



Brussels, 3.2.2017
SWD(2017) 40 final

COMMISSION STAFF WORKING DOCUMENT

**The EU Environmental Implementation Review
Country Report - ESTONIA**

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**

{COM(2017) 63 final}
{SWD(2017) 33 - 39 final}
{SWD(2017) 41 - 60 final}

This report has been written by the staff of the Directorate-General for Environment, European Commission. Any comments are welcome to the following e-mail address: ENV-EIR@ec.europa.eu

More information on the European Union is available on the internet (<http://europa.eu>).

Photographs: p.9 – ©Urmass83/iStock, p.11 – ©LIFE00 NAT/EE/007083/Voldemar Rannap, p.11 – ©Urmass83/iStock, p.17 – ©Leonardo Patrizi/iStock, p.21 – ©Konstik/iStock

For reproduction or use of these photos, permission must be sought directly from the copyright holder.

©European Union, 2017

Reproduction is authorised provided the source is acknowledged.

Table of Contents

| | |
|--|----|
| EXECUTIVE SUMMARY | 4 |
| PART I: THEMATIC AREAS | 5 |
| 1. TURNING THE EU INTO A CIRCULAR, RESOURCE-EFFICIENT, GREEN AND COMPETITIVE LOW-CARBON ECONOMY..... | 5 |
| Developing a circular economy and improving resource efficiency | 5 |
| Waste management | 7 |
| 2. PROTECTING, CONSERVING AND ENHANCING NATURAL CAPITAL..... | 9 |
| Nature and Biodiversity..... | 9 |
| Estimating Natural Capital..... | 11 |
| Green Infrastructure | 11 |
| Soil protection | 11 |
| Marine protection | 12 |
| 3. ENSURING CITIZENS' HEALTH AND QUALITY OF LIFE | 14 |
| Air quality | 14 |
| Noise | 15 |
| Water quality and management | 15 |
| Enhancing the sustainability of cities | 16 |
| International agreements | 17 |
| PART II: ENABLING FRAMEWORK: IMPLEMENTATION TOOLS | 18 |
| 4. MARKET BASED INSTRUMENTS AND INVESTMENT | 18 |
| Green taxation and environmentally harmful subsidies..... | 18 |
| Green Public Procurement..... | 19 |
| Investments: contribution of EU funds | 19 |
| 5. EFFECTIVE GOVERNANCE AND KNOWLEDGE..... | 21 |
| Effective governance within central, regional and local government..... | 21 |
| Compliance assurance..... | 22 |
| Public participation and access to justice | 23 |

Access to information, knowledge and evidence..... 23

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 legislation¹. 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 Programme² 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 law⁴.

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

Estonia does not face major environmental problems,

and environmental awareness has risen significantly in the last decade. Nature conservation, air and water quality are in a good status. There is access to good-quality drinking water, and compliance rates with the UWWTD are high. However, there is room for improvement especially on issues as resource and energy intensity, and waste management. Great potential lies in eco-innovation for finding more efficient resource management solutions. Estonia is rich in biodiversity with a high level of habitat assessments with favourable status. Estonian compliance is rather good, however, some cases of late transposition could be observed.

Main Challenges

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

- ❖ Estonia is the one of the most resource intensive country in the EU and needs to make progress on this in order to improve the resilience of its industry faced with increasing resource costs;
- ❖ Incineration and MBT overcapacity could have a negative impact on reaching the EU recycling targets.

Main Opportunities

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

- ❖ Waste management, where further efforts on recycling could deliver jobs and growth;
- ❖ Vehicle taxation could play an important role supporting a modal shift from private to public transport, as well as an important additional measures contributing to emissions reduction⁵.

Points of Excellence

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

- ❖ The strong start-up culture in the country has contributed to the fast development of the eco-innovation activities in Estonia, with support structures.
- ❖ Estonia has provided one of the most complete Prioritized Action Framework (PAF) which has been used successfully to ensure funding to Natura 2000 sites from different EU funds.

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 According to the EEA report "[New cars' CO2 emissions well below Europe's 2015 target](#)" and they were least efficient in the EU in 2014.

- ❖ Estonia is one of the few Member States having more than 50% of its habitats and species

assessments reported as favourable.

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 them more sustainable and competitive. This will stimulate investments and bring both short and long-term benefits for the economy, environment and citizens alike⁶.

