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The EU Environmental Implementation Review
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

The EU Environmental Implementation Review: Common Challenges and how to combine efforts to deliver better results

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Executive summary

About the Environmental Implementation Review

In May 2016, the Commission launched the Environmental Implementation Review (EIR), a two-year cycle of analysis, dialogue and collaboration to improve the implementation of existing EU environmental policy and legislation[1]. As a first step, the Commission drafted 28 reports describing the main challenges and opportunities on environmental implementation for each Member State. These reports are meant to stimulate a positive debate both on shared environmental challenges for the EU, as well as on the most effective ways to address the key implementation gaps. The reports rely on the detailed sectoral implementation reports collected or issued by the Commission under specific environmental legislation as well as the 2015 State of the Environment Report and other reports by the European Environment Agency. These reports will not replace the specific instruments to ensure compliance with the EU legal obligations.

The reports will broadly follow the outline of the 7th Environmental Action Programme[2] and refer to the 2030 Agenda for Sustainable development and related Sustainable Development Goals (SDGs)[3] to the extent to which they reflect the existing obligations and policy objectives of EU environmental law[4].

The main challenges have been selected by taking into account factors such as the importance or the gravity of the environmental implementation issue in the light of the impact on the quality of life of the citizens, the distance to target, and financial implications.

The reports accompany the Communication "*The EU Environmental Implementation Review 2016: Common challenges and how to combine efforts to deliver better results*", which identifies challenges that are common to several Member States, provides preliminary conclusions on possible root causes of implementation gaps and proposes joint actions to deliver better results. It also groups in its Annex the actions proposed in each country report to improve implementation at national level.

General profile

The status of the environment and especially air and water quality is good in Lithuania. Resource and energy intensity remains high and exceeding the EU average. However, its government is taking the first steps towards the shift to the circular economy. Notably, waste management remains a particular issue in Lithuania. Municipal waste disposal in landfills remains its main treatment option. In recent years investments have either have been made or planned in a number of MBTs[5] and additional waste incineration capacity. Lithuania should carefully plan further investments in the waste sector in order not to hinder the achievement of the 2020 recycling target.

Main Challenges

The main challenges with regard to implementation of EU environmental policy and law in Lithuania are:

- Waste management remains a challenge for Lithuania with the foreseen new municipal waste incineration capacities potentially putting at risk the EU recycling targets.
- Lithuania remains a resource and energy intensive country.

Main Opportunities

Lithuania could perform better on topics where there is already a good knowledge base and good practices. This applies in particular to:

- Targeted policy measures and sufficient funding could further enhance Lithuania's performance in eco-innovation.
- Use of market based instruments could encourage resource efficiency, particularly in waste management (e.g. meet the 2020 recycling targets and divert waste from landfill). Vehicle taxation could play an important role in supporting a modal shift from private to public transport.
- More targeted use of the opportunities provided by the ESIF to enhance environmental implementation, as well as the use of EIB loans and EFSI support to further promote environmental projects would improve progress across the board.

Points of Excellence

Where Lithuania is a leader on environmental implementation, innovative approaches could be shared more widely with other countries. Good examples are:

- A good compliance record, having a low number of complaints and infringements.
- While eco-innovation in general in Lithuania needs further efforts, Lithuania has strengths in certain areas such as biotechnology and laser technology.

[1] Communication "Delivering the benefits of EU environmental policies through a regular Environmental Implementation Review" (COM/2016/ 316 final).

[2] Decision No. 1386/2013/EU of 20 November 2013 on a General Union Environmental Action Programme to 2020 "Living well, within the limits of our planet".

[3] United Nations, 2015. The Sustainable Development Goals

[4] This EIR report does not cover climate change, chemicals and energy.

[5] Mechanical biological treatment facility

Part I: Thematic Areas

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

Developing a circular economy and improving resource efficiency

The 2015 Circular Economy Package emphasizes the need to move towards a lifecycle-driven 'circular' economy, with a cascading use of resources and residual waste that is close to zero. This can be facilitated by the development of, and access to, innovative financial instruments and funding for eco-innovation.

SDG 8 invites countries to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. SDG 9 highlights the need to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. SDG 12 encourages countries to achieve the sustainable management and efficient use of natural resources by 2030.

Measures towards a circular economy

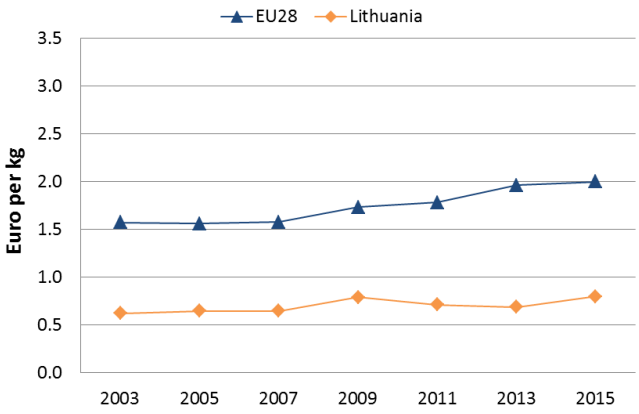
Transforming our economies from linear to circular offers an opportunity to reinvent them and make more sustainable and competitive. This will bring both short and long-term benefits for the economy, industries, and citizens alike.[6]

There is untapped potential for the whole economy, as well as for economic sectors and individual companies to benefit from the shift to the circular economy, which could reduce costs, facilitate growth and competitiveness, as well as job creation; while at the same time would address resource challenges. Figure 1 shows that resource productivity (how efficiently the economy uses material resources to produce wealth)[7], with 0.80 EUR/kg (EU average is 2) in Lithuania has only slightly increased since 2008, however, it still remained significantly below the EU average in 2015.[8]

The main drivers for the transition to the circular economy are the support from EU funds and collaborative grants for eco-innovation with Norway.

While Lithuania supports the EU Circular Economy Package and the shift to the circular economy in general, its government is taking only the first steps towards it. Legislation for promoting and applying the principles of circular economy in Lithuania is still in the early stages of development. Furthermore, Lithuania has average achievements in regards to the targets proposed for EU circular economy with areas still needing to be improved.

Figure 1: Resource productivity 2003-15[9]



Among the proposed priorities in the Lithuanian Smart Specialisation Strategy, circular economy is specifically targeted by the use of alternative fuels to increase energy efficiency, efficient waste management and rationalisation of various production cycles to include recycled resources.

Moreover, waste management and recycling have had a bigger visibility in the recent years in Lithuania. Since 2014, the Packaging Innovations and Research Centre (at Kaunas University of Technology) has been conducting research into sustainable development and environmental impact of packages. New businesses are also emerging (Polymer Recycling, Esco) that base their business model on recycling waste into new materials.

The low level of eco-innovation remains a challenge for Lithuania. This is compounded by the low level of private sector investment and lack of suitable skills in environmental sectors.

SMEs and resource efficiency

In the Flash Eurobarometer 426 "SMEs, resource efficiency and green markets"[10] it is shown that 39% of Lithuania's SMEs have invested up to 5% of their annual turnover in their resource efficiency actions (EU28 average 50%), 29% of them are currently offering green products and services (EU28 average 26%), 50%

[6] European Commission, 2015. Proposed Circular Economy Package
[7] Resource productivity is defined as the ratio between gross domestic product (GDP) and domestic material consumption (DMC).
[8] Eurostat, Resource productivity, accessed October 2016
[9] Eurostat, Resource productivity, accessed October 2016
[10] European Commission, 2015. Flash 426 Eurobarometer "SMEs, resource efficiency and green markets"

took measures to save energy (EU28 average 59%), 33% to minimise waste (EU28 average 60%), 45% to save water (EU28 average 44%), and 46% to save materials (EU28 average 54%). From a circular economy perspective, 12% took measures to recycle by reusing material or waste within the company, 13% to design products that are easier to maintain, repair or reuse and 24% were able to sell their scrap material to another company. The resource efficiency actions undertaken allowed the reduction of production costs in a 56% of the Lithuanian SMEs (EU average 45%).

The Flash Eurobarometer shows that 19% of the SMEs in Lithuania have one or more full time employee working in a green job at least some of the time. Lithuania has an average number of 1.4 full time green employees per SME.[11]

Eco-Innovation

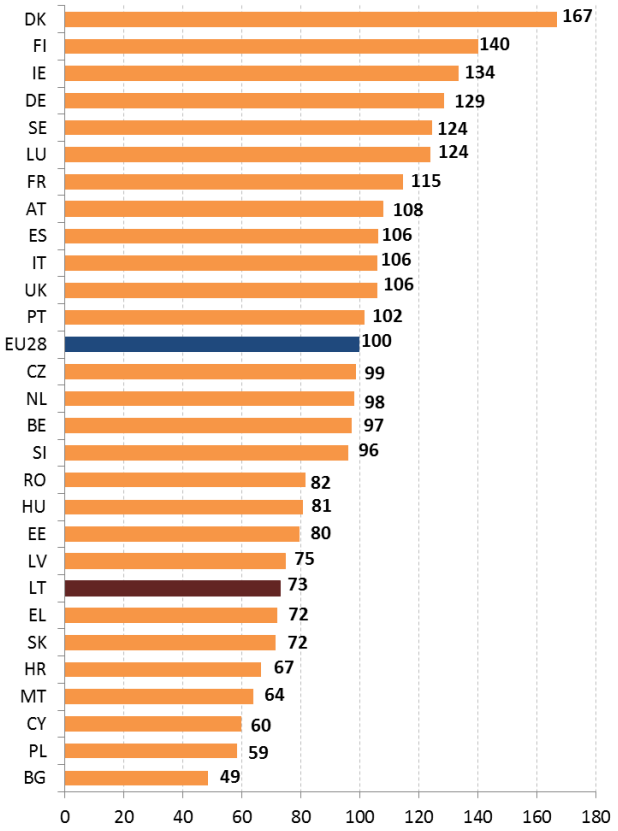
The composite eco-innovation index for Lithuania rose from 66 in 2013 to 72.9 in 2015, as depicted in Figure 2.

A major economic driver for eco-innovation is the funding support from EU measures and a continuing partnership between Lithuania and Norway. This partnership in particular has led to the establishment of the Green Industry Innovation Programme based on the Norwegian Financial Mechanism 2009-2014. The programme has helped fund many new innovations and has been a great contributing force towards moving Lithuania in the direction of eco-innovation.

The partnership with Norway also acts as a driver of cultural change for Lithuanian businesses. Though the last call for the Green Industry Innovation Programme was issued in 2015, the partnership has continued in other aspects. In particular matchmaking events between Lithuanian and Norwegian businesses have been planned for 2016 and 2017 to continue spreading good practice of eco-innovation in Lithuania (waste management in particular).

Since 2013, the policy framework for eco-innovation has been significantly improved, especially with two major programmes and strategies that cover national actions for eco-innovation[12]. The promotion of eco-innovation in Lithuania is covered under the general innovation policy agenda - Lithuanian Innovation Development Programme for 2014-2020, the strategic aim of which is to promote Lithuania's global competitiveness by establishing an effective innovation system. Growing potential in eco-innovation is expected in construction, solar energy, waste management and green transport.

Figure 2: Eco-Innovation Index 2015 (EU=100)[13]



The Smart Specialisation Strategy, adopted in 2015, promotes economic growth and the contribution of knowledge-intensive economic activities to GDP, in particular, biotechnology, which is a priority area for agro-innovation and food technologies, as well as laser technology for use in biomedical applications. The programme includes an action plan for sustainable use of agro-biological resources and safe food.

While progress towards increased promotion of innovation in general can be observed in the Lithuanian policy landscape, the key barrier still remains the lack of policy measures for the promotion of eco-innovation.

Another interrelated problem is that for a long time there was no common understanding about eco-innovation among various institutions, ministries and SMEs.

