on the state of natural habitats and species, or on progress made in improving the conservation status of species and habitats in Lithuania, as compared to the 2017 EIR Lithuanian Country Report.

Overall, it is acknowledged that improvements in the status of species and habitats have recently been reported in Lithuania.

2019 priority actions

- Complete the Natura 2000 designation process and put in place clearly defined conservation objectives and the necessary conservation measures for the sites; provide adequate resources for their implementation in order to maintain/restore species and habitats of community interest to a favourable conservation status across their natural range.
- Develop and promote smart and streamlined implementation approaches, in particular as regards appropriate assessment procedures, to ensure that necessary knowledge and data are available; improve communication with stakeholders.
- Improve the incentives for foresters and farmers to better protect forest and grassland habitat. Ensure sustainable forest management and promote efficient use of biomass.

Maintaining and restoring ecosystems and their services

The EU biodiversity strategy aims to maintain and restore ecosystems and their services by including green infrastructure in spatial planning and restoring at least 15 % of degraded ecosystems by 2020. The EU green infrastructure strategy promotes the incorporation of green infrastructure into related plans and programmes.

The EU has provided guidance on the further deployment of green and blue infrastructure in Lithuania[29] and a country page on the Biodiversity Information System for Europe (BISE)[30]. This information will also contribute to the final evaluation of the EU Biodiversity Strategy to 2020.

The Lithuanian green infrastructure (GI) strategy is in line with the spatial system developed in the country, called the 'nature frame'. It is put into law by the Law on Environmental Protection, the Law on Protected Areas, and the Master Plan of the Territory of the Republic of Lithuania, through the concepts of nature frame and the ecological network. The nature frame areas cover approximately 60 % of Lithuania's total area.

GI is also incorporated into the national environment protection strategy (2015), which sets goals up to 2030, and the action plan on the conservation of landscape and biodiversity (2015-2020). The plan states that the nature frame and the ecological network should be defined in documents on integrated territorial planning at all levels. However, there are still challenges for implementing the nature frame, due to a lack of experience and financial support. The national environment protection strategy also promotes GI in urban areas. The Law on Green Plots requires the creation of a system of green areas when master plans for cities are being prepared.

GI projects are implemented at cross-border, national, regional and local level. Many Lithuanian cities engage in green urban regeneration and are implementing GI. As regards agricultural policies, the nature frame is taken into account in the preparation of land management plans, accompanied by environmental measures.

Forest policies also include GI elements as forest management plans must take into account biodiversity features in the area when forest management measures are being planned. Conflict between commercial agricultural or forestry activities and the management of land for nature protection has been identified as a challenge. This is especially the case where specific

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[28] The core of the 'Article 17' report is the assessment of conservation status of the habitats and species targeted by the Habitats Directive.

[29] The recommendations of the green infrastructure strategy review report and the EU Guidance on a strategic framework for further supporting the deployment of EU-level green and blue infrastructure.
[30] Biodiversity Information System for Europe.

agricultural practices such as pastures are no longer economically profitable.

On 8 August 2018, the Lithuanian government approved a new yearly quota for cutting state forest for the years 2019-2023. It amounts to 11 850 ha of forest per year and is 6 % higher than the yearly quota approved for the years 2014-2018 (11 168 ha). This quota applies to all state-owned forests, including protected areas. This growing intensity of forest exploitation, especially within Natura 2000 areas, raises further nature protection concerns.

The EU structural and investment funds are an important source of funding for GI in Lithuania. Over 2014-2020, around EUR 66 million is earmarked for the management of protected areas and integration of GI solutions into landscape management at local level. A particular challenge is the lack of a methodology that could guide the creation of the nature frame and ecological networks at regional and local level.

Lithuania is encouraged to continue its efforts to deploy green and blue infrastructure and mainstream it in other policies consistently with the mapping and assessment of ecosystems and their services (MAES) framework; consider the recommendations of the GI strategy review report; make full use of the EU guidance on a strategic framework for further supporting the deployment of EU-level green and blue infrastructure[31].

Lithuania's report on resource mobilisation to the Convention on Biological Diversity (CBD) is still pending. Reporting to the CBD on financial flows is important for the position of the EU and Member States in the CBD, and helps support good practices in other countries.

Estimating natural capital

The EU biodiversity strategy calls on Member States to map and assess the state of ecosystems and their services[32] in their national territories by 2014, assess the economic value of such services and integrate these values into accounting and reporting systems at EU and national level by 2020.

In Lithuania, the topic of ecosystem services is still rather new, with limited knowledge and experience across different sectors (government, academia, NGOs, private). No systemic mapping of ecosystems has yet been done. However, MAES has been included in the current Lithuanian government's work programme for 2016-2020. It requires the mapping and assessing of at least 24 main ecosystem services, and urges the adoption of legislation to foster integration of the ecosystem services approach into sectoral policies. However, there is no coherent strategy or outlined set of actions yet.

Lithuania has started to prepare[33] for a national study on the distribution and state of the main ecosystems and their services on its territory. The two-year study is expected to begin in early 2019. For the process to be successful, however, awareness and knowledge of ecosystem services in Lithuania must increase.

A concurrent scientific project on ecosystem services mapping and assessment funded by the Research Council of Lithuania in 2017 is ongoing. Discussions on how to best combine the two initiatives have started.

Figure 10: Implementation of MAES (September 2018) [34]
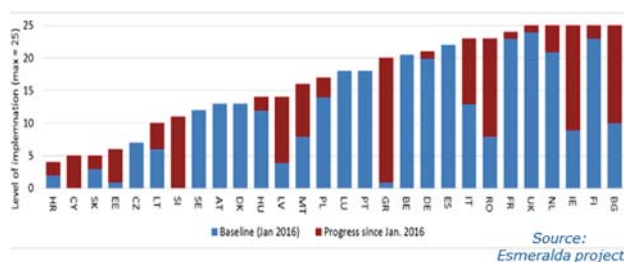
Outside national-level developments, a number of smaller-scale initiatives with a narrower focus can be highlighted, e.g. the VivaGrass project, carried out jointly with Latvian and Estonian partners specifically on grassland ecosystem services, and EcoServe, on the future of the ecosystem services of the Lithuanian coastal zone in the context of global changes.

At the MAES working group meeting held in Brussels in September 2018, it was shown that Lithuania has made

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[31] The recommendations of the green infrastructure strategy review report and the EU Guidance on a strategic framework for further supporting the deployment of EU-level green and blue infrastructure.

[32] Ecosystem services are benefits provided by nature such as food, clean water and pollination on which human society depends.
[33] Ecosystem services in Lithuania.
[34] ESMERALDA project.

some progress in implementing MAES since January 2016 (Figure 10). This assessment was made by the ESMERALDA project[35] and based on 27 implementation questions. The assessment is updated every 6 months.

Business and biodiversity platforms, networks and communities of practice are key for promoting and facilitating natural capital assessments among business and financial service providers, for instance via the Natural Capital Coalition's protocol[36]. The assessments contribute to the EU biodiversity strategy by helping private businesses better understand and value both their impact dependence on nature. Biodiversity platforms have been established at EU level[37] and in a number of Member States.
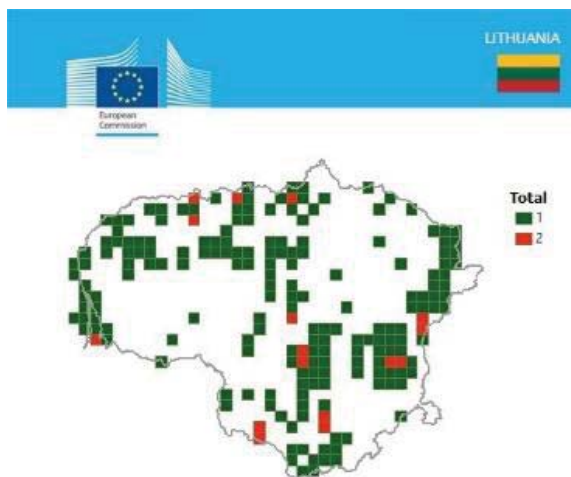
Lithuania has not yet established such a platform.

Invasive alien species

Under the EU biodiversity strategy, the following are to be achieved by 2020:
(i) invasive alien species identified;
(ii) priority species controlled or eradicated; and
(iii) pathways managed to prevent new invasive species from disrupting European biodiversity.
This is supported by the Invasive Alien Species (IAS) Regulation, which entered into force on 1 January 2015.

Figure 11: Number of IAS of EU concern, based on available georeferenced information for Lithuania[38]

The report on the baseline distribution of invasive alien species (Figure 11), for which Lithuania did not review its country or grid-level data, shows that from the 37 species on the first EU list, seven have been observed in the environment in Lithuania. Of these, Sosnowsky's hogweed (*Heracleum sosnowskyi*) seems to be the most widespread.

Between the entry into force of the EU list and 18 May 2018, Lithuania has not notified the Commission of any new appearances of listed species.

Lithuania has fulfilled all of its notification obligations under the Regulation and has also carried out a comprehensive analysis of pathways of unintentional introduction and spread of invasive alien species of EU concern. It has shared the results with the Commission.

Soil protection

The EU soil thematic strategy underlines the need to ensure a sustainable use of soils. This entails preventing further soil degradation and preserving its functions, as well as restoring degraded soils. The 2011 Roadmap to a Resource Efficient Europe states that by 2020, EU policies must take into account their direct and indirect impact on land use.

Soil is a finite and extremely fragile resource and it is increasingly degrading in the EU. The percentage of artificial land[39] in Lithuania (Figure 12) is amongst the lowest in the EU (surpassing only Sweden, Finland, Latvia, Bulgaria, Estonia and Romania). This is partly linked to the population density of 45.8/km^2, significantly below the EU average of 118[40].

Contamination can severely reduce soil quality and threaten human health or the environment. A recent report of the European Commission[41] estimated that potentially polluting activities have taken or are still taking place on approximately 2.8 million sites in the EU. At EU level, 650 000 of these sites have been registered in national or regional inventories. 65 500 contaminated sites already have been remediated. Lithuania has registered 12 341 sites where potentially polluting

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[35] ESMERALDA project.
[36] Natural Capital Coalition, Natural Capital Protocol.
[37] Business and Biodiversity, The European Business and Biodiversity Campaign aims to promote the business case for biodiversity in the EU Member States through workshops, seminars and a cross media communication strategy.
[38] Tsiamis K; Gervasini E; Deriu I; D`amico F; Nunes A; Addamo A; De Jesus Cardoso A. Baseline Distribution of Invasive Alien Species of Union concern. Ispra (Italy): Publications Office of the European Union, 2017.