A potential problem in the future is that funding for innovation in general, and eco-innovation in particular, heavily relies on the European Structural Funds (ESF).

[11] The Flash Eurobarometer 426 "SMEs, resource efficiency and green markets" defines "green job" as a job that directly deals with information, technologies, or materials that preserves or restores environmental quality. This requires specialised skills, knowledge, training, or experience (e.g. verifying compliance with environmental legislation, monitoring resource efficiency within the company, promoting and selling green products and services).

[12] Lithuanian Innovation Development Programme for 2014-2020 and Lithuanian Smart Specialisation Strategy

[13] Eco-innovation Observatory: Eco-Innovation scoreboard 2015

Waste management

Turning waste into a resource requires:

- Full implementation of Union waste legislation, which includes the waste hierarchy; the need to ensure separate collection of waste; the landfill diversion targets etc.
- Reducing per capita waste generation and waste generation in absolute terms.

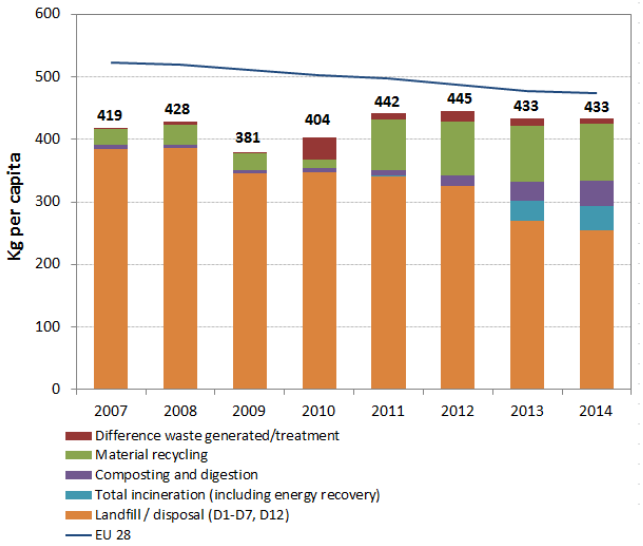
Limiting energy recovery to non-recyclable materials and phasing out landfilling of recyclable or recoverable waste. SDG 12 invites countries to substantially reduce waste generation through prevention, reduction, recycling and reuse, by 2030.

The EU's approach to waste management is based on the "waste hierarchy" which sets out an order of priority when shaping waste policy and managing waste at the operational level: prevention, (preparing for) reuse, recycling, recovery and, as the least preferred option, disposal (which includes landfilling and incineration without energy recovery).

The progress towards reaching recycling targets and the adoption of adequate WMP/WPP should be the key items to measure the performance of Member States. This section focuses on management of municipal waste for which EU law sets mandatory recycling targets.

In 2014, municipal waste generation in Lithuania remained just slightly below the EU average (433 kg/y/inhabitant compared to around 474 kg on average).[14] Figure 3 depicts the municipal waste by treatment in Lithuania in terms of kg per capita.

Figure 3: Municipal waste by treatment in Lithuania 2007-14[15]



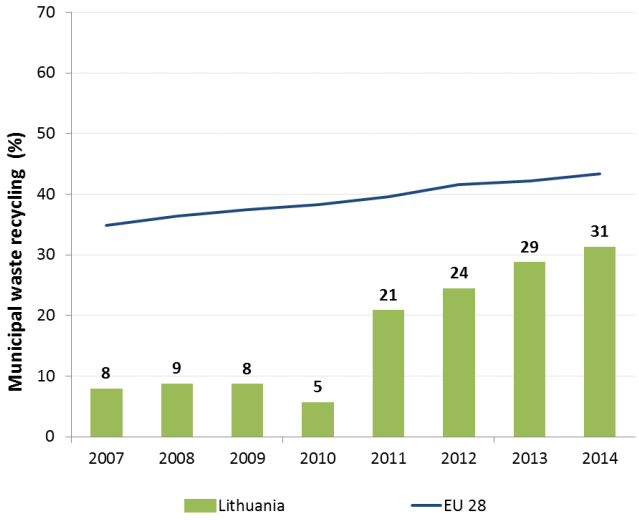
[14] Eurostat, Municipal waste and treatment, by type of treatment method, accessed October 2016

[15] Eurostat, Municipal waste and treatment, by type of treatment method, accessed October 2016

Although in 2014, Lithuania decreased the amounts of municipal waste landfilled compared to 2013 (64% in 2013, 60% in 2014), it was still significantly above the EU average of 28%. Disposal in landfills remained Lithuania's main treatment option of municipal waste. Composting has increased from 8% in 2013 to 10% in 2014 (EU average 16% in 2014).

Even though in 2014 recycling of municipal waste at 31% has slightly increased compared to the year before (EU average 44% in 2014), this stagnation puts Lithuania at risk of not meeting the 50% recycling target by 2020 as shown in Figure 4.[16]

Figure 4: Recycling rate of municipal waste 2007-14[17]



Lithuania has not fulfilled the 2010 target for biodegradable waste diversion from landfills (to no more than 85% of 1995 level). Nevertheless, Lithuania has reduced the amount of biodegradable municipal waste going to landfill to 55% by 2012.

Lithuania met the packaging waste recycling target in 2012. However, in 2013 the recycling rate decreased from 62.2% in 2012 to 53.5% in 2013 placing it below the target of 55%. In order to help bridge the implementation gap in Lithuania, the Commission has delivered a roadmap for Lithuania[18] for compliance in which economic instruments play a crucial role.

Managing waste efficiently and reaching the 2020 recycling target of 50% remains a challenge in Lithuania. Comparing to the previous year, waste management has improved; however, further investments in separate

[16] 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.

[17] Eurostat, Recycling rate of municipal waste, accessed October 2016

[18] European Commission, Support to Member States in improving waste management based on assessment of Member States' performance, Roadmap for Lithuania

collection and recycling will be needed in Lithuania in order to reach the 2020 recycling target.

In 2014, Lithuania adopted its National Waste Management Plan 2014-2020 (last amendment in June 2016) and in 2013 the National Waste Prevention Programme.

Furthermore, in June 2016 Lithuania amended its Waste management plan including two new Combined Heat and Power plant (CHP) in Vilnius and/or in Kaunas with a combined incineration capacity of municipal waste of 360,000 t/y. The construction of two additional CHPs is likely to lead to municipal waste incineration overcapacity. Lithuania plans to incinerate 30% of its municipal waste.

However, this calculation includes the 'stocks' of refuse-derived fuel to be cumulated over the next several years (equivalent to 100,000 t/y in terms of capacity) and packaging waste (60,000 t/y).

In the light of the on-going review of the recycling targets and landfill restrictions for municipal waste (COM(2015)595, 594) – 65% recycling target for 2030 and possible upwards review of the targets by 2025 and a landfill restriction to 10% for 2030 – the Commission services consider that the optimal incineration capacity in a country is 20-25% of municipal waste generated. Incineration capacity in excess of this is likely to further hinder Lithuania from meeting the 50% recycling target in 2020 and future increase of that target level.

Full implementation of the existing legislation could create more than 5200 jobs in Lithuania and increase the annual turnover of the waste sector by EUR 550 million. Moving towards the targets of the Roadmap on resource efficiency could create over 3000 additional jobs and increase the annual turnover of the waste sector by over EUR 630 million.[19]

EU structural and investment funds are an important source of funding for improved waste management system in Lithuania. In 2007-2013 190 million EUR were invested into waste management projects, including construction of 9 regional mechanical and biological waste treatment plants, remediation of 340 old landfills/dumpsites, construction of numerous bulky waste collection and green waste composting sites, extension of separate waste collection system (210 000 containers for recyclable and biodegradable waste).

In the 2014-2020 period 87,2 million EUR investment from the Cohesion Fund is planned to support further development of the separate collection of waste, modernisation of capacities to prepare waste for recycling, reuse or other recovery (sorting lines, other equipment), and modernisation of the waste management information system and monitoring.

Suggested action

- Gradually increase landfill taxes to phase-out landfilling of recyclable and recoverable waste. Use the revenues to support the separate collection and alternative infrastructure in conjunction with a better allocation of the cohesion policy funds to the first steps of waste hierarchy. Avoid building excessive infrastructure for the treatment of residual waste (the existing incinerating facilities could treat approximately 30% of municipal waste.).
- Focus more effort on implementation of the separate collection obligation to increase recycling rates. Use the economic instruments (e.g. PAYT) to support transition towards more recycling.

[19] Bio Intelligence service, 2011. Implementing EU Waste legislation for Green Growth, study for European Commission. The breakdown per country on job creation was made by the consultant on Commission demand but was not included in the published document.

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, restore ecosystems and their services in so far as feasible, and step up efforts to avert global biodiversity loss. The EU Birds and Habitats Directives aim at achieving favourable conservation status of protected species and habitats.

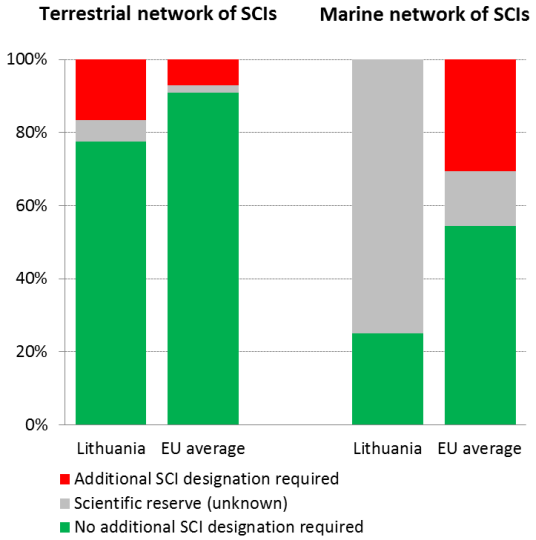
SDG 14 requires countries to conserve and sustainably use the oceans, seas and marine resources, while SDG 15 requires countries to protect, restore and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

The 1992 EU Habitats Directive and the 1979 Birds Directive are the cornerstone of the European legislation aimed at the conservation of the EU's wildlife. Natura 2000, the largest coordinated network of protected areas in the world, is the key instrument to achieve and implement the Directives' objectives to ensure the long-term protection, conservation and survival of Europe's most valuable and threatened species and habitats and the ecosystems they underpin.

The adequate designation of protected sites as Special Ares of Conservation (SAC) under the Habitats Directive and as Special Protection Areas (SPA) under the Birds Directive is a key milestone towards meeting the objectives of the Directives. The results of Habitats Directive Article 17 and Birds Directive Article 12 reports and the progress towards adequate Sites of Community Importance (SCI)-SPA and SAC designation[20] both in land and at sea, should be the key items to measure the performance of Member States.

By early 2016, 12.16% of the national land area of Lithuania is covered by Natura 2000 (EU average 18.1%), with Birds Directive SPAs covering 8.47% (EU average 12.3%) and Habitats Directive SCIs covering 9.40% (EU average 13.8%). The list of SPAs in Lithuania comprises 83 sites covering a total area of over 626 000 ha, while the list of SCIs consists of 410 sites covering 667 000 ha. The area of overlapping SPAs and SCIs is about 385 000 ha. With the establishment of the last marine SPA in July 2015 Lithuanian network of SPAs is being considered as completed. However, the latest assessment[21] of the SCIs part of the Natura 2000 network shows that there are insufficiencies in designation as shown in Figure 5[22].

Figure 5: Sufficiency assessment of SCI networks in Lithuania based on the situation until December 2013 (%)[23]



Between 2011-2015 Lithuania carried out a national habitat inventory with a view to determine the exact localization of natural habitats and also to collect the necessary data needed for establishing favourable reference values and the relevant conservation objectives for each habitat type. Preliminary results of the exercise strongly suggest that the information on the present SCI's will have to be substantially reviewed as to reflect the current reality. Furthermore, it also points to the idea that the current SCI network might be incomplete for some habitat types and species.

Nevertheless, despite the uncertainties, species conservation plans and management plans of protected areas continue being developed in Lithuania according to the requirements of the European legislation. At present, there are 82 management plans for Natura 2000 sites adopted, and 143 in preparation at different stages of development. As pointed out in the last Habitat Directive

[20] Sites of Community Importance (SCIs) are designated pursuant to the Habitats Directive whereas Special Areas of Protection (SPAs) are designated pursuant to the Birds Directive; figures of coverage do not add up due to the fact that some SCIs and SPAs overlap. Special Areas of Conservation (SACs) means a SCI designated by the Member States.

[21] 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.

[22] The percentages in Figure 5 refer to percentages of the total number of assessments (one assessment covering 1 species or 1 habitat in a given biographical region with the Member State); if a habitat type or a species occurs in more than 1 Biogeographic region within a given Member State, there will be as many individual assessments as there are Biogeographic regions with an occurrence of that species or habitat in this Member State.

[23] European Commission internal assessment.

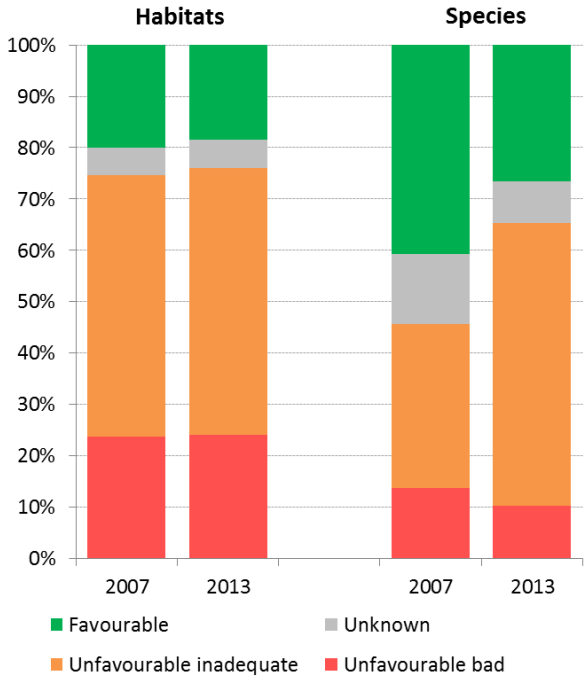
Article 17[24] Report, the main identified difficulties for implementation of the required nature management activities over the Natura 2000 network in Lithuania are the lack of financial resources for the funding of surveillance of species and habitats as well as for activities related to habitat restoration and maintenance.

Conflicts between commercial agricultural or forestry activities and the particular management of the land for nature protection needs represent a serious limiting factor. This is especially where specific pastures or forest conditions are no longer economically profitable. The grassland habitats in need of protection under Natura 2000 are the weakest links of the network in Lithuania.

The Prioritised Action Framework is expected to provide tools to mitigate some of those critical cases of deterioration of habitats generated by now obsolete agricultural practices through a better focused allocation of financial resources. Nevertheless, it is unlikely that the PAF alone will solve the sustainability concerns of the grassland habitats.

According to the latest report on the conservation status[25] of habitats and species covered by the Habitats Directive, 18.5% of the habitats biogeographic assessments were favourable in 2013 (EU 27: 16%). Furthermore, 52% are considered to be unfavourable–inadequate (EU27: 47%) and 24% are unfavourable – bad (EU27: 30%). As for the species, 26.5% of the assessments were favourable in 2013, 55% at unfavourable-inadequate (EU27: 42%) and 10% unfavourable-bad status (EU27: 18%). This is depicted in Figure 6[26].

Figure 6: Conservation status of habitats and species in Lithuania in 2007/2013 (%)[27]



Only 6.3% of the unfavourable assessments for species were showing a positive trend in 2013 and no unfavourable assessments for habitats were showing a positive trend in 2013.

As far as birds are concerned, 77% of the breeding species showed short-term increasing or stable population trends (for wintering species this figure was 56%).

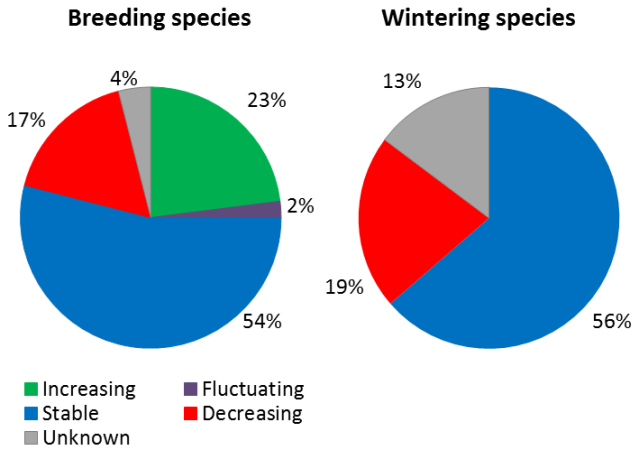
[24] The core of the 'Article 17' report is the assessment of conservation status of the habitats and species targeted by the Habitats Directive

[25] Conservation status is assessed using a standard methodology as being either 'favourable', 'unfavourable-inadequate' and 'unfavourable-bad', based on four parameters as defined in Article 1 of the Habitats Directive.

[26] Please note that a direct comparison between 2007 and 2013 data is complicated by the fact that Bulgaria and Romania were not covered by the 2007 reporting cycle, that the 'unknown' assessments have strongly diminished particularly for species, and that some reported changes are not real as they result from improved data / monitoring methods.

[27] These figures show the percentage of biogeographical assessments in each category of conservation status for habitats and species (one assessment covering 1 species or 1 habitat in a given biographical region with the Member State), respectively. The information is based on the 'Article 17' report – national summary of Lithuania.

Figure 7: Short-term population trend of breeding and wintering bird species in Lithuania in 2012 (%)[28]



In 2014-2020 financing period 50 million EUR of ESI funds are earmarked for nature protection, biodiversity, Natura 2000 and green infrastructure. It will help to restore favourable conservation status in 1,150 hectares surface area of habitats.

Suggested action

- Complete the Natura 2000 designation process and put in place clearly defined conservation objectives and the necessary conservation measures for the sites and 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 site and species permitting procedures, ensuring the necessary knowledge and data availability. Strengthen communication with stakeholders.
- Continue support to the mapping and assessment of ecosystems and their services, valuation and development of natural capital accounting systems.

Green Infrastructure

The EU strategy on green infrastructure[29] promotes the incorporation of green infrastructure into related plans and programmes to help overcome fragmentation of habitats and preserve or restore ecological connectivity, enhance ecosystem resilience and thereby ensure the continued provision of ecosystem services.

Green Infrastructure provides ecological, economic and social benefits through natural solutions. It helps to understand the value of the benefits that nature provides to human society and to mobilise investments to sustain and enhance them.

The backbone of green infrastructure in Lithuania is the national legislation on ecological network, which requires incorporating protected areas and other ecologically and biologically valuable areas into spatial planning processes with the aims to:

- protect biodiversity, landscape and natural recreational resources;
- to make interlinkages among the most ecologically valuable habitats;
- to form migration corridors;
- to enhance areas of forests; and
- to regulate development of urbanization and agriculture.

The Action Plan on Conservation of Landscape and Biodiversity for the period of 2015–2020 sets a strategic goal for Lithuania to halt biodiversity loss and degradation of ecosystems and their services and, where possible, to restore them.

The Process of preparation and implementation of management plans for protected areas as well as action plans for protected species is ongoing.

Nine border municipalities in Latvia and Lithuania are cooperating under the motto “Let’s make our cities greener” in order to restore urban parks and green infrastructure; improve the wellbeing, awareness and engagement of citizens to maintain green areas in their neighbourhood; and enable city planners to integrate green infrastructure in urban space.

A LIFE+ project for the establishment of a pilot ecological network in South Lithuania, completed in 2015, carried out activities for the protection of target species, the restoration of their habitats, the creation of an ecological network and education of local communities. The ecological network model is intended for replication to the entire territory of Lithuania. The project further raised local awareness of the importance of ecological networks for nature and for people[30].

[28] Article 12 of the Birds Directive reporting - national summary of Lithuania

[29] European Union, Green Infrastructure — Enhancing Europe’s Natural Capital,(COM/2013/0249)

[30] LIFE09 NAT/LT/000581: http://www.glis.lt/ekotinklas/index.php/lt/

Soil protection

The EU Soil Thematic Strategy highlights the need to ensure a sustainable use of soils. This requires the prevention of further soil degradation and the preservation of its functions, as well as the restoration of degraded soils. The 2011 Road Map for Resource-Efficient Europe, part of Europe 2020 Strategy provides that by 2020, EU policies take into account their direct and indirect impact on land use in the EU and globally, and the rate of land take is on track with an aim to achieve no net land take by 2050.

SDG 15 requires countries to combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land-degradation-neutral world by 2030.

Soil is an important resource for life and the economy. It provides key ecosystem services including the provision of food, fibre and biomass for renewable energy, carbon sequestration, water purification and flood regulation, the provision of raw and building material. Soil is a finite and extremely fragile resource and increasingly degrading in the EU. Land taken by urban development and infrastructure is highly unlikely to be reverted to its natural state; it consumes mostly agricultural land and increases fragmentation of habitats. Soil protection is indirectly addressed in existing EU policies in areas such as agriculture, water, waste, chemicals, and prevention of industrial pollution.

Artificial land cover is used for settlements, production systems and infrastructure. It may itself be split between built-up areas (buildings) and non-built-up areas (such as linear transport networks and associated areas).

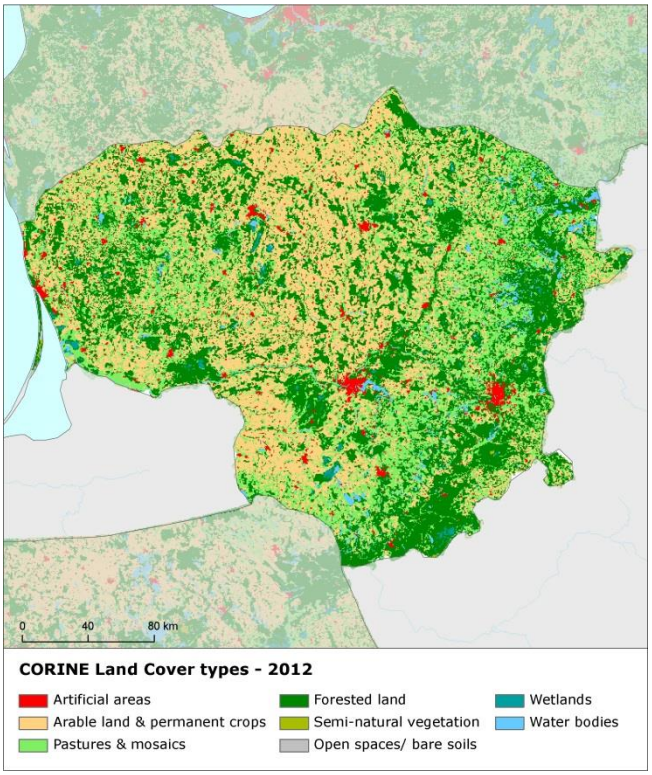
The annual land take rate (growth of artificial areas) as provided by CORINE Land Cover was 0.29% in Lithuania over the period 2006-12, below the EU average (0.41%). It represented 612 hectares per year and was mainly driven by new construction, together with the extension of mines and quarry areas[31]. The percentage of built up land in 2009 was 2.05%, below the EU average (3.23%)[32].

Figure 8 shows the different land cover types in Lithuania in 2012.

The soil water erosion rate in 2010 was 0.52 tonnes per ha per year, well below EU-28 average (2.46 tonnes)[33].