[39] Artificial land cover is defined as the total of roofed built-up areas (including buildings and greenhouses), artificial non built-up areas (including sealed area features, such as yards, farmyards, cemeteries, car parking areas etc. and linear features, such as streets, roads, railways, runways, bridges) and other artificial areas (including bridges and viaducts, mobile homes, solar panels, power plants, electrical substations, pipelines, water sewage plants, and open dump sites).
[40] European Commission, Eurostat, Population density by NUTS 3 region.
[41] Ana Paya Perez, Natalia Rodriguez Eugenio (2018), Status of local soil contamination in Europe: Revision of the indicator "Progress in the management Contaminated Sites in Europe".

activities have taken or are taking place, and already has remediated or applied aftercare measures on 96 sites.

Lithuania has carried out a thorough mapping of potentially contaminated sites. This serves as the basis for remediating these contaminated sites under the national environment protection strategy (2015)[42] and management plan of contaminated sites for 2013-2023, approved by the Minister of Environment[43]

Figure 12: Proportion of artificial land cover, 2015 [44]
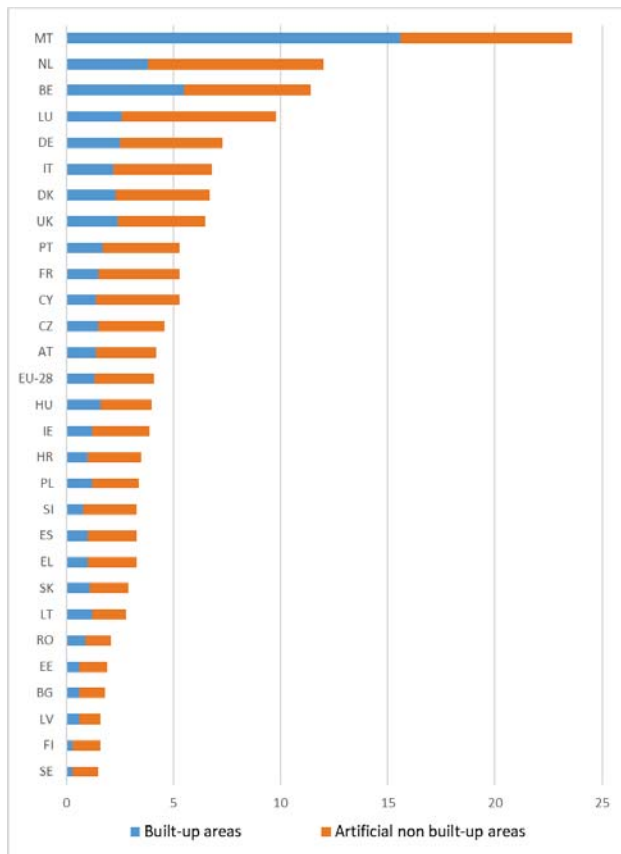
Soil erosion by water is a natural process, but this natural process can be aggravated by climate change and human activities such as inappropriate agricultural practices, deforestation, forest fires or construction works. High levels of soil erosion can reduce productivity in agriculture and can have negative and transboundary impacts on biodiversity and ecosystem service. High levels of soil erosion can also have negative and transboundary effects on rivers and lakes (due to increased sediment volumes and transport of contaminants). According to the RUSLE2015 model[45],

Lithuania has an average soil loss rate by water of 2.46 tonnes per hectare per year, compared to the EU mean of 2.46 t ha^{-a} yr^{-y}. This indicates that soil erosion in Lithuania is similar to the EU average. Note that these figures are the output of an EU level model and can therefore not be considered as locally measured values. The actual rate of soil loss can vary strongly within a Member State depending on local conditions.

Soil organic matter plays an important role in the carbon cycle and in climate change. Soils are the second largest carbon sink in the world after the oceans. Due to the natural climate conditions and long-term intensive historical tillage, Lithuanian arable land is heavily affected by leaching of organic carbon – median value of total organic carbon (TOC) in arable soil is 1.2 %, while median at EU level is 1.8 %. Only Polish, Spanish and Portuguese arable soil is poorer with TOC than Lithuanian. Grazing land in Lithuania has 2.25 % of TOC, but is still very poor and only fourth from the end in EU[46].

Marine protection

EU coastal and marine policy and legislation require that by 2020 the impact of pressures on marine waters be reduced to achieve or maintain good environmental status (GES) and ensure that coastal zones are managed sustainably.

The Marine Strategy Framework Directive (MSFD)[47] aims to achieve good environmental status of the EU's marine waters by 2020. To that end, Member States must develop a marine strategy for their marine waters, and cooperate with the EU countries that share the same marine (sub)region.

For Lithuania, the Baltic Marine Environment Protection Commission (Helsinki Commission) plays an important role in achieving the goals required by the Marine Strategy Framework Directive. Marine strategies comprise different steps to be developed and implemented over six-year cycles. The latest step required Member States to set up a programme of measures and report on it to the Commission. This was due by 31 March 2016. Although it has reported its measures in the meantime, this was too late for the Commission to include them in this assessment exercise[48].

[42] National Environment Protection Strategy.
[43] Management Plan of Contaminated sites for 2013-2023.
[44] European Commission, Eurostat, Land covered by artificial surfaces by NUTS 2 regions.
[45] Panagos, P., Borrelli, P., Poesen, J., Ballabio, C., Lugato, E., Meusburger, K., Montanarella, L., Alewell, C., The new assessment of soil loss by water erosion in Europe, (2015) Environmental Science and Policy, 54, pp. 438-447.

[46] Birke, M., Demetriades, A., Filzmoser, P., O'Connor, P. (eds.) 2014. *Chemistry of Europe's agricultural soils*. Geologisches Jahrbuch (Reihe A, 102, Schweizerbart, 2014, pp.187-191.
[47] Directive 2008/56/EC.
[48] COM(2018) 562, p. 2.

2019 priority action

- Ensure timely reporting of the different elements under the Marine Strategy Framework Directive so that Lithuania can be part of future Commission's assessments.

2019 priority action

# 3. Ensuring citizens' health and quality of life

Air quality

EU clean air policy and legislation require the significant improvement of air quality in the EU, moving the EU closer to the quality recommended by the World Health Organisation. Air pollution and its impacts on human health, ecosystems and biodiversity should be further reduced with the long-term aim of not exceeding critical loads and levels. This requires strengthening efforts to reach full compliance with EU air quality legislation and defining strategic targets and actions beyond 2020.

The EU has developed a comprehensive body of air quality legislation[49], which establishes health-based standards and objectives for a number of air pollutants.

According to the European Court of Auditors (ECA)[50], EU action to protect human health from air pollution has not delivered its expected impact.

Figure 13: PM$_{2.5}$ and NO$_x$ emissions by sector in Lithuania[51]
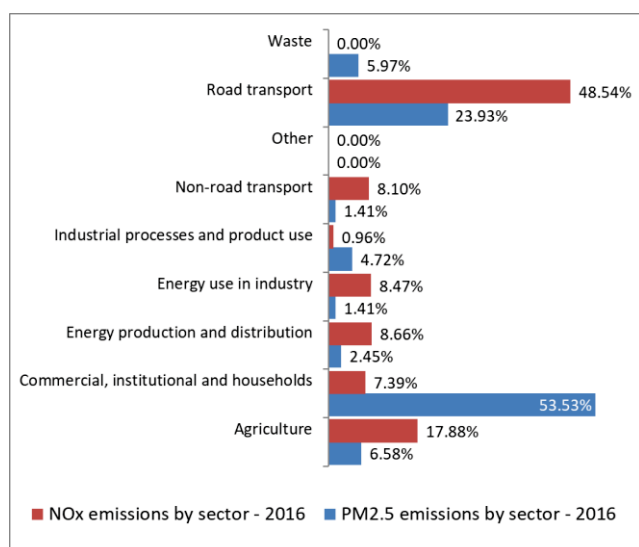
The emission of several air pollutants has decreased significantly in Lithuania[52]. The emission reductions made between 1990-2014 and mentioned in the previous EIR continued between 2014-2016, with: emissions of sulphur oxides (SO$_x$) falling by 4.51 %; emissions of ammonia (NH$_3$) by 1.65 %; emissions of volatile organic compounds (NMVOCs) by 0.96 %, and; emissions of fine particular matter PM$_{2.5}$ by 9.35 %. Meanwhile, emissions of nitrogen oxides (NO$_x$) increased by 1.14 % between 2014 and 2016 (see also Figure 13 on the total PM$_{2.5}$ and NO$_x$ emissions per sector).

Despite the reduction in emissions, Lithuania needs to make additional efforts to meet its emission reduction commitments (compared with 2005 levels) set by the new National Emissions Ceilings Directive[53] for 2020-2029 and for any year from 2030.

For 2017, Lithuania does not report any air quality values that exceed EU limits[54]. Air quality in Lithuania is reported to be generally good, with exceptions. For 2015, the European Environment Agency[55] estimated that about 2 600 premature deaths were attributable to fine particulate matter concentrations[56], 90 to ozone concentrations[57] and 70 to nitrogen dioxide concentrations.

Figure 14: Air quality zones exceeding EU air quality standards in 2017[58]
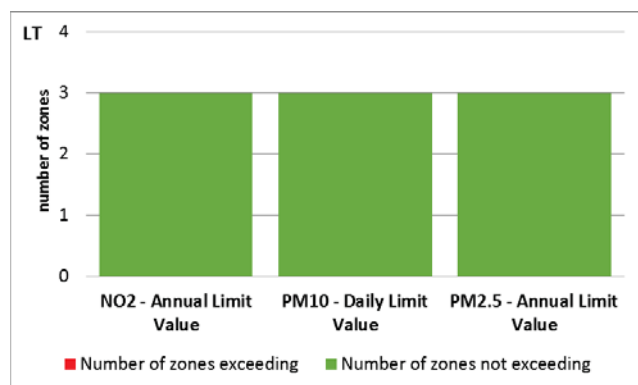
2019 priority action

- Take, in the context of the National Air Pollution Control Programme (NAPCP), actions towards further reducing the main emission sources.

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[49] European Commission, 2016. Air Quality Standards.
[50] European Court of Auditors, Special report no 23/2018, Air pollution: Our health still insufficiently protected, p.41.
[51] 2016 NECD data submitted by Member State to the EEA.
[52] See EIONET Central Data Repository and Air pollutant emissions data viewer (NEC Directive).

[53] Directive 2016/2284/EU
[54] See The EEA/Eionet Air Quality Portal and the related Central Data Repository.
[55] EEA, Air Quality in Europe – 2018 Report, p. 64. Please see details in this report as regards the underpinning methodology.
[56] Particulate matter (PM) is a mixture of aerosol particles (solid and liquid) covering a wide range of sizes and chemical compositions. PM10 (PM2.5) refers to particles with a diameter of 10 (2.5) micrometres or less. PM is emitted from many human sources, including combustion.
[57] Low level ozone is produced by photochemical action on pollution.
[58] European Commission, Data reflects the reporting situation as of 26 November 2018.

Industrial emissions

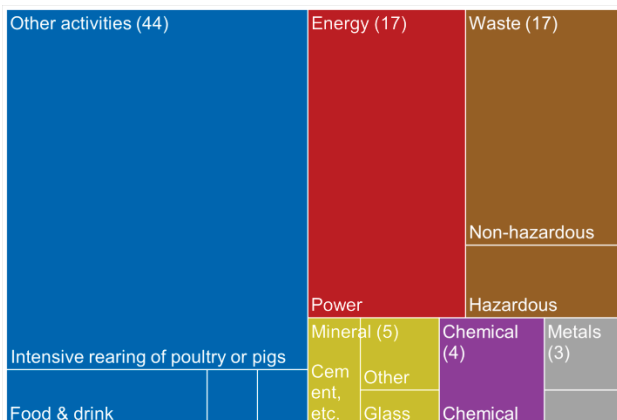The main objectives of EU policy on industrial emissions are to:
(i) protect air, water and soil;
(ii) prevent and manage waste;
(iii) improve energy and resource efficiency; and
(iv) clean up contaminated sites.
To achieve this, the EU takes an integrated approach to the prevention and control of routine and accidental industrial emissions. The cornerstone of the policy is the Industrial Emissions Directive[59] (IED).

The below overview of industrial activities regulated by the IED is based on the 'industrial emissions policy country profiles' project[60].

Lithuania's industrial sectors with the most IED installations in 2015 were, as reflected in Figure 15: intensive rearing of poultry and pigs (41 %), followed by the management of hazardous waste industry (13 %), management of non-hazardous waste (12 %) and energy-power (12 %).

Figure 15: Number of IED industrial installations by sector, Lithuania (2015)[61]

The industrial sectors that were the largest burden on the environment in terms of emissions to air were the energy-power sector for all pollutants except NMVOCs and ammonia (NH3) and 'other activities' (mostly intensive rearing of poultry or pigs, surface treatment and pulp, paper and wood products), also for NMVOCs

and NH3. The breakdown is shown in the following graph.

Figure 16: Emissions to air from IED sectors and all other national total air emissions (2015)

Regarding water emissions, the 'other activities' and chemicals sectors were identified as having the most significant environmental impact. The waste management sector mainly contributes to hazardous waste generation and chemicals to non-hazardous waste generation. Waste generation by IED installations is shown in the following graph.

The EU approach taken to enforcement under the IED creates strong rights for citizens to have access to relevant information and to participate in the permitting process. This empowers citizens, and NGOs, to ensure that permits are appropriately granted and their conditions respected.

The development of Best Available Techniques (BAT) Reference Documents (BREFs) and BAT Conclusions through the exchange of information involving Member States, Industrial associations, NGOs and the Commission ensures a good collaboration with stakeholders and enables a better implementation of IED.

The Commission relies on and welcomes the efforts of national competent authorities to implement the legally binding BAT conclusions and associated BAT emission levels in environmental permits, resulting in considerable and continuous reduction of pollution.

By way of example, the implementation of the recently adopted BAT associated emission levels for Large Combustion Plants will -on average and depending on the situation of individual plants- reduce emissions of sulphur dioxide with 25% to 81%, nitrogen oxide with 8%to 56%, dust with 31% to 78% and mercury with 19% to 71% at EU level.

The challenge identified during stakeholder consultation in Lithuania related to the odour arising from the intensive rearing of pigs.
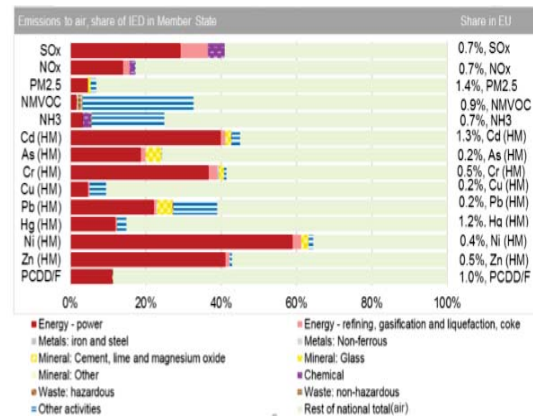
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[59] Directive 2010/75/EU covers industrial activities carried out above certain thresholds. It covers energy industry, metal production, mineral and chemical industry and waste management, as well as a wide range of industrial and agricultural sectors (e.g. intensive rearing of pig and poultry, pulp and paper production, painting and cleaning).
[60] European Commission, Industrial emissions policy country profile – Lithuania.
[61] European Commission, Industrial emissions policy country profile – Lithuania.

2019 priority action

- Review permits and strengthen control and /or enforcement to compy with newly adopted BAT conclusions.

Noise

The Environmental Noise Directive[62] provides for a common approach to avoiding, preventing and reducing the harmful effects of exposure to environmental noise.

Excessive noise from aircraft, railways and roads is one of the main causes of environmental health-related issues in the EU[63].

Based on a limited set of data[64], environmental noise causes at least 300 premature deaths per year in Lithuania and is responsible for around 1 200 hospital admissions. Noise also disturbs the sleep of roughly 130 000 people in Lithuania. The noise mapping for the previous reporting round (reference year 2011) is complete, as are the action plans (reference year 2013). These instruments, adopted after a public consultation had been carried out, should include the measures to keep noise low or reduce it.

Water quality and management

EU legislation and policy requires that the impact of pressures on transitional, coastal and fresh waters (including surface and ground waters) be significantly reduced. Achieving, maintaining or enhancing a good status of water bodies as defined by the Water Framework Directive will ensure that EU citizens benefit from good quality and safe drinking and bathing water. It will further ensure that the nutrient cycle (nitrogen and phosphorus) is managed in a more sustainable and resource-efficient way.

The existing EU water legislation[65] puts in place a protective framework to ensure high standards for all water bodies in the EU and addresses specific pollution sources (for example, from agriculture, urban areas and industrial activities). It also requires that the projected impacts of climate change are integrated into the corresponding planning instruments e.g. flood risk management plans and river basin management plans, including programme of measures which include the actions that Member States plan to take in order to achieve the environmental objectives.

Water Framework Directive

Lithuania has adopted the second generation of river basin management plans under the Water Framework Directive albeit not finished the electronic reporting to WISE as agreed by the water directors under the common implementation strategy related to the Water Framework Directive, in June 2014. The European Commission has therefore not yet conducted an assessment and not been able to assess the status and development since the first EIR report.

Nitrates Directive

In the context of the **Nitrates Directive**, Lithuania applies mandatory measures on its whole territory. The measures implementing the Nitrates Directive are set out in the water field development program for the year 2017-2023 and implementation plan of the water field development program for the year 2017-2023. Overall, according to the last report on the implementation of the Nitrates Directive (referring to the period 2012-2015), nitrate levels in surface water and groundwater remain low in Lithuania. However, eutrophication of surface freshwater remains problematic, with a slight increase of stations reported in eutrophic and hypertrophic status, from 47 % to 49 %. Protection of the Baltic Sea is also an issue as all saline water stations were reported to be in eutrophic or hypertrophic status. Under the Nitrates Directive report for 2012-2015, Lithuania also reported that nitrate concentrations in surface water are not likely to decrease if no additional measures are taken to reduce pollution.

Bathing Water Directive

Figure 17 shows that, in 2017, out of Lithuania's 114 **bathing waters**, 85.1 % were of excellent quality, 10.5 % of good quality and 0.9 % of sufficient quality (85.1 %, 8.8 % and 2.6 % respectively in 2016). However, one of Lithuania's bathing waters was of poor quality[66]. Detailed information on Lithuania's bathing waters is available on a national portal [67] and via an interactive map viewer designed and hosted by the European Environment Agency[68].

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[62] Directive 2002/49/EC.

[63] Fritschi, L., Brown, A.L., Kim, R., Schwela, D., Kephalopoulos, S. (eds), *Burden of disease from environmental noise*, WHO/JRC, World Health Organization, Regional Office for Europe, Copenhagen, Denmark, 2011.

[64] European Environment Agency, Noise Fact Sheets 2017.

[65] This includes the Bathing Waters Directive (2006/7/EC), the Urban Waste Water Treatment Directive (91/271/EEC) (on discharges of municipal and some industrial wastewaters), the Drinking Water Directive (98/83/EC) (on potable water quality), the Water Framework Directive (2000/60/EC) (on water resources management), the Nitrates Directive (91/676/EEC) and the Floods Directive (2007/60/EC).

[66] European Environment Agency, European bathing water quality in 2016, 2017, p. 17.

[67] Centre for Health Education and Disease Prevention

[68] EEA, State of bathing waters.

Figure 17: Bathing water quality 2014 – 2017[69]
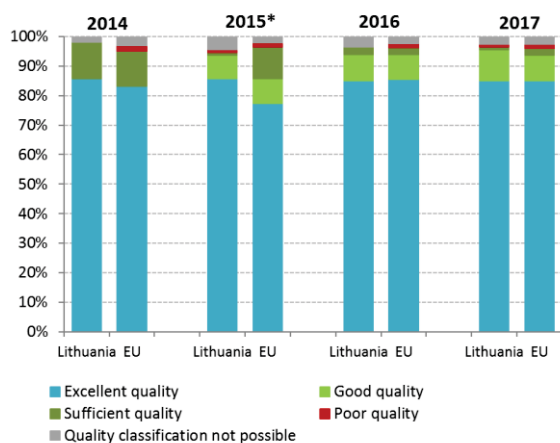
*The category 'good' was introduced in the 2015 bathing water report

Urban Waste Water Treatment Directive

Lithuania has a high level of compliance with the requirements of the **Urban Waste Water Treatment Directive**. All except one of its 65 agglomerations comply with the requirements of the Directive in terms of collection and treatment. An infringement procedure has been launched to address the remaining agglomeration (Kėdainiai) and issues related to the use of individual or other appropriate systems (IAS) across the country, which frequently lack regulation and control. The estimated investment needed to ensure adequate collection and treatment of the remaining agglomeration is EUR 38 million[70].

Floods Directive

The Floods Directive established a framework for the assessment and management of flood risks, aiming at the reduction of the adverse consequences associated with significant floods.

Lithuania has reported its first Flood Risk Management Plans under the Directive, which has been assessed by the European Commission. Objectives are well defined as are measures focusing on prevention, protection and preparedness. The assessment also showed that, as was the case for other Member States, Lithuania's Flood Risk Management Plans do not yet include a baseline to assess the progress achieved in implementing measures. Also the coordination with the National Climate Change Adaptation Strategy could be reinforced. In addition, there is scope for clarifying the legal status of the Flood Risk Management Plan.