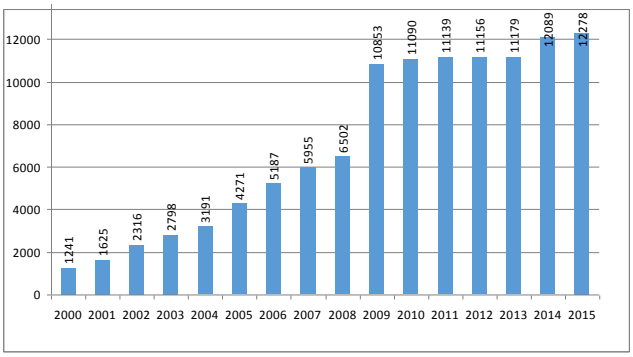
There are still not EU-wide datasets enabling the provision of benchmark indicators for soil organic matter decline, contaminated sites, pressures on soil biology and diffuse pollution.

Figure 8: Land Cover types in Lithuania in 2012[34]



However, since 1999, Lithuania is implementing a long-term project "Database fulfilment of geological environment's contaminated sites". During this period (until beginning 2016), 12,278 potentially contaminated sites have been inventoried (Figure 8a).

Figure 8a. Inventorisation of potentially contaminated sites[35]



In the time period from 2007 until 2015, more than 1000 contaminated sites were investigated. 887 of them are preliminary eco-geological investigations, 210 detailed eco-geological investigations and 88 control investigations after remediation of contaminated sites.

(in Lithuanian)

[31] European Environment Agency Draft results of CORINE Land Cover (CLC) inventory 2012; mean annual land take 2006-12 as a % of 2006 artificial land.

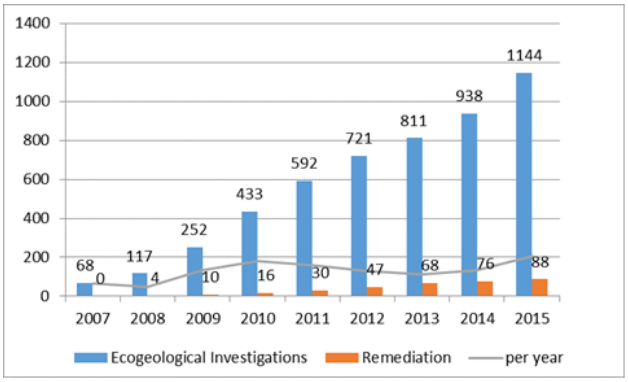
[32] European Environment Agency, 2016. Imperviousness and imperviousness change, Figure 1

[33] Eurostat, Soil water erosion rate, Figure 2, accessed November 2016

[34] European Environment Agency, 2016. Land cover 2012 and changes country analysis [publication forthcoming]

[35] Lithuanian Geological Survey. Annual Report, 2015.

Figure 8b. Environmental investigations and remediation of contaminated sites[36]



Intensified remediation of contaminated sites is promoted by National Environment Protection Strategy (2015)[37] and Management Plan of Contaminated sites for 2013-2023 approved by the Minister of Environment[38].

An updated inventory and assessment of soil protection policy instruments in Lithuania and other EU Member States is being performed by the EU Expert Group on Soil Protection.

Marine protection

The EU Coastal and Marine Policy and legislation require that by 2020 the impact of pressures on marine waters is reduced to achieve or maintain good environmental status and coastal zones are managed sustainably.

SDG 14 requires countries to conserve and sustainably use the oceans, seas and marine resources for sustainable development.

The Marine Strategy Framework Directive (MSFD)[39] aims to achieve Good Environmental Status (GES) of the EU's marine waters by 2020 by providing an ecosystem approach to the management of human activities with impact on the marine environment. The Directive requires Member States to develop and implement a marine strategy for their marine waters, and cooperate with Member States sharing the same marine region or subregion.

As part of their marine strategies, Member States had to make an initial assessment of their marine waters, determine GES[40] and establish environmental targets by July 2012. They also had to establish monitoring programmes for the on-going assessment of their marine waters by July 2014. The next element of their marine strategy is to establish a Programme of Measures (2016). The Commission assesses whether these elements constitute an appropriate framework to meet the requirements of the MSFD.

Lithuanian marine waters are part of the Baltic Sea marine region. Lithuania is therefore party to the Convention on the Protection of the Marine Environment of the Baltic Sea (HELCOM). In the Baltic Sea, main risks for biodiversity relate to eutrophication, overfishing and bycatch, pollution by contaminants and oil, and introduction of non-indigenous species.

With regard to the implementation of MSFD, Lithuania determined its good environmental status (GES) in 2012, but the Commission's assessment revealed that GES was inadequate or partially adequate for a majority of descriptors. However, on the positive side, the attention given to seabird abundance is encouraging[41].

It is however too early to say whether Lithuanian marine waters are in good status because of these inadequacies in defining what ''good environmental status'' is.

Lithuania established a monitoring programme of its marine waters in 2014. However it seems that its monitoring programmes for all descriptors apart from eutrophication, hydrographical changes and contaminants in seafood need further refinement to constitute an appropriate framework to monitor progress towards GES and targets, especially since Lithuania also reports that its monitoring programme will not be in place before (or even after in many cases) 2020 for most descriptors[42].

Lithuanian marine protected areas covered 673.8 square kilometres of its marine waters in the Baltic Sea[43].

In its reports on the implementation of the MSFD[44], the Commission provided guidance to assist Lithuania in its implementation of the Directive.

The use and protection of marine areas of Lithuania are regulated by the Upgrading of the Comprehensive Plan of the Republic of Lithuania by Marine Areas, approved by the Parliament of the Republic of Lithuania by the Resolution No. XII-1781 on 11th of June, 2015.

[36] Lithuanian Geological Survey. Annual Report, 2015.
[37] National Environment Protection Strategy
[38] Management Plan of Contaminated sites for 2013-2023
[39] European Union, Marine Strategy Framework Directive 2008/56/EC
[40] The MSFD defines Good Environmental Status (GES) in Article 3 as: "The environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive"
[41] Report from the Commission "The first phase of implementation of the Marine Strategy Framework Directive (2008/56/EC) - The European Commission's assessment and guidance" COM(2014)097
[42] Commission Staff Working Document Accompanying the Commission Report assessing Member States' monitoring programmes under the Marine Strategy Framework Directive (COM(2017)3 and SWD(2017)1 final)
[43] 2012 Data provided by the European Environmental Agency to the European Commission– Not published
[44] Report from the Commission "The first phase of implementation of the Marine Strategy Framework Directive (2008/56/EC) - The European Commission's assessment and guidance" COM(2014)097

Suggested action

- Continue work to improve the definitions of GES in particular for biodiversity descriptors, including through regional cooperation by using the work of the relevant Regional Sea Convention.
- Identify and address knowledge gaps.
- Further develop approaches assessing (and quantifying) impacts from the main pressures in order to lead to improved and more conclusive assessment results for 2018 reporting.
- Continue to integrate monitoring programmes already existing under relevant EU legislation, and to implement, where they exist, joint monitoring programmes developed at (sub)regional level, for instance by HELCOM.
- Enhance comparability and consistency of monitoring approaches within its marine region.
- Urgently report and implement its programme of measures[45].
- Ensure that the monitoring programme is implemented without delay, addresses all descriptors and is appropriate to monitor progress towards GES.

[45] As of 7.10.2016, Lithuania has not yet reported its programme of measures to the Commission.

3. Ensuring citizens' health and quality of life

Air quality

The EU Clean Air Policy and legislation require that air quality in the Union is significantly improved, moving closer to the WHO recommended levels. Air pollution and its impacts on 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 Union air quality legislation and defining strategic targets and actions beyond 2020.

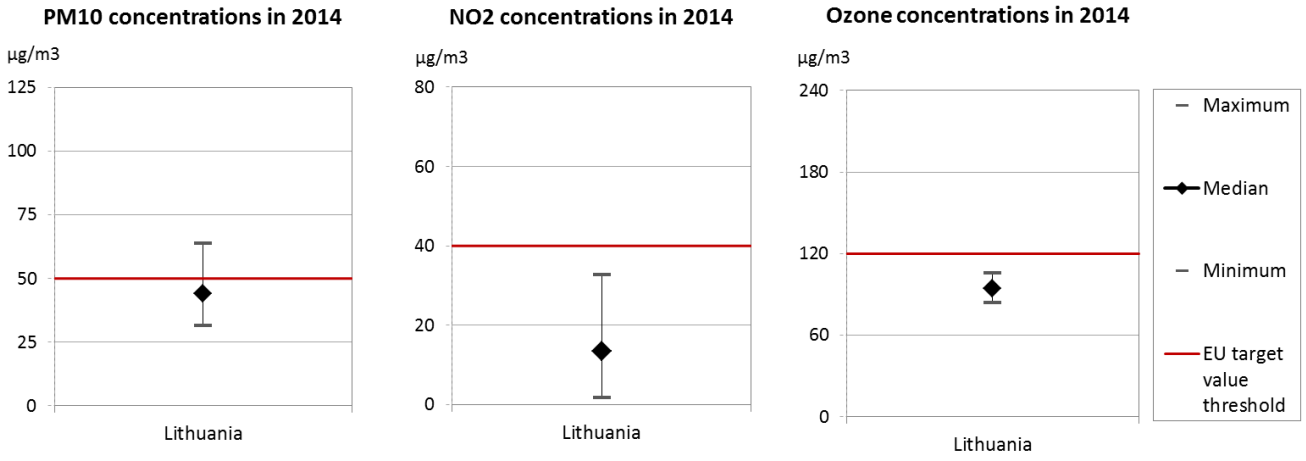
The EU has developed a comprehensive suite of air quality legislation[46], which establishes health-based standards and objectives for a number of air pollutants. As part of this, Member States are also required to ensure that up-to-date information on ambient concentrations of different air pollutants is routinely made available to the public. In addition, the National Emission Ceilings Directive provides for emission reductions at national level that should be achieved for main pollutants.

The emission of several air pollutants has decreased significantly in Lithuania[47]. Reductions between 1990 and 2014 for sulphur oxides (-89%), nitrogen oxides (-60%), ammonia (-52%) as well as volatile organic compounds (-52%) ensure air emissions for these pollutants are within the currently applicable national emission ceilings[48].

At the same time, air quality in Lithuania continues to give cause for concern. For the year 2013, the European Environment Agency[49] estimated that about 3 170 premature deaths were attributable to fine particulate matter concentrations[50] and 90 to ozone concentrations[51]. This is due also to exceedances above the EU air quality standards such as shown in Figure 9[52].

For 2014, exceedances above the EU air quality standards have been registered for particulate matter in one air quality zone (Vilnius). Furthermore, exceedances have been registered for long-term objectives regarding ozone concentration in three air quality zones for daily concentration and in one air quality zone for annual

Figure 9: Attainment situation for PM10, NO2 and O3 in 2014



Note: *These graphs show concentrations as measured and reported by the Member State at different locations; specifically they show, (a) for PM10, the 90.4 percentile of daily mean concentration, which corresponds to the 36th highest daily mean, (b) for NO2, the annual mean concentration, and (c) for O3, the 93.2 percentile of maximum daily 8-hour mean concentration values, which corresponds to the 26th highest daily maximum. For each pollutant they depict both the lowest and highest concentration reported, as well as the median values (i.e. note that 50% of the stations report lower concentrations than the respective median value, the other 50% report higher concentrations). The air quality standards as set by EU legislation are marked by the red line.*

[46] European Commission, 2016. Air Quality Standards

[47] See EIONET Central Data Repository and Air pollutant emissions data viewer (NEC Directive)

[48] The current national emission ceilings apply since 2010 (Directive 2001/81/EC); revised ceilings for 2020 and 2030 have been set by Directive (EU) 2016/2284 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC.

[49] European Environment Agency, 2016. Air Quality in Europe – 2016 Report. (Table 10.2, please see details in this report as regards the underpinning methodology).

[50] 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.

[51] Low level ozone is produced by photochemical action on pollution and it is also a greenhouse gas

[52] Based on European Environment Agency, 2016. Air Quality in Europe – 2016 Report. (Figures 4.1, 5.1 and 6.1)

mean concentration[53].

It has been estimated that the health-related external costs from air pollution in Lithuania are above EUR 1 billion/year (income adjusted, 2010), which include not only the intrinsic value of living a full health life but also direct costs to the economy. These direct economic costs relate to 488 thousand workdays lost each year due to sickness related to air pollution, with associated costs for employers of EUR 37 million/year (income adjusted, 2010), for healthcare of above EUR 5 million/year (income adjusted, 2010), and for agriculture (crop losses) of EUR 17 million/year (2010)[54].

In 2014-2020, EUR 20 million of ESI funds are planned for actions ensuring better air quality and integrated pollution prevention and control.

Suggested action

- Maintain downward emissions trends of air pollutants in order to achieve full compliance with air quality limit values - and reduce adverse air pollution impacts on health, environment and economy.
- Reduce PM_{10} emission and concentration, inter alia, by reducing emissions related to energy and heat generation using solid fuels, to transport and to agriculture.

Noise

The Environmental Noise Directive provides for a common approach for the avoidance, prevention and reduction of harmful effects due to exposure to environmental noise.

Excessive noise is one of the main causes of health issues[55]. To alleviate this, the EU *acquis* sets out several requirements, including assessing the exposure to environmental noise through noise mapping, ensuring that information on environmental noise and its effects is made available to the public, and adopting action plans with a view to preventing and reducing environmental noise where necessary and to preserving the acoustic environment quality where it is good.

Lithuanian authorities have fulfilled all their obligations with regards to the Environmental Noise Directive[56] for the current reporting period.

[53] See The EEA/Eionet Air Quality Portal and the related Central Data Repository

[54] These figures are based on the Impact Assessment for the European Commission Integrated Clean Air Package (2013)

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

[56] The Noise Directive requires Member States to prepare and publish, every 5 years, noise maps and noise management action plans for agglomerations with more than 100,000 inhabitants, and for major roads, railways and airports.

Water quality and management

The EU water policy and legislation require that the impact of pressures on transitional, coastal and fresh waters (including surface and ground waters) is significantly reduced to achieve, maintain or enhance good status of water bodies, as defined by the Water Framework Directive; that citizens throughout the Union benefit from high standards for safe drinking and bathing water; and that the nutrient cycle (nitrogen and phosphorus) is managed in a more sustainable and resource-efficient way.

SDG 6 encourages countries to ensure availability and sustainable management of water and sanitation for all.

The main overall objective of EU water policy and legislation is to ensure access to good quality water in sufficient quantity for all Europeans. The EU water *acquis*[57] seeks to ensure good status of all water bodies across Europe by addressing pollution sources (from e.g. agriculture, urban areas and industrial activities), physical and hydrological modifications to water bodies) and the management of risks of flooding.

River Basin Management Plans (RBMPs) are a requirement of the Water Framework Directive and a means of achieving the protection, improvement and sustainable use of the water environment across Europe. This includes surface freshwaters such as lakes and rivers, groundwater, estuaries and coastal waters up to one nautical mile.

In its first generation of RBMPs Lithuania reported the status of 832 rivers, 354 lakes, 4 transitional, 2 coastal and 20 groundwater bodies[58]. 50% of natural surface water bodies achieve a good or high ecological status[59] and only 37% of heavily modified or artificial water bodies[60] achieve a good or high ecological potential. Almost 100% of surface water bodies, almost 100% of heavily modified and artificial water bodies and 100% of groundwater bodies achieve good chemical status[61]. Though 100% of groundwater bodies are in good

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

[58] For groundwater, a precautionary approach has been taken that comprises a prohibition on direct discharges to groundwater, and a requirement to monitor groundwater bodies.

[59] Good ecological status is defined in the Water Framework Directive referring to the quality of the biological community, the hydrological characteristics and the chemical characteristics.

[60] Many European river basins and waters have been altered by human activities, such as land drainage, flood protection, and, building of dams to create reservoirs.

[61] Good chemical status is defined in the Water Framework Directive referring to compliance with all the quality standards established for chemical substances at European level.

quantitative and chemical status, and 5 groundwater bodies are classified as "groundwater bodies at risk" because of mineral water intrusion to drinking water aquifers.

The main pressure for the Lithuanian surface water is diffuse pollution[62] mainly from agriculture that affects 26% of water bodies on average.

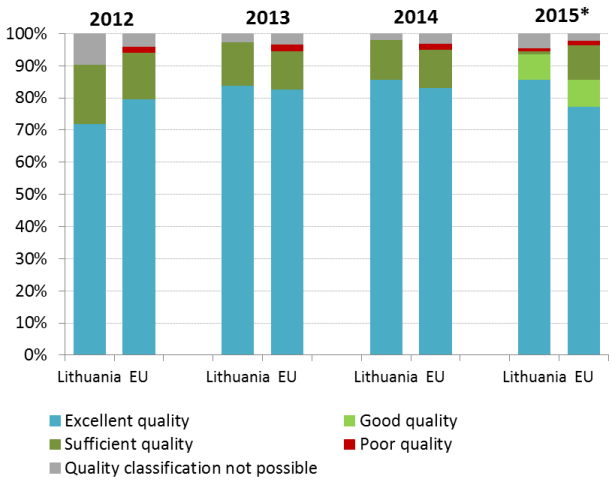
The Lithuanian RBMPs have a number of deficiencies that result in uncertainties about the status, pressures and effectiveness of Programmes of Measures. In particular there were weaknesses in monitoring and methods for assessment and classification of both the ecological and chemical status. A high number of exemptions were applied without transparent justification. The planned measures are expected to result in significant improvement of ecological potential of artificial and heavily modified water bodies by 24% and improvement of ecological status by 7% for natural water bodies.

Lithuania applies its Nitrates Action Programme (NAP) throughout its territory which provides a basic level of protection for all waters. The current Action Programme expired on 1 May 2016. According to the last report on the implementation of the Nitrates Directive (referring to the period 2008-2011), there are low levels of nitrate in surface water and groundwater but high levels of eutrophication in rivers. Protection of the Baltic Sea is also an issue (all saline waters were reported as eutrophic).

As regards drinking water, Lithuania reaches very high compliance rates of 99-100% for microbiological, chemical and indicator parameters laid down in the Drinking Water Directive[63].

Figure 10 shows that in 2015 in Lithuania out of 112 bathing waters, 85.7% were of excellent quality, 8.0% of good quality and 0.9% of sufficient quality. 1 bathing water was of poor quality or non-compliant while it was not possible to assess the remaining 5 bathing waters.[64]

Figure 10: Bathing water quality 2012–15[65]



**The category 'good' was introduced in the 2015 bathing water report*

With a total generated load of 2.7 million population equivalents (p.e.), the final deadline to fully comply with the Urban Waste Water Treatment Directive (UWWTD) in Lithuania was end 2009 for all 67 agglomerations above 2000 p.e. It should be noted that all the Lithuanian territory is considered as sensitive, i.e., more stringent treatment is applicable in all the agglomerations whose size is above10000 p.e. On the basis of the latest data available (2011), Lithuania demonstrates very high compliance rates with the Urban Waste Water Treatment Directive (with rates of 100% for both collection (Article 3 UWWTD) and secondary treatment (Article 4 UWWTD)) and 96.6% of the waste water load collected subject to more stringent treatment in accordance with Article 5 of the UWWTD.[66] However, and despite the general good results, it should be noted that 10.2% of the above-mentioned total p.e. is addressed via individual or other systems whose appropriateness to protect the environment might be questionable.

EU structural and investment funds are an important source of funding for water sector in Lithuania. In 2007-2013 around 570 million EUR were invested into the waste water collection and treatment system.

In 2014-2020, around 125 million EUR are planned for water management measures that will help to further develop waste water collection and treatment systems and improve environmental status of at least 20 surface water bodies.

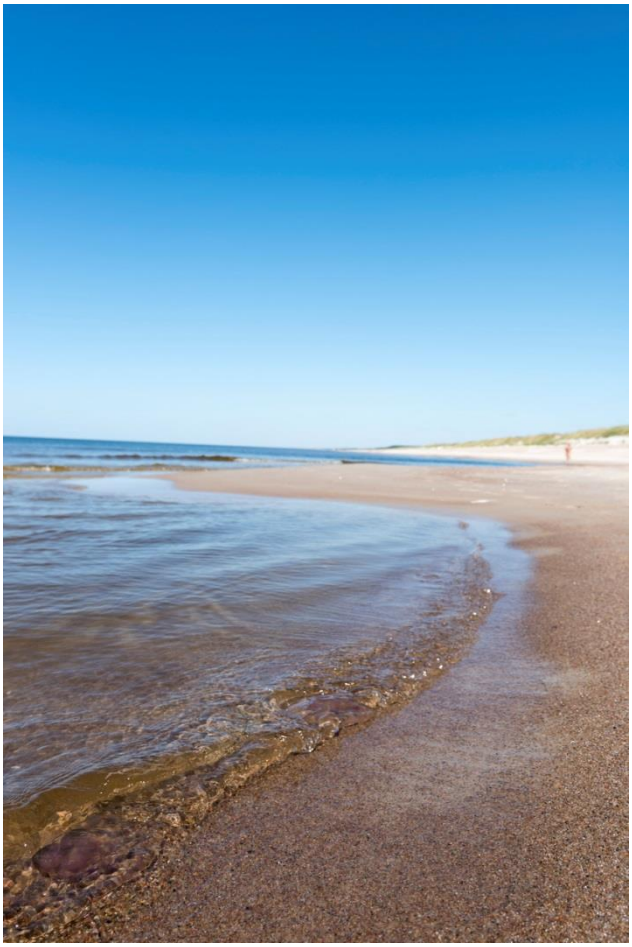
[62] Diffuse pollution comes from widespread activities with no one discrete source.

[63] Commission's Synthesis Report on the Quality of Drinking Water in the Union examining Member States' reports for the 2011-2013 period, foreseen under Article 13(5) of Directive 98/83/EC; COM(2016)666

[64] European Environment Agency, 2016. European bathing water quality in 2015, p. 26

[65] European Environment Agency, State of bathing water – country report Lithuania, 2016

[66] European Commission, Eighth Report on the Implementation Status and the Programmes for Implementation (as required by Article 17) of Council Directive 91/271/EEC concerning Urban Waste Water treatment Directive (COM /2016/105 final) and Commission Staff Working Document accompanying the report (SWD/2016/45 final).



Suggested action

- The RBMP measures should address all relevant pressures and implementation gaps in particular measures addressing agricultural pollution by nutrients. Measures should be properly financed.
- Properly assess new modifications of water bodies according to article 4(7) of the WFD, as well as review and improve its measures to reduce the hydromorphological pressure in its river basins.

Enhancing the sustainability of cities

The EU Policy on the urban environment encourages cities to implement policies for sustainable urban planning and design, including innovative approaches for urban public transport and mobility, sustainable buildings, energy efficiency and urban biodiversity conservation.

SDG11 aims at making cities and human settlements inclusive, safe, resilient and sustainable.

Europe is a Union of cities and towns; around 75% of the EU population are living in urban areas.[67] The urban environment poses particular challenges for the environment and human health, whilst also providing opportunities and efficiency gains in the use of resources.

The Member States, European institutions, cities and stakeholders have prepared a new Urban Agenda for the EU (incorporating the Smart Cities initiative) to tackle these issues in a comprehensive way, including their connections with social and economic challenges. At the heart of this Urban Agenda will be the development of twelve partnerships on the identified urban challenges, including air quality and housing[68].

The European Commission will launch a new EU benchmark system in 2017[69].