2019 priority actions

- Ensure timely reporting of river basin management plans in accordance with the Water Framework Directive.
- Consider improved or new measures under the Nitrates Directive to decrease nitrate pollution.
- Reach compliance with the Urban Waste Water Treatment Directive in Kėdainiai and resolve issues related to IAS as soon as possible.
- Take steps to clarify the legal status of the Flood Risk Management Plan.

Chemicals

The EU seeks to ensure that by 2020 chemicals are produced and used in ways that minimise any significant adverse effects on human health and the environment. An EU strategy for a non-toxic environment that is conducive to innovation and to developing sustainable substitutes, including non-chemical options, is being prepared.

The EU's chemicals legislation[71] provides baseline protection for human health and the environment. It also ensures stability and predictability for businesses operating within the internal market.

In 2016, the European Chemicals Agency (ECHA) published a report on REACH and the CLP Regulation[72] that showed that enforcement activities are still evolving. Member States cooperate closely within the Forum for Exchange of Information on Enforcement[73]. This cooperation has shown that there is scope to increase the effectiveness of enforcement activities, particularly for registration obligations and safety data sheets where the level of non-compliance is still relatively high.

While progress has been made, there is room to further improve and harmonise enforcement activities across the EU, including controls on imported goods. Enforcement remains weak in some Member States, particularly for controls on imports and supply chain obligations. The enforcement architecture is complex in most EU countries and enforcement projects reveal differences in compliance between Member States.

A 2015 Commission study already emphasised the importance of harmonised market surveillance and enforcement when implementing REACH at Member

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[69] European Environment Agency, European bathing water quality in 2017, 2018, p. 21.
[70] COM(2017) 749 , SWD(2017)445.

[71] Principally for chemicals: REACH (OJ L 396, 30.12.2006, p.1.); for Classification, Labelling and Packaging, the CLP Regulation (: OJ L 252, 31.12.2006, p.1.), together with legislation on biocidal products and plant protection products.
[72] ECHA, Report on the Operation of REACH and CLP 2016.
[73] ECHA, On the basis of the projects REF-1, REF-2 and REF-3.

State level, deeming it to be a critical success factor in the operation of a harmonised single market[74].

In March 2018, the Commission published an evaluation of REACH[75] underlining the need to improve enforcement by all actors, including registrants, downstream users and importers in particular, to ensure a level playing field, meet the REACH objectives and ensure consistency with measures that aim to improve environmental compliance and governance. For this, consistent reporting of Member States' enforcement activities was considered of key importance.

Making cities more sustainable

EU policy on the urban environment encourages cities to put policies in place for sustainable urban planning and design. These should include innovative approaches to urban public transport and mobility, sustainable buildings, energy efficiency and urban biodiversity conservation.

The population living in urban areas in Europe is projected to rise to just over 80% by 2050[76]. Urban areas pose particular challenges for the environment and human health, but they also provide opportunities for using resources more efficiently. The EU encourages municipalities to become greener through initiatives such as the Green Capital Award[77], the Green Leaf Award[78] and the Green City Tool[79].

Financing greener cities

Lithuania has allocated EUR 204.7 million or 5.85 % of its allocation under the European Regional Development Fund (ERDF) and EUR 6 million or 0.5 % of its allocation

under the European Social Fund (ESF) to sustainable urban development[80].

Lithuania participates in the European Urban Development Network (UDN)[81], which includes more than 500 cities across the EU responsible for carrying out integrated measures based on sustainable urban development strategies financed by the ERDF in 2014-2020. In June 2018, the UDN organised a workshop open to Estonian, Latvian and Lithuanian cities implementing sustainable urban development measures.

Participation in EU urban initiatives and networks

Lithuanian municipalities are generally involved in EU initiatives on environmental protection and climate change.

Three Lithuanian municipalities are involved in the URBACT initiative, which supports sustainable urban development through five thematic networks[82]. None of these networks are currently led by Lithuania.

Several Horizon 2020 network projects have also contributed to the sustainability of Lithuanian cities. Four cities, namely Vilnius, Kaunas, Klaipėda and Palanga, participate in CIVITAS initiative, which aims to improve the efficiency of urban transport in Europe and beyond, while reducing the negative impacts of the transport sector and combatting harmful emissions[83].

15 Lithuanian municipalities are involved in the EU Covenant of Mayors. Good project examples include several projects related to renovating public and residential buildings, replacement of fossil fuels by biomass in the Kaunas DH system and modernising public transport in Kaunas[84].

These urban initiatives and networks should be welcomed and encouraged, as they contribute to a better urban environment. In 2017, 21.6 % of Lithuanians living in cities considered that their residential area was affected by pollution, grime or other environmental problems, a slight increase compared to 2015 (21.2 %) and 2014 (20.8 %). These figures are above EU-28 levels (18.9 % in 2016, 19.2 % in 2015 and 19 % in 2014)[85].

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[74] European Commission, Monitoring the Impacts of REACH on Innovation, Competitiveness and SMEs, Final Report, 2015.
[75] COM(2018) 116.
[76] European Commission, Eurostat, Urban Europe, 2016, p.9.
[77] European Commission, European Green Capital.
[78] European Commission, European Green Leaf Award.
[79] European Commission, Green City Tool.

[80] EU structural assistance 2007-2013, Partnership agreement 2014-2020.
[81] European Commission, The Urban Development Network.
[82] URBACT, Associated Networks by country.
[83] CIVITAS initiative.
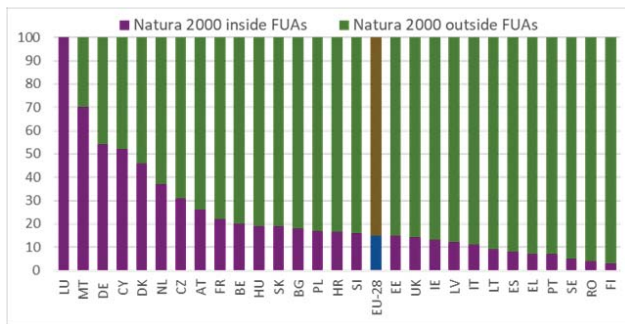[84] Covenant of Mayors for Climate and Energy, Country signatories.
[85] European Commission, Eurostat, Pollution, grime or other environmental problems by degree of urbanisation.

Nature and cities

Around 9 % of Lithuania's Natura 2000 network is in functional urban areas[86], above the EU average of 15 % (see Figure 18).

Several Lithuanian cities are taking positive action towards greening urban regeneration and the implementation of green infrastructure.

Figure 18: Proportion of Natura 2000 network in functional urban areas (FUAs)[87]

Urban sprawl

Lithuania's weighted urban proliferation of 1.69 UPU/m^2 in 2009 was around the EU average (EU28+4) of 1.64 UPU/m^2, having increased compared to 2006 (1.64 UPU/m^2)[8889].

Traffic congestion and urban mobility

Traffic congestion is not one of the main environmental issues affecting Lithuania. However, many subjects addressed in this report are to some extent related to traffic congestion, especially air quality and noise.

Lithuanian cities generally have low levels of traffic congestion. The capital city Vilnius has a traffic congestion level of 28 %[90].

Regarding urban mobility, there has been an increase in the use of public transport in recent years, especially buses and trolleybuses, but also other transportation alternatives to the private car.

In freight transport, the proportion of road transport in Lithuania was far below the EU average in 2015. Railways played an important role for freight transport in 2015 and are far above the EU average.

Lithuania is one of the EU countries with high road fatality rates despite the significant decreases that have been recorded since 2007.

There is no progress on the proportion of renewable energy used in transport. The proportion of renewable energy in fuel consumption is decreasing: 4.3 % in 2014, 4.6 % in 2015 and 3.6 % in 2016. The Lithuanian rail network remains among the lowest electrified rail networks in the EU: only 6.9 % of rail tracks are electrified. However, with the help of various funding instruments, progress is expected in the coming years.

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[86] European Commission, Definition of Functional Urban Areas.
[87] European Commission, the 7th Report on Economic, Social and Territorial Cohesion, 2017, p. 121.
[88] Urban Permeation Units measure the size of the built-up area as well as its degree of dispersion throughout the region.
[89] EEA, Urban Sprawl in Europe, Annex I, 2014, pp.4-5.
[90] TOMTOM, TOMTOM Traffic Index.

Part II: Enabling framework: implementation tools

4. Green taxation, green public procurement, environmental funding and investments

Green taxation and environmentally harmful subsidies

Financial incentives, taxation and other economic instruments are effective and efficient ways to meet environmental policy objectives. The circular economy action plan encourages their use. Environmentally harmful subsidies are monitored in the context of the European Semester and the energy union governance process.

Lithuania's revenue from environment-related taxes remains below the EU average. Environmental taxes accounted for 1.91 % of GDP in 2017 (EU-28 average: 2.4 %), as shown in Figure 19, and energy taxes for 1.73 % of GDP (EU-28 average: 1.84 %). In the same year, environmental tax revenues stood at 6.42 % of total revenues from taxes and social security contributions (compared to the EU-28 average of 5.97 %).

The structure of taxation shows that the proportion of labour tax revenues in total tax revenues, at 48 % in 2016, was in line with the EU average, with the implicit tax burden on labour at 32.2 %. Consumption taxes remained high (at 38.3 %, 9th place in the EU-28), which suggests that there are obstacles to shifting taxes from labour to consumption, as well as to environmental taxes.

In the European Country reports, the Commission has repeatedly indicated that there is further potential to increase environmental taxes. Lithuania has the lowest excise duties on motor fuel, petrol and diesel in the EU[91] and the proposals to introduce a CO2-based motor vehicle tax have been rejected so far.

Nevertheless, there are several cases that show the implementation of sound fiscal measures related to the environment. Seven widely used products, which account for a large portion of the waste stream, were added to the products taxed under the Law on the Tax on Environmental Pollution of the Republic of Lithuania: tyres, accumulators, galvanic elements (batteries), fuel or

oil filters, air intake filters, shock absorbers and mercury lamps[92].

Figure 19: Environmental tax revenues as % of GDP (2017)[93]
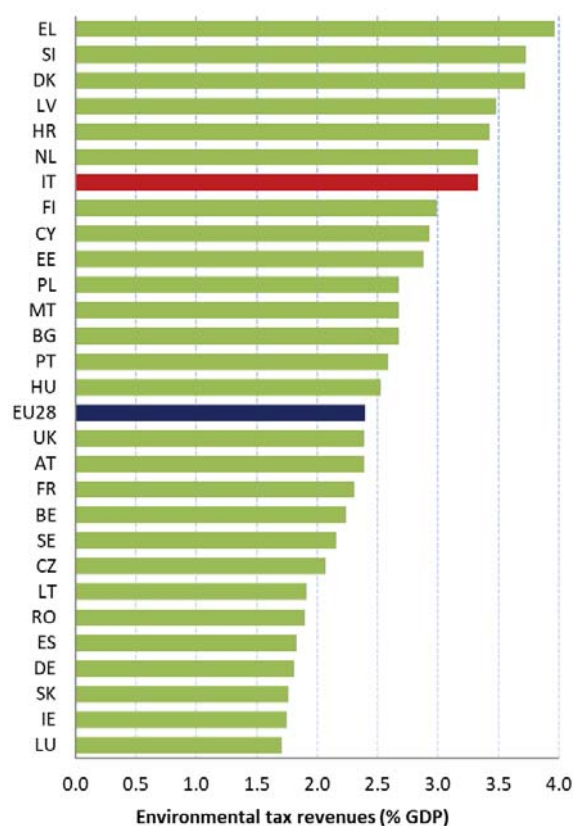
Meanwhile, post-tax fossil fuel subsidies added up to more than USD 2.24 billion (this includes not only price-gap subsidies but also subsidies to combat the negative consequences associated with fossil fuel use, such as local air pollution, faster climate change and congestion)[94].