The EU stimulates green cities through awards and funding, such as the EU Green Capital Award aimed at cities with more than 100,000 inhabitants and the EU Green Leaf initiative aimed at cities and towns, with between 20,000 and 100,000 inhabitants.

67 % of Lithuanian residents live in urban areas.[70]. The capital city (Vilnius) has over 500 000 inhabitants, second tier cities (Kaunas, Klaipėda, Šiauliai) are smaller. Lithuanian urban areas are evenly distributed throughout the territory of the country and are easily accessible[71]. Lithuanian cities are rich in green space. Green Cities Index produced by Siemens and the Economist Intelligence Unit ranked Vilnius as one of 30 Europe's greenest cities[72].

Kaunas, the 2nd largest city in Lithuania, with a population of 353,800 inhabitants) was amongst applicant countries for European Green Capital Award 2015.

Major Lithuanian cities are densifying the existing urban areas (low percentage of built-up areas)[73] indicating the potential for these cities to grow. A current challenge to major cities is negative externalities of agglomeration (unregulated urban growth with major specific environmental problems, such as derelict urban areas with technical infrastructure, the poor quality of air, noise, traffic jams). Cities municipalities lack funds for the implementation of masterplans, management of public spaces and blocks of multi-apartment buildings, improvement of communication and engineering infrastructure, or for taking care of derelict urban areas that require a change in their use.

Kaunas city municipality has invested in city public transport, and also participated in various EU programs (CIVITAS, BSR INTERREG, IEE). It installed an electronic

[67] European Environment Agency, Urban environment

[68] http://urbanagendaforthe.eu/

[69] The Commission is developing an Urban Benchmarking and Monitoring ('UBaM') tool to be launched in 2017. Best practices emerge and these will be better disseminated via the app featuring the UBaM tool, and increasingly via e.g. EUROCITIES, ICLEI, CEMR, Committee of the Regions, Covenant of Mayors and others.

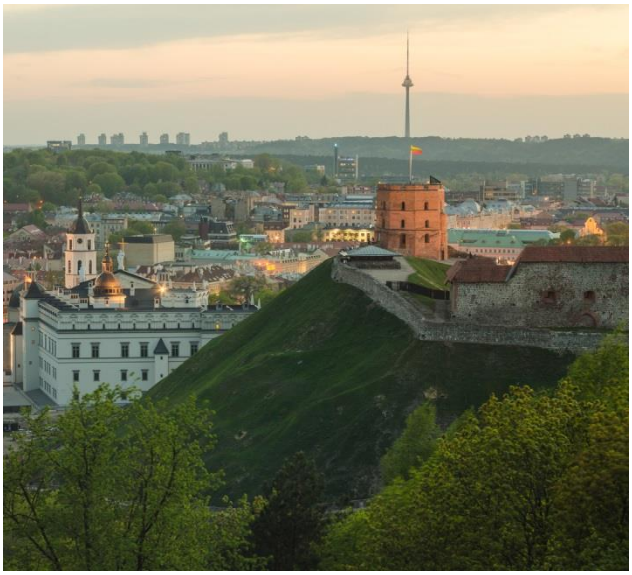
[70] Statistics Lithuania, Official Statistics Portal

[71] The National Environmental Protection Strategy, 2015

[72] Green Cities Index, 2010

[73] ESPON Future Orientations for Cities (FOCI), Final Scientific Report, 2010

payment method for the benefit of public transport passengers. Passengers using a single monthly E-ticket scheme (operating on radio-frequency identification) can pre-pay for journeys on buses as well as parking services in the city.



Klaipėda has successful implementation of industrial development through potential of Klaipėdos FEZ and Klaipėdos State Seaport (Industrial park development)[74]. In 2013 Klaipėda was declared a Cycling Friendly City by the Lithuanian Ministry of Transport and Communications.

Šiauliai participates in the project "Urban renewal improving their energy characteristics of Lithuania".

The most successful municipalities apply integrated methods of spatial planning for the management of urban environment (Vilnius, Kaunas, Klaipėda have started to prepare sustainable urban mobility plans). Some municipalities have no territorial master plans for municipal centres. This situation leads to an erratic socio-economic development, complicates investment and intensifies the uneven development of areas.

The National Environmental Protection Strategy[75] has been drown up in order to establish horizontal long-term environmental objectives and will serve as the basis for the environmental pillar of Lithuania's sustainable development. Key policy implementing directions for urban environment covers:

- Promotion of sustainable planning of cities and peri-urban territories;
- Promotion of the development and implementation of sustainable urban transport communication plans for the purpose of reducing an adverse impact on human health and the environment (air pollution, noise, traffic jams and greenhouse gas emissions);
- Development and use of research, innovation and solutions on urban issues.

Vilnius is moving towards sustainable urban regeneration[76]. This involves a number of projects, including the regeneration project 'Park of Architecture" (i.e. decontamination of a 78 ha brownfield site, construction of green spaces, etc.); and the regeneration of "Žirmūnai Tringle", which concerns a 52 hectare neighbourhood in a strategic location of Vilnius. It involves energy-efficient renovation, safeguarding green spaces, expanding bicycle and pedestrian infrastructures. "Žirmūnai Triangle" is being carried out as a pilot innovative regeneration project, which could be subsequently applied in other parts of Lithuania.

Conversion of former industrial and utility areas to residential/commercial areas is currently being intensified (Naujamiestis, Markučiai, Saltoniškės), also conversion of abandoned industrial areas to the service facilities or residential areas (between Kalvarijų and Verkių streets, Savanorių Avenue, Naujamiestis). New squares have been equipped in Old town, Bernardinai garden has been renovated[77].

A number of initiatives are covered under the Union of the Baltic Cities Sustainable Cities Commission, which is a voluntary network of its member cities of the Baltic Sea Region addressing a number of issues, including environmentally sustainable development. This includes such initiatives as integrated management systems and spatial management, urban water management, maritime activities and sustainable urban mobility.

Furthermore, already in 2009 Lithuania has signed an agreement with the European Investment Bank to strengthen co-operation in financing sustainable urban development.

International agreements

The EU Treaties require that the Union policy on the environment promotes measures at the international level to deal with regional or worldwide environmental problems.

Most environmental problems have a transboundary nature and often a global scope and they can only be addressed effectively through international co-operation. International environmental agreements concluded by the Union are binding upon the institutions of the Union and on its Member States. This requires the EU and the Member States to sign, ratify and effectively implement all relevant multilateral environmental agreements (MEAs) in a timely manner. This will also be an important contribution towards the achievement of the SDGs, which Member States committed to in 2015 and include

[74] Klaipėda Master Plan monitoring report, 2007-2014
[75] The National Environmental Protection Strategy, 2015
[76] The path towards sustainable urban regeneration in Vilnius, URBACT II Capitalisation, April 2015
[77] Reconstruction of the Park of Sereikiškės, Technical project.

many commitments contained already in legally binding agreements.

The fact that some Member States did not sign and/or ratify a number of MEAs compromises environmental implementation, including within the Union, as well as the Union's credibility in related negotiations and international meetings where supporting the participation of third countries to such agreements is an established EU policy objective. In agreements where voting takes place it has a direct impact on the number of votes to be cast by the EU.

Lithuania has signed and ratified almost all MEAs. It has signed but not yet ratified the Nagoya Protocol[78].

[78] Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity.

Part II: Enabling Framework: Implementation Tools

4. Market based instruments and investment

Green taxation and environmentally harmful subsidies

The Circular Economy Action Plan encourages the use of financial incentives and economic instruments, such as taxation to ensure that product prices better reflect environmental costs. The phasing out of environmentally harmful subsidies is monitored in the context of the European Semester and in national reform programmes submitted by Member States.

Taxing pollution and resource use can generate increased revenue and bring important social and environmental benefits.

While Lithuania has broadened its tax base, however, it remains one of MS having relatively high tax burden on labour. There is a scope to shift the tax burden to less distortive taxes such as, inter alia, environmental taxes.

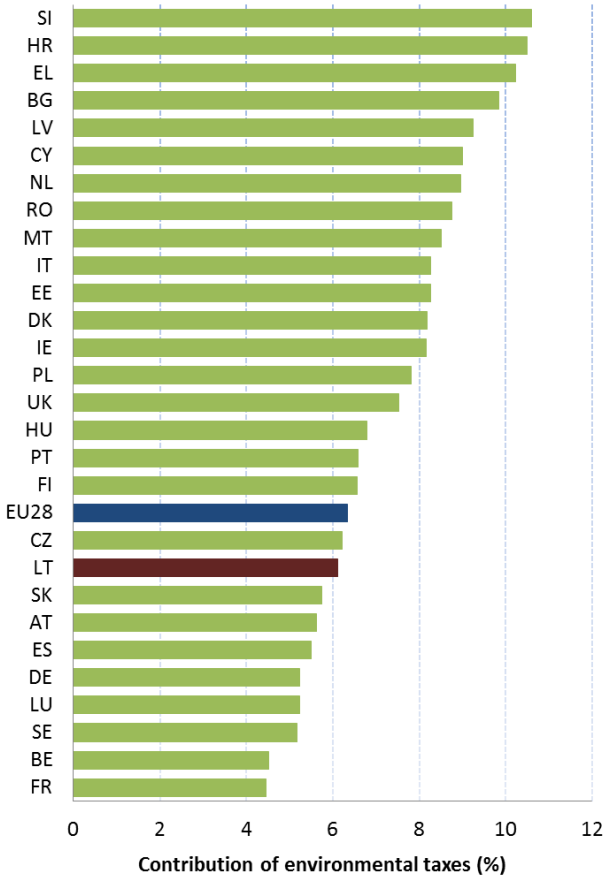
In 2014, the ratio of tax revenues to GDP in Lithuania is the lowest in the EU, while at the same time environmental taxes, as a potential source of revenues, remain unexploited. After a large drop in the share of environmental taxes from 2.8% of GDP in 2004 to 1.7% in 2011, it remained stagnant in 2014. In the same year environmental tax revenues accounted for 6.13% of total revenues from taxes and social-security contributions (EU 28 average: 6.35%)[79] as shown in Figure 11.

The largest proportion of the revenue derived from environmentally-related taxation is obtained through energy taxes. Pollution/resource and transport taxes (excluding transport fuels) have produced smaller revenue streams with each group of taxes constituting around 3% of environmental taxes. Taxes on transport in Lithuania are the lowest in the EU, and besides a low level, they do not take into account the environmental performance of vehicles[80].

The progress shifting tax burden from labour to other less distortive taxes has been limited in Lithuania. Certain issues, such as the absence of vehicle taxation, still persist.

In particular, Lithuania is among the few Member States without any form of private passenger car taxation or road-use tax for private passenger vehicles. In addition, Lithuania has a large share of old cars in the existing car fleet and the emissions of newly registered cars in Lithuania are well above the EU average[81].

Figure 11: Environmental tax revenues as a share of total revenues from taxes and social contributions (excluding imputed social contributions) in 2014[82]



The previously abandoned debate on the introduction of car taxation in Lithuania restarted in 2015. In March 2015 the Minister of Transport expressed his support to the introduction of such tax. In July, the Ministry of Environment has carried out a feasibility study to investigate the possibilities of introducing car taxation on private passenger cars[83,84]. It recommends introduction of environmental car circulation tax with the calculation

[79] Eurostat, Environmental tax revenues, accessed June 2016

[80] Taxation trends in the EU (Eurostat, 2014); Tax Reforms in EU Member States 2014 (TAXUD)

[81] The average age of passenger cars in Lithuania is around 15 years while it is between 7 and 8 years in the EU (Source: DG ECFIN Country Focus, Vol. 12, 2014. New passenger car missions are 135.82 g CO2/km against the EU average of 123.40 g CO2/km (Source: EEA, 2014, provisional values).

[82] Eurostat, Environmental tax revenues, accessed October 2016

[83] Commission Staff Working Document, Country Report Lithuania 2016

[84] "Development of the criteria for determining the rates of vehicle circulation tax and formulation of recommendations for the taxation of vehicles in Lithuania", July 2015, Summary report.

of the tariffs based on CO2 emissions and type of fuel, and estimates that such tax could bring up to 76.6 million EUR a year.

Besides the additional revenues, the introduction of car taxation would also help addressing energy and carbon efficiency issues (the Baltics being amongst the most energy–intensive in the EU), support a modal shift from private to public transport, as well as reduce the very high number of people killed in road accidents[85]. Circulation tax differentiated by CO2 emissions and other pollutants such as particulates, as well as a dynamic bonus malus system for car registration implemented in a socially acceptable manner could positively influence future decisions on purchasing new vehicles, while at the same time could bring considerable additional revenues.

Excise duties on motor fuel, petrol and diesel in Lithuania are among the lowest in EU. The overall implicit tax rate on energy is the 3rd lowest in the EU-28.[86]

No major progress has been made regarding environmental taxation over the last years. A landfill tax (with a progressive increase from 3 EUR/t to 27.51 EUR/t for non-hazardous waste, and from 47.79 EUR/t to 70.96 EUR/t for hazardous waste until 2020) and excise duties on natural gas (used as a heating fuel) have been introduced from January 2016. The landfill tax could encourage resource efficiency in waste management and divert waste from landfill

Indeed, a 2016 study shows there is considerable potential for shifting taxes from labour to environment[87]. Under a good practice scenario[88], these taxes could generate an additional EUR 0.36 billion by 2018, rising to EUR 0.76 billion by 2030 (both in real 2015 terms). This is equivalent to an increase by 0.85% and 1.22% of GDP in 2018 and 2030, respectively.

In 2014, a study on the "Naming of environmentally harmful subsidies, and determination of their common values in the tax system setting. Methodology for evaluation of environmentally harmful subsidies" was carried out in Lithuania. The study has identified 37 environmentally harmful subsidies in Lithuania, composing of 79% of the National budget subsidies and 22% of EU support subsidies. The study proposed to review the tax subsidy incentives, which are related to natural resources, mobile pollution sources and energy products gradually abandoning them.

Green Public Procurement

The EU green public procurement policies encourage Member States to take further steps to reach the target of applying green procurement criteria to at least 50% of public tenders.

Green Public Procurement (GPP) is a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life-cycle when compared to goods, services and works with the same primary function that would otherwise be procured.

The purchasing power of public procurement in the EU equals to approximately 14% of GDP[89]. A substantial part of this money is spent on sectors with high environmental impact such as construction or transport, so GPP can help to significantly lower the impact of public spending and foster sustainable innovative businesses. The Commission has proposed EU GPP criteria[90].

A National Action Plan (NAP) or National Strategy on GPP is in force, and the implementation measures of GPP for the period 2016–2020 was approved in October 2015. GPP criteria are developed at the national level for environmental criteria for 26 products attributed to 4 groups[91], see webpage for the Ministry of Environment[92]. A previous aim was to achieve 35% green public procurement contracts of all public contracts for goods, services and works, for the purchase of which core (mandatory) and comprehensive (advisable) environmental criteria are established in 2015.[93]

According to a 2010 study, 10% and 20% of Lithuanian authorities included GPP requirements in between 50% and 100% of their contracts[94].

[85] Passenger car taxation in Baltics (ECFIN country focus):"the renewal of the car fleet and the reduction in engine power and car mass could help reduce other externalities such as the very high number of people killed in road accidents in the Baltic States". In 2013, Lithuania had the 4th of the highest number of road deaths in the EU – 85 fatalities per million inhabitants, way above the EU average of 52 (ref. Road Safety in the European Union (2015)).

[86] EUROSTAT (Code: tsdcc360)

87 Eunomia Research and Consulting, IEEP, Aarhus University, ENT, 2016. Study on Assessing the Environmental Fiscal Reform Potential for the EU28. N.B. National governments are responsible for setting tax rates within the EU Single Market rules and this report is not suggesting concrete changes as to the level of environmental taxation. It merely presents the findings of the 2016 study by Eunomia *et al* on the potential benefits various environmental taxes could bring. It is then for the national authorities to assess this study and their concrete impacts in the national context. A first step in this respect, already done by a number of Member States, is to set up expert groups to assess these and make specific proposals.

[88] The good practice scenario means benchmarking to a successful taxation practice in another Member State.

[89] European Commission, 2015. Public procurement

[90] 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.

[91] European Commission, 2015. Documentation on National GPP Action Plans

[92] Ministry of Environment, Environmental criteria por public procurement

[93] European Commission, 2015. Documentation on National GPP Action Plans

According to a 2011 survey, Lithuanian authorities included at least one of the EU core green criteria in 56% of the contracts, and 33% of the contracts included all the relevant EU core green criteria.[95].

No data is available in regard to the achievement of this goal.

Investments: the contribution of EU funds

European Structural and Investment Funds Regulations provide that Member States promote environment and climate objectives in their funding strategies and programmes for economic, social and territorial cohesion, rural development and maritime policy, and reinforce the capacity of implementing bodies to deliver cost-effective and sustainable investments in these areas.

Making good use of the European Structural and Investment Funds (ESIF)[96] is essential to achieve the environmental goals and integrate these into other policy areas. Other instruments such as the Horizon 2020, the LIFE programme and EFSI may also support implementation and spread off best practice.

Lithuania, through 3 national and regional programmes, benefits from ESIF funding of EUR 8.4 billion over the period 2014-2020 (see Figure 12)[97].

The biggest share – EUR 3.5 billion (41.8%) of funding is coming from the European Fund for Regional Development (ERDF).

EUR 1.6 billion (19.2%) – from the European Agricultural Fund for Rural Development (EAFRD).

EUR 1.1 billion (13.4%) - from the European Social Fund (ESF).

EUR 63.4 million (0.8%) from the European Maritime and Fisheries Fund (EMFF) and

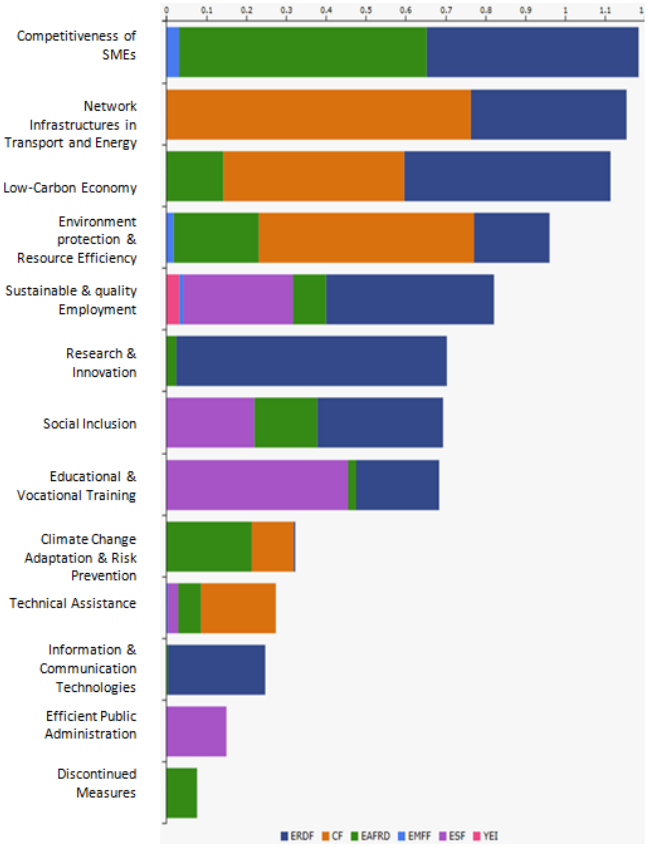
EUR 2.1 billion (24.4%) - from the Cohesion Fund (CF).

The environmental expenditure estimates to around 1 billion EUR or 18% of the total ERDF and CF (based on categories of expenditure). These investments target water, waste, air, biodiversity and nature, sustainable urban transport. Among other things the EU investment will help to reduce landfilling of municipal waste to 35% in 2023 (60% in 2014), develop additional municipal waste separate collection and recycling capacity (150.000 and 100.000 tons a year respectively), ensure improved water supply and wastewater management services for 60.000 persons, support 1,150 hectares of surface area of habitats to attain better conservation status.

In addition, 970 million EUR (or 13,5% of ERDF and CF) are earmarked for the shift to low carbon technologies in all sectors, including support to energy efficiency, increase of the use of renewable energy sources, sustainable transport and urban mobility measures.

It is too early to draw conclusions as regards the use and results of ESIF funds for the period 2014-2020, as the relevant programmes are still in an early stage of their implementation. Current data suggest that the EU funds for the 2007-2013 period were almost fully spent. However, Lithuania would benefit from more targeted investments.

Figure 12: European Structural and Investment Funds 2014-2020: Budget Lithuania by theme, EUR billion[98]



In total, EUR 960 million a dedicated to the Thematic objective (TO) 6 *Environment Protection and Resource efficiency*, EUR 539.3 million through the CF, EUR 214.1 million through the EAFRD programme, EUR 189.6 million through the ERDF programmes, EUR 17.6 million through the EMFF. In addition, EUR 1.1 billion is foreseen for TO4 *Low Carbon Economy* (ERDF, CF, EMFF and EAFRD) and EUR 322.9 million for TO5 *Climate Change Adoption and Risk Prevention* (EAFRD, CF and ERDF).

[95] CEPS, 2012. Monitoring the Uptake of GPP in the EU

[96] 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.

[97] European Commission : European Structural and Investment Funds Country Data for Lithuania

[98] European Commission, European Structural and Investment Funds Data By Country

With regard to the integration of environmental concerns into the Common Agricultural Policy (CAP), the two key areas for Lithuania (as for all Member States) are, first, using Rural Development funds to pay for environmental land management and other environmental measures, while avoiding financing measures which could damage the environment; and secondly, ensuring an effective implementation of the first pillar of the CAP with regard to cross compliance and 1st pillar 'greening'.

The approved National Rural Development Program (EARDF) amounts overall to EUR 1.613 billion. The planned spending on the ecosystem priority is EUR 0.431 billion, which represents 26.7% of the total budget, but only EUR 0.179 billion, 11.1% of the total budget is dedicated to agri-environment-climate measures. It is recognised that environment and climate measures proposed in the RDP, with adequate uptake and now improved funding, have the potential to contribute to addressing the environmental problems identified. The RDP contribution to the delivery of the required regulatory outcomes of "good status of water" and the "good conservation status of species and habitats" needs to be aligned further and monitored as the program evolves especially in the context of potential increased agricultural intensity. Lithuania should strengthen the development of biodiversity aspects in the Rural Development Programme.

The Direct Payment envelope of Lithuania for the period 2015-2020 is EUR 2.336 billion, (according to Commission delegated regulation (EU) No 994/2014 of 13 May 2014), 30% of which (EUR 0.701 billion) being allocated to greening practices beneficial for the environment. An environmentally ambitious implementation of 1st pillar greening would clearly help to improve the environmental situation in areas not covered by rural development, including intensive area, and if appropriate Lithuania could review its implementation of this.

6. Effective governance and knowledge

SDG 16 aims at providing access to justice and building effective, accountable and inclusive institutions at all levels. SDG 17 aims at better implementation, improving policy coordination and policy coherence, stimulating science, technology and innovation, establishing partnerships and developing measurements of progress.

Effective governance of EU environmental legislation and policies requires having an appropriate institutional framework, policy coherence and coordination, applying legal and non-legal instruments, engaging with non-governmental stakeholders, and having adequate levels of knowledge and skills[99]. Successful implementation depends, to a large extent, on central, regional and local government fulfilling key legislative and administrative tasks, notably adoption of sound implementing legislation, co-ordinated action to meet environmental objectives and correct decision-making on matters such as industrial permits. Beyond fulfilment of these tasks, government must intervene to ensure day-to-day compliance by economic operators, utilities and individuals ("compliance assurance"). Civil society also has a role to play, including through legal action. To underpin the roles of all actors, it is crucial to collect and share knowledge and evidence on the state of the environment and on environmental pressures, drivers and impacts.