In 2018, some efforts have been made to reduce the 'diesel differential' (difference in the price of diesel versus petrol). Lithuania has increased the rate for diesel (propellant) in 2018 by 5%, however rate for petrol has

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[91] European Commission, European Semester Country Report 2018, p16.

[92] Institute for European Environmental Policy, Case Studies on Environmental Fiscal Reform, Environmental Pollution Tax in Lithuania.
[93] European Commission, Eurostat, Environmental tax revenues, 2019.
[94] European Parliament and IMF, Fossil Fuel Subsidies, 2017, pp. 10-11.

not been changed. In 2016, there was still a 32 % gap between petrol and diesel tax rates; whereas in 2005 it was only 17 %[95].

There are no CO_2-based motor vehicle taxes in place in Lithuania. Incentives to encourage the purchase of cars with lower CO_2 emissions were low in 2016. New vehicles purchased in Lithuania are among the least environmentally friendly in the EU, with average CO_2 emissions of 126.2 grams per kilometre, above the EU average of 118 grams in 2016[96].

The proportion of alternative fuels used in road transport is low in Lithuania. The focus is on electric vehicles, but Lithuania does not yet have a dense enough network of publicly accessible recharging points. The spatial distribution of recharging points does not currently cover the needs of vehicles in terms of distance requirements[97].

Green public procurement

> The EU green public procurement policies encourage Member States to take further steps to apply green procurement criteria to at least 50 % of public tenders. The European Commission is helping to increase the use of public procurement as a strategic tool to support environmental protection.

The purchasing power of public procurement amounts to around EUR 1.8 trillion in the EU (approximately 14% of GDP). A substantial proportion of this money goes to sectors with a high environmental impact such as construction or transport. Therefore, green public procurement (GPP) can help to significantly lower the negative impact of public spending on the environment and can help support sustainable innovative businesses. The Commission has proposed EU GPP criteria[98].

In Lithuania, a GPP national action plan and strategy are in force, and the GPP implementation measures for 2016–2020 were approved in October 2015. A European Parliament study shows that Lithuania has partially implemented the GPP national action plan[99].

Statistical data show that the proportion of GPP tenders in overall public procurement (excluding low value contracts) was 7 % in 2013 and 5.7 % in 2014. The value of GPP tenders compared to the overall value of public procurement (excluding low value contracts) was 19.9 % in 2013 and 8.6 % in 2014[100]. GPP accounted for only 8.3 % of the number of tenders and 13.3 % of tender value in 2016 and 19.1% of the number of tenders and 11.3 of tender value in 2017, all well below target levels.

Resolution No 1133 adopted by the Lithuanian government on 21 July 2010 stipulates that contracting authorities and contracting entities must ensure that at least 45% of procurement includes environmental criteria in both 2017 and 2018 and that at least 50% includes environmental criteria in both 2019 and 2020. The Minister of Environment Order No D1-508 of 28 June 2011 sets minimum and comprehensive environmental criteria for 30 products such as paper, office supplies, products from recycled plastics, publishing and printing related services, event management services and others.

Environmental funding and investments

> European Structural and Investment Fund (ESIF) rules oblige Member States to promote environment and climate in their funding strategies and programmes for economic, social and territorial cohesion, rural development and maritime policy.

Achieving sustainability goals requires the mobilisation of public and private funding[101]. Using the European Structural and Investment Funds (ESIF)[102] is essential to achieving environmental goals and integrating them into other policy areas. Other instruments such as Horizon 2020, the LIFE programme[103] and the EFSI[104] may also support implementation and help spread good practices.

According to the 2017 Special Eurobarometer 468 on attitudes of EU citizens towards the environment[105], 89 % of Lithuanians support greater EU investment in environmental protection (EU-28 average is 85 %).

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[95] EEA, Environmental taxation and EU environmental policies, 2017, p. 27.

[96] EEA, Average CO2 emissions from new passenger cars sold in EU-28 Member States plus Norway, Iceland and Switzerland in 2016.

[97] European Commission, Transport in the European Union Current Trends and Issues, 2018, p 82.

[98] In the Communication 'Public procurement for a better environment' (COM (2008) 400) the Commission recommended the creation of a process for setting common GPP criteria. The basic concept of GPP relies on having clear, verifiable, justifiable and ambitious environmental criteria for products and services, based on a life-cycle approach and scientific evidence base.

[99] European Parliament, Green Public Procurement and the Action Plan for the Circular Economy, 2017, pp. 79-80.

[100] Dovilė Šličiuvienė, Public Procurement in Lithuania: (Dis)balance Between Profitability and Environmental Protection, Springer International Publishing, 2017.

[101] European Commission, Action Plan on Financing Sustainable Growth

[102] ESIF comprises five funds — the European Regional Development Funds (ERDF), the Cohesion Fund (CF), the European Social Fund (ESF), the European Agricultural Fund for Rural Development (EAFRD), and the European Maritime and Fisheries Fund (EMFF). The ERDF, the CF and the ESF together form the Cohesion Policy funds.

[103] European Commission, LIFE Lithuania Factsheet, 2017.

[104] European Investment Bank, European Fund for Strategic Investments, 2016.

[105] European Commission, 2017 Special Eurobarometer 468 on attitudes of EU citizens towards the Environment.

European Structural and Investment Funds 2014-2020

Through three national programmes, Lithuania has been allocated EUR 8.39 billion from ESIF funds for 2014-2020. With a national contribution of EUR 1.56 billion, Lithuania has a total budget of EUR 9.95 billion to be invested in various areas, from innovation and competitiveness to SME support, resource efficiency, promoting employment, quality education and social inclusion[106].

Member States' administrative capacity in areas including human resources, relevant knowledge, skills, systems and tools is one of the key elements needed to ensure successful and efficient investment of EU funds, including those for the environment. The importance of administrative capacity is well understood in Lithuania: the country actively participates in administrative capacity events and networks, e.g. a seminar on anti-fraud and anti-corruption measures related to ESIF funding held in Riga (2015); the Integrity Pact Stakeholder Event in Bucharest (2017); and the TAIEX REGIO PEER 2 PEER[107] network where Lithuania is the most active Member State. In addition, Lithuania is one of the 11 Member States participating in a pilot 'integrity pact'[108] exercise; more specifically, the Vilnius municipality is taking part with three projects.

According to the Sustainable Governance Index, Lithuania scores rather well in terms of policy performance (including economic, social and environmental policies); it is ranked 11th amongst 41 countries world-wide[109]. However, according to worldwide governance indicators, Lithuania scores lowest in terms of political stability and corruption control perception and this area has the highest potential for improvement[110].

Cohesion policy

In 2014-2020, Lithuania is managing one multi-fund operational programme for the European Regional Development Fund (ERDF), the Cohesion Fund and the European Social Fund (ESF), covering all thematic objectives under EU cohesion policy[111].

For 2014-2020, Lithuania has been allocated around EUR 6.82 billion (current prices) in total cohesion policy funding, including EUR 4.63 billion under ERDF for less developed regions (the entire country is classified as a less developed region), EUR 2.05 billion under the Cohesion Fund, EUR 113.7 million for European territorial cooperation and EUR 31.8 million under the youth employment initiative. Of this, ESF funding amounts to EUR 1.13 billion in Lithuania.

EU funds are a key asset for protecting the environment in Lithuania. The investment priorities for Lithuania in 2014-2020 include climate change, water, waste, air, biodiversity and nature, and sustainable urban transport[112].

Figure 20: ESIF 2014-2020 – EU allocation by theme, Lithuania (EUR billion)[113]
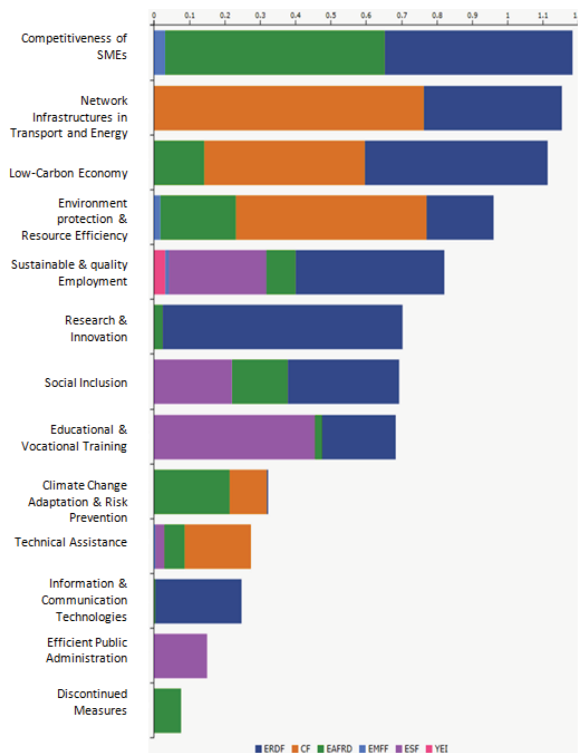
The ERDF allocation in Lithuania for moving towards a low carbon economy is EUR 517 million, in addition to EUR 4 million for climate adaptation and EUR 190 million for environmental measures. The Cohesion Fund has allocated EUR 454 million to the low carbon economy, as well as EUR 104 million to climate adaptation and EUR 539 million to environmental protection and resource efficiency[114].

The Cohesion Fund has supported the construction of a sludge treatment facility at Vilnius's wastewater treatment plant with nearly EUR 29 million. The project addresses a number of environmental challenges, while improving the quality of life of more than 590 000 local residents. The sludge pellets produced by the new

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[106] European Commission, European Structural and Investment Funds, Country factsheet Lithuania, 2017.
[107] TAIEX REGIO Peer-to-peer.
[108] European Commission, Integrity pacts.
[109] Sustainable Governance Index.
[110] World Bank Governance Indicators.
[111] European Commission, Cohesion Policy and Lithuania, 2014.

[112] European Commission, Summary of the Partnership agreement for Lithuania, 2014, p. 1.
[113] European Commission, European Structural and Investment Funds Data by Country.
[114] European Commission, Summary of the Partnership agreement for Lithuania, 2014, pp. 4-5.

system also have potential use as a fuel source for greener energy.

Current data suggest that the EU funds allocated in 2007-2013 were fully spent[115].

Rural development

The approved national rural development programme (EARDF) has a budget of EUR 1.6 billion. 7.2 % of this is dedicated to agri-environment-climate measures, 7.6 % to organic farming and 14.5 % to areas facing natural or other specific constraints (ANCs). It is planned that EUR 436 million will be spent on Lithuania's ecosystem, representing 27 % of the total budget.

As regards integrating environmental concerns into the common agricultural policy (CAP), the two areas that are most important for Lithuania are: using rural development funds to pay for environmental land management and other environmental measures, and ensuring the effective application of ''Greening'' rules. Lithuania's 2015-2020 budget for direct payments is EUR 3.1 billion, 30 % of which are being allocated to greening practices beneficial to the environment[116]. The latest financial data available (relating to the 2007-2013 period) show that Lithuania's absorption rate for rural development funds was 100 % better than the EU average (97.3 %)[117].

Recently, Lithuania has focused on agri-environment-climate measures (AECM) sub-measures:

- Extensive management of meadows by grazing. This is an effort to encourage farmers to increase the environmental value of all meadows or pastures, irrespective of the timing of sowing.
- Stubbly fields in winter season, due to their importance in fostering development of a habitat, which acts as an important food source for endangered species of predatory birds, while reducing the risk of wind and water erosion.
- Intermediate (catch) crops on arable land, as Lithuania intends to meet higher agri-environmental objectives on arable land.

European Maritime and Fisheries Fund

Lithuania receives around EUR 82 million in co-financing for the fisheries and the maritime sector, with an EU contribution of EUR 63 million[118]. Around 26 % (EUR 22 million) is earmarked for achieving environmental goals, namely promoting environmentally sustainable,

resource-efficient, innovative, competitive and knowledge-based fisheries and aquaculture[119].

The Connecting Europe Facility

The Connecting Europe Facility (CEF) is a key EU funding instrument developed specifically to direct investment into European transport, energy and digital infrastructures. It aims to address identified missing links and bottlenecks and promote sustainability.

By the end of 2017, Lithuania had signed agreements for 13 transport projects amounting to EUR 390 million[120] and 9 energy projects amounting to around EUR 329 million [121] under the CEF.

Horizon 2020

Lithuania has benefited from Horizon 2020 funding since the programme started in 2014. As of January 2019, 123 participants have been granted a maximum amount of EUR 15.1 million for projects from the Societal Challenges work programmes dealing with environmental issues[122][123].

In addition to the abovementioned work programmes, climate and biodiversity expenditure is present across the entire Horizon 2020. In Lithuania, projects accepted for funding in all Horizon 2020 working programmes until December 2018 included EUR 11 million destined to climate action (22.3 % of the total Horizon 2020 contribution to the country) and EUR 2 million for biodiversity-related actions (3.4 % of the Horizon 2020 contribution to the country)[124].

Several projects have been finalised or are still ongoing in Lithuania, such as *Ecopotential* (improving future ecosystem benefits through earth observations), and projects aiming to, for example, improve the mapping of ecosystem services for policy and decision making and recycle waste tyres into devulcanised rubber.

LIFE programme

Since its launch in 1992, the LIFE Programme has co-financed 17 projects in Lithuania. For the period 2014-2017 EUR 5 million has been allocated to Lithuanian

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[115] European Commission, SF 2007-2013 Funds Absorption Rate, 2018.
[116] European Commission, CAP in your country (Lithuania), p. 2.
[117] COM(2017) 554.
[118] European Commission, European Maritime and Fisheries Fund in Lithuania, 2015.

[119] European Commission, Commissioner Vella welcomes €82 million investment package for the Lithuanian fisheries sector, 26.08.2015.
[120] European Commission, CEF-transport funding for Lithuania.
[121] European Commission, CEF-energy funding for Lithuania.
[122] European Commission own calculations based on CORDA (COmmon Research DAta Warehouse). A maximum grant amount is the maximum grant amount decided by the Commission. It normally corresponds to the requested grant, but it may be lower.
[123] i.e. (ii) Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy; (iii) Secure, clean and efficient energy; (iv) Smart, green and integrated transport; and (v) Climate action, environment, resource efficiency and raw materials.
[124] European Commission own calculations based on CORDA (COmmon Research DAta Warehouse).

projects by the EU[125]. The LIFE MagniDucatusAcrola is among these projects, implementing measures towards ensuring long-term favourable conservation status of the Aquatic warbler, with a EU requested contribution of around EUR 3 million[126].

European Investment Bank

In 2013-2017, EIB loans in Lithuania amounted to EUR 4.6 billion[127]. In 2018 alone, the EIB Group (the European Investment Bank and the European Investment Fund)[128] loaned Lithuanian businesses and public institutions EUR 372 million, as shown in Figure 21. Of this, EUR 91.7 million (24.6 %) went to environmental projects.

Figure 21: EIB loans to Lithuania in 2018 [129]
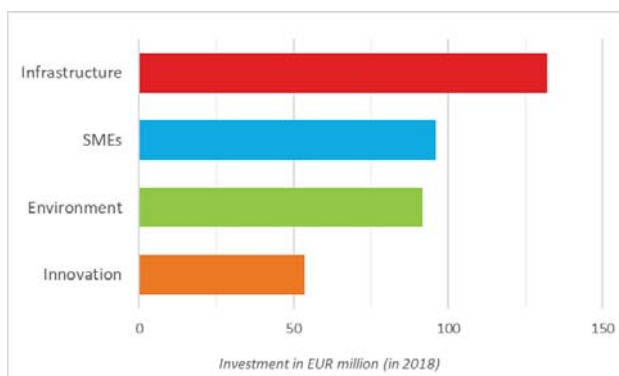
European Fund for Strategic Investments

The European Fund for Strategic Investments (EFSI) aims to help overcome the current investment gap in the EU. As of January 2019, it has mobilised EUR 412 million in Lithuania, and the secondary investment triggered by this is expected to be EUR 1.6 billion[130][131].

More specifically, eight projects involving Lithuania have been approved so far under the infrastructure and innovation window (including four multi-country projects), amounting to EUR 295 million in EIB financing under the EFSI. This is expected to trigger about EUR 640 million in investments. Under the SME window, five agreements with financial intermediaries have been approved so far[132].

National environmental financing

Lithuania spent EUR 186.2 million on environmental protection in 2016, an 8 % decrease from 2015[133]. 25 % of these payments were allocated to waste management activities (the annual average percentage of environmental spending allocated to waste management in the EU is 49.7 %). EUR 1.8 million was allocated to wastewater management (1 % of total) and 4.3 % of environmental spending was allocated to protecting biodiversity and the landscape (EUR 8 million). Between 2012 and 2016, general government funding for environmental protection was EUR 1.026 billion[134].

Lithuania runs several programmes financed by funds collected though fiscal and market instruments, such as the Environmental protection support programme ('Aplinkos apsaugos rėmimo programa') and the Climate change special programme ('Klimato kaitos specialioji programa')[135]. There are also municipal programmes that support environmental activities.

The Environmental protection support programme receives funds from environmental taxes and penalties. The programme finances the development of environmental infrastructure, elimination of environmental pollution, preservation of fish stocks, environmental education and research, remuneration of officials carrying out state control of environmental protection and other activities.

The Climate change special programme is financed by proceeds from the sale of assigned amount units[136] and EU emission allowances. Other sources include donations and economic penalties to operators. At least 40 % of programme funds must be allocated to energy efficiency, another 40 % to renewable energy promotion and the remainder to reforestation and afforestation, education and consultation on climate change issues, support to developing countries and other tasks[137].

Other programmes include Waste Management Programmes and the Programme for the Financing of General Forestry Needs. Allocations for these programmes have steadily increased in recent years: in 2016 they stood at almost EUR 47.7 million and in 2017 they increased to EUR 52.6 million.

2019 priority action

- Improve the capacity to use EU funds for the environment effectively, including preparation for the next financing period 2021-2027.

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[125] Commission services based on data provided by EASME.
[126] European Commission, LIFE projects in Lithuania, p. 4.
[127] European Investment Bank, Delivering impact in finance in Lithuania, 2017.
[128] The EIB Group includes EIB and EFSI investments and loans.
[129] EIB, Lithuania and the EIB, 2018.
[130] European Investment Bank, EFSI project map.
[131] European Commission, European Semester Country Report for Lithuania, 2018.
[132] European Commission, European Semester Country Report for Lithuania, 2018.

[133] Eurostat, General Government Expenditure by function, 2018.
[134] Eurostat, General Government Expenditure by function, 2018.
[135] Ministry of Environment.
[136] Carbon credits, i.e. allowance to emit greenhouse gases.
[137] Ministry of Environment.

5. Strengthening environmental governance

Information, public participation and access to justice

> Citizens can more effectively protect the environment if they can rely on the three 'pillars' of the Aarhus Convention:
> (i) access to information;
> (ii) public participation in decision making; and
> (iii) access to justice in environmental matters.
>
> It is of crucial importance to public authorities, the public and business that environmental information is shared efficiently and effectively[138]. Public participation allows authorities to make decisions that take public concerns into account. Access to justice is a set of guarantees that allows citizens and NGOs to use national courts to protect the environment[139]. It includes the right to bring legal challenges ('legal standing')[140].

Environmental information

Lithuania has a centralized approach to disseminating environmental information. Information on most areas of environmental policy can be accessed through the main environmental portal of the national protection agency[141], with the exception of information on the Habitat Directive. Occasionally, information related to EU legislation was not available on the main environmental portal, but was provided via the Ministry of Environment website[142]. These portals are not linked to each other.

Lithuania's performance on implementing the INSPIRE Directive leaves room for improvement. Its performance was reviewed based on its 2016 implementation report[143] and most recent monitoring data from 2017[144]. There has been good progress as regards documentation of data and data sharing and reuse. Additional efforts are needed to make the data accessible through services. Lithuania also needs to make additional efforts to prioritise environmental datasets in the implementation

of environmental legislation. In particular, it needs to prioritise datasets identified as high-value spatial data sets[145].

Figure 22: Access to spatial data through view and download services in Lithuania (2017)

Public participation

In Lithuania[146], public participation in environmental decision making is regulated by several legal acts, in particular the Law on Environmental Protection and the Law on Environmental Impact Assessment of the Proposed Economic Activity (the EIA Law). Moreover, there are general regulations on public information, consultation and participation in decision making in spatial planning and several specifications addressing these issues. The Ministry of Environment website does not have a dedicated section for public consultations. However, anyone can submit a proposal on a draft legal act via the dedicated website of the Lithuanian Parliament[147].