Equally, effective governance of EU environmental legislation and policies benefits from a dialogue within Member States and between Member States and the Commission on whether the current EU environmental legislation is fit for purpose. Legislation can only be properly implemented when it takes into account experiences at Member State level with putting EU commitments into effect. The Make it Work initiative, a Member State driven project, established in 2014, organizes a discussion on how the clarity, coherence and structure of EU environmental legislation can be improved without lowering existing protection standards.

Effective governance within central, regional and local government

Those involved in implementing environment legislation at Union, national, regional and local levels need to be equipped with the knowledge, tools and capacity to improve the delivery of benefits from that legislation, and the governance of the enforcement process.

Capacity to implement rules

It is crucial that federal, regional and local administrations have the necessary capacities and skills and training to carry out their own tasks and co-operate and co-ordinate effectively with each other, within a system of multi-level governance.

In the 2014-2020 programming period is foreseen to allocate EUR 150 million (or 13.3% from the ESF) at increasing the efficiency of public administration institutions, developing and executing national public administration reforms and implementing one of the Council recommendations related to the reform of state-owned enterprises. Specific action include strengthening result-orientation of governance, increasing transparency and openness of the public administration processes, improving the quality of services and make them more customer-oriented, improving business regulation environment, and improving management of human resources in the public service.[100]

The government of Lithuania has recognised the strategic importance of civic engagement in law-making, policy making, and service delivery; and has established a conducive legal framework and multiple mechanisms to support it. Nevertheless, citizens' engagement rates remain fairly low.[101]

The basic principles of environmental protection are established in the Constitution of the Republic of Lithuania, stipulating that the state and the individual must protect the environment from harmful influences and the state shall take care of the protection of the natural environment, wildlife and plants, individual objects of nature and areas of particular value and shall supervise a sustainable use of natural resources, their restoration and increase. The law states that, in the Republic of Lithuania, environmental governance is the concern and duty of the Parliament, the Government,

[99] The Commission has work ongoing to improve the country-specific knowledge about quality and functioning of the administrative systems of Member States.

[100] Lithuanian Operational Programme for the European Union Funds' Investments in 2014-2020

[101] OECD, 2015. Lithuania: Fostering Open and Inclusive Policy Making

the Ministry of Environment, and the municipalities at the respective levels.

Lithuania transposes new directives into the national legislation respecting the established timelines and communicates national transposing measures relatively fast. There is a rather low number of complaints.

Coordination and integration

Lithuania adopted its National Sustainable development strategy in 2009 and National Environment Protection Strategy in 2015 and National Environment Protection Strategy in 2015.

Environmental issues fall within the area of governance of the Ministry of Environment (Aplinkos ministerija). There are a number of subordinate institutions: five agencies, eight regional departments, the State Territorial Planning and Construction Inspectorate, three enterprises (e.g. Construction production Certification Centre) and a number of directorates and services.

The Commission encourages the streamlining of the environmental assessments to avoid overlaps in environmental assessments and accelerate decision-making, without compromising the quality of the environmental assessment procedure. The Commission has issued a guidance document in 2016[102] 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.

Compliance assurance

EU law generally and specific provisions on inspections, other checks, penalties and environmental liability help lay the basis for the systems Member States need to have in place to secure compliance with EU environmental rules.

Public authorities help ensure accountability of duty-holders by monitoring and promoting compliance and by taking credible follow-up action (i.e. enforcement) when breaches occur or liabilities arise. Compliance monitoring can be done both on the initiative of authorities themselves and in response to citizen complaints. It can involve using various kinds of checks, including inspections for permitted activities, surveillance for possible illegal activities, investigations for crimes and audits for systemic weaknesses. Similarly, there is a range of means to promote compliance, including awareness-raising campaigns and use of guidance documents and online information tools. Follow-up to breaches and liabilities can include administrative action (e.g. withdrawal of a permit), use of criminal law[103] and action under liability law (e.g. required remediation after damage from an accident using liability rules) and contractual law (e.g. measures to require compliance with nature conservation contracts). Taken together, all of these interventions represent "compliance assurance" as shown in Figure 13.

Best practice has moved towards a risk-based approach at strategic and operational levels in which the best mix of compliance monitoring, promotion and enforcement is directed at the most serious problems. Best practice also recognises the need for coordination and cooperation between different authorities to ensure consistency, avoid duplication of work and reduce administrative burden. Active participation in established pan-European networks of inspectors, police, prosecutors and judges, such as *IMPEL*[104], *EUFJE*[105], *ENPE*[106] *and EnviCrimeNet*[107], is a valuable tool for sharing experience and good practices.

Figure 13: Environmental compliance assurance

Currently, there exist a number of sectoral obligations on inspections and the EU directive on environmental liability (ELD) [108] provides a means of ensuring that the "polluter-pays principle" is applied when there are accidents and incidents that harm the environment. There is also publically available information giving insights into existing strengths and weaknesses in each Member State.

For each Member State, the following were therefore reviewed: use of risk-based compliance assurance; coordination and co-operation between authorities and participation in pan-European networks; and key aspects of implementation of the ELD based on the Commission's

[102] European Commission, 2016. Commission notice — Commission guidance document on streamlining environmental assessments conducted under Article 2(3) of the Environmental Impact Assessment Directive (Directive 2011/92/EU of the European Parliament and of the Council, as amended by Directive 2014/52/EU).

[103] European Union, Environmental Crime Directive 2008/99/EC

[104] European Union Network for the Implementation and Enforcement of Environmental Law

[105] European Union Forum of judges for the environment

[106] The European Network of Prosecutors for the Environment

[107] EnviCrimeNet

[108] European Union, Environmental Liability Directive 2004/35/CE

recently published implementation report and REFIT evaluation[109].

From the available sources, no significant up-to-date information has been found on the organisation and functioning of the environmental compliance system in Lithuania. Information is lacking in particular in relation to the following:

- data-collection arrangements to track the use and effectiveness of different compliance assurance interventions;
- the extent to which risk-based methods are used to direct compliance assurance at the strategic level and in relation to industrial installations as well other critical activities, including specific problem-areas highlighted elsewhere in this Country Report, i.e. the threats to protected habitat types and species, poor air quality and the pressures on water quality from diffuse sources of pollution and reliance on individual domestic waste-water treatment systems.
- how the Lithuanian authorities ensure a targeted and proportionate response to different types of non-compliant behavior, in particular in relation to serious breaches detected.

Currently Lithuania does not actively participate in the activities of the European networks of environmental professionals.

For the period 2007 to 2013, Lithuania reported four cases of environmental damage handled according to the Environmental Liability Directive. Lithuania participated in the Commission training but there is scope for additional measures to improve implementation. The country does not have mandatory financial security (to pay for remediation when an operator cannot) and it is not evident that insurance is either sufficiently available or taken out.

Suggested action

- Improve transparency on the organisation and functioning of compliance assurance and on how significant risks are addressed, as outlined above.
- Step up efforts in the implementation of the Environmental Liability Directive (ELD) with proactive initiatives, in particular by setting up a national register of ELD incidents and drafting national guidance; take further steps to ensure an effective system of financial security for environmental liabilities (so that operators not only have insurance cover available to them but actually take it up).

[109] COM(2016)204 final and COM(2016)121 final of 14.4.2016. This highlighted the need for better evidence on how the directive is used in practice; for tools to support its implementation, such as guidance, training and ELD registers; and for financial security to be available in case events or incidents generate remediation costs.

Public participation and access to justice

The Aarhus Convention, related EU legislation on public participation and environmental impact assessment, and the case-law of the Court of Justice require that citizens and their associations should be able to participate in decision-making on projects and plans and should enjoy effective environmental access to justice.

Citizens can more effectively protect the environment if they can rely on the three "pillars" of the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters ("the Aarhus Convention"). Public participation in the administrative decision making process is an important element to ensure that the authority takes its decision on the best possible basis. The Commission intends to examine compliance with mandatory public participation requirements more systematically at a later stage.

Access to justice in environmental matters is a set of guarantees that allows citizens and their associations to challenge acts or omissions of the public administration before a court. It is a tool for decentralised implementation of EU environmental law.

For each Member State, two crucial elements for effective access to justice have been systematically reviewed: the legal standing for the public, including NGOs and the extent to which prohibitive costs represent a barrier.

Lithuania grants the public, notably individuals and NGOs, a broad access to justice in environmental cases. The costs for bringing a case to a court are also not prohibitively high. This guarantees that members of the public are provided with good conditions for asking for a judicial review in environmental matters in Lithuania. One problem, however, seems to be the lack of resource of environmental NGOs, which prevents them to follow up environmental cases to the extent necessary[110].

Access to information, knowledge and evidence

The Aarhus Convention and related EU legislation on access to information and the sharing of spatial data require that the public has access to clear information on the environment, including on how Union environmental law is being implemented.

It is of crucial importance to public authorities, the public and business that environmental information is shared in an efficient and effective way. This covers reporting by businesses and public authorities and active dissemination to the public, increasingly through

[110] European Commission, 2012/2013 access to justice in environmental matters

electronic means.

The Aarhus Convention[111], the Access to Environmental Information Directive[112] and the INSPIRE Directive[113] together create a legal foundation for the sharing of environmental information between public authorities and with the public. They also represent the green part of the ongoing EU e-Government Action Plan[114]. The first two instruments create obligations to provide information to the public, both on request and actively. The INSPIRE Directive is a pioneering instrument for electronic data-sharing between public authorities who can vary in their data-sharing policies, e.g. on whether access to data is for free. The INSPIRE Directive sets up a geoportal which indicates the level of shared spatial data in each Member State – i.e. data related to specific locations, such as air quality monitoring data. Amongst other benefits it facilitates the public authorities' reporting obligations.

For each Member State, the accessibility of environmental data (based on what the INSPIRE Directive envisages) as well as data-sharing policies ('open data') have been systematically reviewed[115].

Lithuania's performance on the implementation of the INSPIRE Directive as enabling framework to actively disseminate environmental information to the public leaves room for improvement. Lithuania has indicated in the 3-yearly INSPIRE implementation report[116] that the necessary data-sharing policies allowing access and use of spatial data by national administrations, other Member States' administrations and EU institutions without procedural obstacles are available and implemented. Most of the spatial information is shared between public authorities and with the public free of charge. Experienced barriers to the sharing of data where mostly of the technical kind and have been remediated by Lithuania.

Assessments of monitoring reports[117] issued by Lithuania and the spatial information that Lithuania has published on the INSPIRE geoportal[118] indicate that not all spatial information needed for the evaluation and implementation of EU environmental law has been made available or is accessible. The larger part of this missing spatial information consists of the environmental data required to be made available under the existing reporting and monitoring regulations of EU environmental law.

Suggested action

- Critically review the effectiveness of its data policies and amend them, taking 'best practices' into consideration.
- Identify and document all spatial data sets required for the implementation of environmental law, and make the data and documentation at least accessible 'as is' to other public authorities and the public through the digital services foreseen in the INSPIRE Directive.

[111] UNECE, 1998. Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters

[112] European Union, Directive 2003/4/EC on public access to environmental information

[113] European Union, INSPIRE Directive 2007/2/EC

[114] European Union, EU eGovernment Action Plan 2016-2020 - Accelerating the digital transformation of government COM/2016/179 final

[115] Upon request by the Commission, most Member States provided an INSPIRE Action Plan addressing implementation issues. These plans are currently being assessed by the Commission.

[116] European Commission, INSPIRE reports

[117] Inspire indicator trends

[118] Inspire Resources Summary Report