The Ministry of Environment has also established a panel in which representatives of environmental NGOs, environmental officials and representatives of science and education institutions have equal participation. The panel is an advisory body that considers the most important issues of the activities of the Ministry[148]. However, the Aarhus Convention Implementation Report mentions challenges such as the lack of public involvement in the early stages of the legislative process, generally low response rates and late submissions of comments.

The Eurobarometer figures from 2017 show that people in Lithuania agree relatively strongly (80 % of

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[138] The Aarhus Convention, the Access to Environmental Information Directive, 2003/4/EC and the INSPIRE Directive, 2007/2 together create a legal foundation for the sharing of environmental information between public authorities and with the public. This EIR focuses on INSPIRE.

[139] The guarantees are explained in Commission Notice on access to justice in environmental matters, OJL 275, 18.8.2017 and a related Citizen's Guide.

[140] This EIR looks at how well Member States explain access to justice rights to the public, and at legal standing and other major barriers to bringing cases on nature and air pollution.
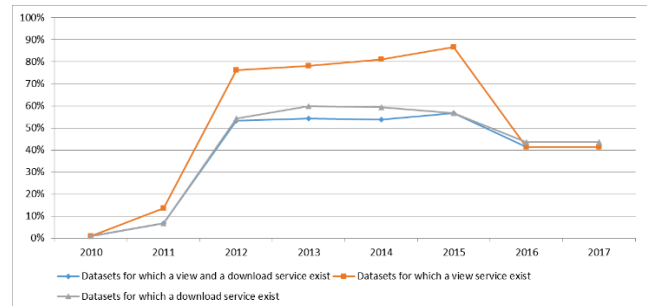
[141] The Environmental Protection Agency.

[142] Ministry of Environment

[143] *INSPIRE LT country sheet 2017.*

[144] INSPIRE monitoring dashboard.

[145] List of high value spatial data sets.

[146] Ministry of Environment of the Republic of Lithuania, the track-change version of Aarhus Convention implementation report of Lithuania, 2016, p. 2-3.

[147] Lietuvos Seimas.

[148] Ministry of Environment of the Republic of Lithuania, the track-change version of Aarhus Convention implementation report of Lithuania, 2016, p. 6-7, 31-34.

respondents) that an individual can play a role in protecting the environment.

Access to justice

Significant progress is needed to inform the general public about effective remedies for individuals and environmental associations in relation to access to justice in environmental matters under Lithuanian and EU law. This could be ensured for instance by providing detailed guidelines with information on how to take practical steps. Even if in accordance with the Law on Public Administration an individual act must specify the appeal procedure, this does not apply to general administrative acts. In particular for those acts it is important that information is easily available and user-friendly. This is not the case currently. People have the right to approach a municipality for additional information on the administrative and judicial procedures (according to their declared place of residence), and the municipality must provide legal assistance free of charge. However, this cannot replace structured and user-friendly information available from public authorities online.

An individual or public body concerned has the right to bring action directly in court to protect themselves against an activity, either by challenging the decision allowing such activity, or by claiming compensation of damage suffered because of the activity (Article 7 of the Law on Environmental Protection). The Supreme Administrative Court of Lithuania has confirmed that the Aarhus Convention grants community-based organisations the right to defend the public interest in the environmental sphere. However, there is a lack of clarity on whether NGOs have the right to contest the lawfulness of provisions of a normative legal act before a court.

Lithuania applies the 'loser pays' principle. An unsuccessful litigant may be ordered to provide remuneration for legal services and litigation costs incurred by the other party if awarded by the court. These costs might include: the paid stamp duty, representation expenses, costs connected with the investigation of the case, transport costs and others.

2019 priority actions

- Improve access to spatial data and services by making stronger linkages between the central INSPIRE website and regional portals. Identify and document all spatial datasets required for the implementation of environmental law[149], and make the data and documentation at least accessible 'as is' to other public authorities and the public through the digital services set out in the INSPIRE Directive.

- Improve the legal framework for and/or the practical application of measures that facilitate public participation in EU legislation that has an impact on the environment (e.g. by setting up a single webpage for the relevant information).

- Ensure that there is legal standing for environmental NGOs to bring legal challenges on air pollution.

Compliance assurance

Environmental compliance assurance covers all the work undertaken by public authorities to ensure that industries, farmers and others fulfil their obligations to protect water, air and nature, and manage waste[150]. It includes support measures provided by the authorities, such as:
(i) compliance promotion[151];
(ii) inspections and other checks that they carry out, i.e. compliance monitoring[152]; and
(iii) the steps that they take to stop breaches, impose sanctions and require damage to be remedied, i.e. enforcement[153].
Citizen science and complaints enable authorities to focus their efforts better. Environmental liability[154] ensures that the polluter pays to remedy any damage.

Compliance promotion and monitoring

Online information is given to farmers on how to comply with obligations on nitrates and nature. The quality of this information is an indicator of how actively authorities promote compliance in areas with serious implementation gaps. The website of Lithuania's Ministry of Agriculture includes a dedicated page on implementing the Nitrates Directive[155]. This contains detailed guidelines on the use of fertilisers and manure

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[149] European Commission, INSPIRE.
[150] COM(2018)10, SWD(2018)10.
[151] This EIR focuses on the help given to farmers to comply with nature and nitrates legislation.
[152] This EIR focuses on inspections of major industrial installations.
[153] This EIR focuses on the availability of enforcement data and co-ordination between authorities to tackle environmental crime.
[154] Directive 2004/35 CE, creates the framework.
[155] The Ministry of Agriculture of the Republic of Lithuania, Implementation of Nitrates Directive.

management[156]. Protected areas, including Natura 2000 sites, are managed by the State Service for Protected Areas under the Ministry of Environment ('*Valstybinė Saugomų Teritorijų Tarnyba prie Aplinkos ministerijos*'). The service's website contains guidelines on activities which are permitted in these areas[157]. However, these guidelines target employees of the state service more than the general public. The 'frequently asked questions' section also provides some information on activities that are allowed in the protected areas, as well as on permits needed for each of these activities[158]. In addition, there is a dedicated Natura 2000 website, which provides a reader-friendly description of some limitations on various activities in the protected areas[159]. However, this website does not list all the obligations that landowners need to fulfil on Natura 2000 sites under the Birds Directive and the Habitats Directive.

Major industrial installations can present serious pollution risks. Public authorities are required to have plans to inspect these installations and to make individual inspection reports available to the public[160]. In accordance with the relevant national legislation[161], inspections under the Industrial Emissions Directive are performed by the Regional Environmental Protection Departments which report to the Environmental Protection Agency[162]. The website of the Environmental Protection Department contains annual plans and is supposed to include in future also annual reports with details on planned and completed inspections[163]. However, the annual plans and reports generally include very limited information, mainly indicating the number of inspections planned and carried out without providing details on the inspection results (though the level of detail varies among the reports).

A special military helicopter is used to monitor environmental compliance in Lithuania[164]. At least 75 hours of its flight time is to be dedicated to environmental surveillance during the first five years of use. Such airspace surveillance helped to capture cases of illegal waste storage, dismantling of vehicles, storage of fishing gear, spilled pollutants at sea. However, not all suspected environmental violations proved to be true. In 2016 the regional environmental protection department of Panevėžys detected 5 breaches during airspace surveillance. They were eliminated by the obligation of individuals to clean up contaminated sites, and seizure of illegal fishing gear. In two cases the administrative offenses were applied[165].

Citizen science and complaint handling

Engagement of citizens, including through citizen science, can deepen knowledge about the environment and help the authorities in their work.

Protected species information system (*Saugomų rūšių informacinė Sistema*, SRIS) is used to obtain, provide or verify data on protected species, their habitats and sites. This service can be used by all residents of Lithuania. Users can provide information on protected species and their habitats[166]. The Ministry of Environment invited citizens to provide information on observed wolfs, lynxs and brown bears by filling a special form online[167].

The availability of clear online information about how to make a complaint is an indicator of how responsive authorities are to complaints from the public. The website of the Ministry of Environment includes a special hotline (*Karštoji linija*), which provides information on how to submit a complaint about an environmental nuisance or environmental damage. The website refers to the AAKIS environmental information monitoring system (*Aplinkos apsaugos kontrolės informacinė sistema AAKIS*) which is supposed to be able to receive citizen complaints online[168]. Another option given on the website is to call dedicated phone numbers[169].

Enforcement

When monitoring identifies problems, a range of responses may be appropriate. With some exceptions[170], Lithuania lacks structured published information on

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[156] The Ministry of Agriculture of the Republic of Lithuania, Surface treatment and fertilization; Manure storage and use.

[157] State Service for Protected Areas.

[158] State Service for Protected Areas.

[159] Natura 2000 website.

[160] 2010/75/EU, Article 23.

[161] Law on Environmental State control; Requirements on Scheduled and Non-scheduled Inspections under the State Environmental Control of the Economic Entities, approved by the Order of Minister of Environment No. D1-145 of 18 February 2011, and the Rules On the Granting, Updating and Revocation of Integrated Pollution Prevention And Control Permits, approved by the Minister of Environment Decree Order of the Minister of Environment No. D1-259528 of 6 March 201415 July 2013.

[162] Ministry of Environment of the Republic of Lithuania.

[163] Regional Environmental Protection Departments, Vilnius Environment Protection Department, Šiauliai region environmental protection department, Annual activity reports.

[164] Environmental Project Management Agency (Aplinkos projektų valdymo agentūra).

[165] Ministry of Environment of the Republic of Lithuania, Article of 27.04.2016; Article of 18.05.2016; Article of 23.05.2018; Article of 13.03.2018; Article of 13.03.2018.

[166] See this link for more information

[167] Protected species and their habitats registration form (for more information: DELFI news portal).

[168] Environmental information monitoring system. The Environmental Protection Department received 463 notifications via this system in 2018.

[169] Ministry of Environment of the Republic of Lithuania.

[170] For instance, the 2017 report of Siauliai Regional Environmental Protection Department provides details on follow-up actions and penalties. The report refers to 7 non-compliance cases in 2017 and 17 outstanding court cases, p. 6-10.

issuing warnings, applying sanctions and achieving compliance after follow-up measures have been set up and enforcement action has been taken. Payments under the common agricultural policy in Lithuania are managed by the National Paying Agency under the Ministry of Agriculture of the Republic of Lithuania (*'Nacionalinė mokėjimo agentūra prie Žemės ūkio ministerijos'*). The agency also investigates non-compliance with EU legal acts and provides on its website graphical information on non-compliance cases[171]. However, no data is available on individual cases, and there are no references to individual EU Directives that were breached. According to the Ministry of Agriculture, the number of non-compliant farms has decreased from 287 in 2015 to 138 in 2016[172].

Tackling waste, wildlife crimes and other environmental offences is especially challenging. It requires close cooperation between inspectors, customs authorities, police and prosecutors. The websites of Lithuania's Ministry of Environment, Environmental Protection Agency and Environmental Protection Department do not contain any references to formal cooperation arrangements between inspectors/wildlife officials, police and prosecutors. However, in practice the Ministry of Environment does cooperate with the Lithuanian Police Department[173]. The Environmental Department of the Vilnius municipality also closely cooperates with the Lithuanian Police Department regarding preventing and investigating waste crime[174]. Other municipalities are considering signing cooperation agreements with local police units on environmental crime[175].

Environmental liability

The Environmental Liability Directive (ELD) establishes a framework based on the 'polluter pays' principle to prevent and remedy environmental damage. The 2017 EIR focused on gathering better information on environmental damage, on financial security and guidance. The Commission is still collecting evidence on the progress made.

2019 priority actions

- Better inform the public about compliance promotion, monitoring and enforcement. As a minimum, this should involve providing more detailed online information on inspection plans and reports on industrial inspections
- Publish structured information on the outcomes of enforcement action and on the follow-up to

- detected cross-compliance breaches on nitrates and nature.
- Ensure more information is available on how professionals dealing with environmental crime work together.
- Improve financial security for liabilities and ELD-guidance and publish information on environmental damage.

Effectiveness of environmental administrations

Those involved in implementing environmental legislation at EU, national, regional and local levels need to have the knowledge, tools and capacity to ensure that the legislation and the governance of the enforcement process bring about the intended benefits.

Administrative capacity and quality

Central, regional and local administrations must have the ability to carry out their own tasks and work effectively with each other, within a system of multi-level governance.

The 2017 EIR described the legal arrangements and structure of the environmental administration in Lithuania. The reorganisation of the Regional Environmental Protection Departments into the Environmental Protection Department under the Ministry of Environment is expected to improve efficiency and the coordination of environmental policy implementation[176]. This reform is also expected to streamline compliance monitoring and enforcement activities and reduce the administrative burden for businesses[177]. The reorganisation is expected to be completed by January 2019, and consequently early results are likely to be visible in the second half of 2019.

Use of the ESIF is expected to improve some of Lithuania's environmental governance processes. Six projects under the 2014-2020 investment programme aim to improve environmental monitoring and control; they have a total budget of over EUR 12 million[178]. One of these projects redevelops the existing integrated environmental information management system (AIVIKS), which should improve accessibility and the quality of environmental information. The ambitious governmental commitment to create a new state IT service by the end of 2019 should also facilitate the use of electronic

[171] National Paying Agency under the Ministry of Agriculture of the Republic of Lithuania.
[172] AGROETA, Agroverslo naujienos.
[173] Ministry of Environment of the Republic of Lithuania.
[174] Vilnius municipality.
[175] Vakaru ekspresas news portal.

[176] 15min news portal.
[177] Gudavicius S., *Aplinkosaugos kontrolės institucijos bus apjungtos*, Verslo žinios, 21.11.2017.
[178] 2014-2020 European Union investment in Lithuania, Applications and projects.

services and enable the public or regulated entities to interact with environmental authorities online[179].

According to the EUPACK study, there were almost 130 thousand employees in core public administration in Lithuania in 2015[180].

According to the annual report of the Ministry of Interior, institutions under the supervision of the Ministry of Environment employed 6 788 people in 2016. Employees dealing with environmental matters in municipal administrations are not included in this number. The total number of employees in municipal administrations was around 14 000 in 2015 and 2016[181].

Coordination and integration

As mentioned in the 2017 EIR Report, the transposition of the revised Environmental Impact Assessment (EIA) Directive[182] into national law provides an opportunity for countries to streamline their regulatory framework on environmental assessments. Lithuania transposed the Directive late and the Commission is waiting for missing information to be submitted.

The Commission encourages the streamlining of environmental assessments to reduce duplication and avoid overlaps in environmental assessments for projects. Streamlining helps to reduce unnecessary administrative burden. It also accelerates decision making, without compromising the quality of the environmental assessment procedure[183]. Lithuania has introduced streamlining of environmental assessments under the EIA and Habitats Directives.

Adaptability, reform dynamics and innovation (eGovernment)

After joining the open government partnership in 2012, Lithuania pledged to increase the number of e-services offered. To address this, in 2015 the government adopted Resolution No 875 'On the Development of an assessment framework on environmental governance'.

The current Lithuanian eGovernment gateway offers 82 electronic services for businesses, related to environment and agriculture. These include submission of environmental reports and issuing of environmental permits. The gateway also offers 85 services for individuals.

Lithuania scores very well on the SGI (Sustainable Governance Indictors) adaptability ranking, i.e. on cooperating with other countries while implementing new developments at national level. Only a few EU Member States, such as Denmark, Sweden and Finland, scored higher.

In 2010, 8.1 % of public services were available online. In 2015, this figure jumped to 27.2 %.

According to Europe's Digital Progress Report 2017, Lithuania's digital public services score is 0.62/1. This is higher than the EU-28 average (0.55/1)[184].

Enabling financing and effective use of funds

All information about the ESIF in Lithuania can be found on one central website[185]. It includes information about funding opportunities, calls, public procurement opportunities, application procedures, projects, statistical data and other details.

2019 priority actions

- Complete transposition of the revised EIA Directive.
- Lithuania can further improve its overall environmental governance (such as transparency, citizen engagement, compliance and enforcement, as well as administrative capacity and coordination).

International agreements

The EU Treaties require the EU environmental policy to promote measures at international level to deal with regional or worldwide environmental problems.

The EU is committed to strengthening environmental law and its implementation globally. It therefore continues to support the Global Pact for the Environment process, which was launched by the United Nations General Assembly in May 2018[186]. The EIR is one of the tools to ensure that the Member States set a good example by respecting European Union environmental policies and laws and international agreements.

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[179] Nakrošis, V., Support for developing better country knowledge on public administration and institutional capacity building (EUPACK), Report on Public Administration Reform Trends and Reform Dynamics in Lithuania, report prepared for DG EMPL of the European Commission, 2017, p. 10-16.

[180] Nakrošis, V., Support for developing better country knowledge on public administration and institutional capacity building (EUPACK), Public administration characteristics in Lithuania, report prepared for DG EMPL of the European Commission, 2017, p. 2.

[181] Ministry of the Interior of the Republic of Lithuania, *2016 report of the public sector, ("2016 metų viešojo sektoriaus ataskaita")*, p.31, 93.

[182] Directive 2014/52/EU.

[183] The Commission issued a guidance document in 2016 regarding the setting up of coordinated and/or joint procedures that are simultaneously subject to assessments under the EIA Directive, Habitats Directive, Water Framework Directive, and the Industrial Emissions Directive, OJ C 273, 27.7.2016, p. 1.

[184] European Commission, Europe's Digital Progress Report (EDPR), Country Profile Lithuania, 2017, p. 9.

[185] 2014-2020 European Union investment in Lithuania.

[186] UN General Assembly Resolution 72/277 and Organizational session of the ad hoc open-ended working group.

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Lithuania has signed and ratified almost all Multilateral Environmental Agreements. It has signed but not yet ratified the Nagoya Protocol.

Forests: EU Timber Regulation (EUTR)[187]/ Forest Law Enforcement, Governance and Trade (FLEGT) Regulation[188]

Between March 2015 and February 2017, Lithuania carried out 7264 checks on operators who placed domestic timber on the EU market for the first time. It also carried out 227 checks on operators importing timber. These numbers are way above the number of checks Lithuania had planned for this period[189]. It is estimated that 25940 Lithuanian operators placed domestic timber on the EU market for the first time in this period, and 800 imported timber.

It should be mentioned that Lithuania's highest number of penalties issued, other than notices of remedial action, related to *domestic* timber[190].

On cooperation (Article 12 EUTR), Lithuania reports to have collaborated with other government institutions within Lithuania and with other EU authorities, e.g. the European Commission and the Forestry Institute of the Czech Republic. Lithuania is also involved in the Nordic-Baltic network on EUTR implementation.

Genetic resources: Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising (ABS)[191]

Lithuania has designated competent authorities for genetic resources and applied sanctions for infringements of the EU ABS Regulation. However, Lithuania has not submitted a due diligence declaration to date, nor has it applied any penalties. Lithuania submitted its first ABS Regulation implementation report to the Commission at the end of 2017.

International wildlife trade: the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)[192]

Lithuania has established relevant national authorities and is processing import, (re-) export and intra-EU trade documents, including requests, on a regular basis.

Reports on seizures of illegal wildlife shipments (in particular those reported every 6 months to TRAFFIC under its contract with the Commission, and those

exchanged through the EU-TWIX platform) show the activity of customs authorities.

To ensure that the EU wildlife action plan (2016) is fully implemented[193], Lithuania's national and local authorities regularly monitor traders, breeders and keepers, in addition to checks carried out at border crossing points.

2019 priority action

- Increase efforts to be party to relevant multilateral environmental agreements, by ratifying the remaining agreements.

Sustainable development and the implementation of the UN SDGs

Sustainable development links environmental, social and economic policies in a coherent framework and therefore helps to implement environmental legislation and policies.

With Decree No. D1-920, Lithuania's Minister of Environment set up a working group on implementing the UN sustainable development goals in Lithuania[194]. The working group includes representatives of the Ministries of Environment, Finance, Social Security and Labour, Economy, Energy, Agriculture, Education and Science, Transport, Interior, Culture, Health, Foreign Affairs, the Association of Local Authorities, Statistics Department and non-government organisations.

The first meeting of the working group was held on 29 November 2017 and focused on preparing a report on implementation of the SDGs. SDG indicators for Lithuania are available on the website of the Ministry of Environment[195]. The group proposed focusing on the following priorities until 2020: no poverty, decent work and economic growth, reduced inequalities, good health and well-being, affordable and clean energy, industry innovation and infrastructure, responsible production and consumption and climate action. These priorities are in line with the Lithuanian government's programme for 2018–2020 with funding coming also from the so-called 'reform basket' ('pokyčių krepšelio')[196] Lithuania submitted a national voluntary review on implementation of the SDGs to the UN in 2018[197].

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[187] Regulation (EU) No 995/2010.
[188] Regulation (EC) No 2173/2005.
[189] 60 checks on operators of domestic timber and 155 checks on operators importing timber were planned for the period 2015-2017.
[190] Approximately 300, all of which being penalties following notices of remedial action.
[191] Regulation (EU) No 511/2014.
[192] The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

[193] European Commission, EU Action Plan against Wildlife Trafficking, 2016.
[194] Ministry of Environment of the Republic of Lithuania.
[195] Ministry of Environment of the Republic of Lithuania.
[196] Lithuanian Government.
[197] Voluntary national review on the implementation of the UN 2030 agenda for sustainable development in Lithuania.