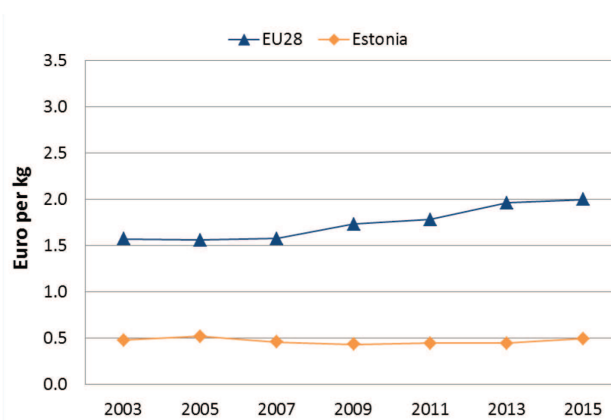
There is untapped potential for the whole economy, as well as for economic sectors and individual companies to benefit from the shift to the circular economy, which could reduce costs, facilitate growth and competitiveness, as well as job creation; while at the same time would address resource challenges.

Resource productivity⁷ (how efficiently the economy uses material resources to produce wealth) in Estonia has slightly increased in 2015 with 0.49 EUR/kg compared to the EU average of 2 EUR/kg (as shown in Figure 1). Despite a slight increase of resource productivity in Estonia since 2013, it remains among the lowest in the EU together with Bulgaria and Romania.

Estonia does not have a fully established policy framework for the circular economy. However, the adoption of the Circular Economy Package has led to

widespread discussion on the subject in Estonia. It has also published its position in terms of the proposed directives, outlining that a large part of the package is in line with Estonia's EU policy for 2015-2019 (Government Office of the Republic of Estonia, 2014).

Figure 1: Resource productivity 2003-15⁸



The most recent policy initiatives in the field, notably the Estonian National Waste Management Plan 2014-2020, have already adopted the underlying principles of circular economy – for example, aiming to reduce the amount of waste produced and recycling it to the maximum level.

Also, in the context of the Multiannual Financial Framework 2014–2020, Estonia has decided to support the investments for more resource-efficient solutions mainly in small and medium-sized enterprises (SMEs) and mainly in manufacturing industry with 111 million EUR. Activities include raising awareness of companies (events started in 2016), training resource specialists/auditors, supporting resource audits and investments in resource efficient solutions. Financial support schemes are under preparation and were scheduled in 2016.

SMEs and resource efficiency

In the Flash Eurobarometer 426 "SMEs, resource efficiency and green markets"⁹ it is shown that 49% of Estonia's small and medium-sized enterprises (SMEs)

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 European Commission, 2015. [Flash 426 Eurobarometer "SMEs, resource efficiency and green markets"](#)

have invested up to 5% of their annual turnover in their resource efficiency actions (EU28 average 50%), 24% of them are currently offering green products and services, 30% took measures to save energy (EU28 average 59%), 19% to minimise waste (EU28 average 60%), 15% to save water (EU28 average 44%), and 24% to save materials (EU28 average 54%). From a circular economy perspective, 18% took measures to recycle by reusing material or waste within the company, 9% to design products that are easier to maintain, repair or reuse and 11% were able to sell their scrap material to another company.

According to the Flash Eurobarometer 426, the resource efficiency actions undertaken allowed the reduction of production costs in 55% of Estonian SMEs.

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. 14% of the SMEs in Estonia have one or more full time employee working in a green job at least some of the time. Estonia has an average number of 0.4 full time green employees per SME.

Eco-innovation

The biggest potential for eco-innovation initiatives within the smart specialisation framework arises in the areas of ICT, as an enabler of eco-innovative ICT solutions, and the use of smart technologies for more efficient resource management in the building and energy sectors. The field has seen numerous eco-innovation solutions in the past few years, largely due to initiatives that have raised awareness and the financial support available for companies.

Furthermore, a more comprehensive support system for companies pursuing eco-innovation has emerged. An Energy and Environmental Technology Development Centre (RoheTAK) was established at the end of 2014, with an aim to support the growth of viable companies in the energy and environmental technology areas. The companies participating have launched an initiative to become a cleantech cluster. The Green Industry Innovation support programme, started in 2013 in cooperation with donor partner Innovation Norway, has successfully supported its first 15 companies and is expected to continue in the future.

Moreover, the strong start-up culture in the country has contributed to the fast development of the eco-innovation activities in Estonia, with support structures – such as the Tehnopol business incubator, Mektory (Innovation and Business Centre of Tallinn University of Technology, founded in 2013) and other business

incubators and university-business cooperation centres, such as Tartu Science Park having led the way in providing initial support for start-ups.

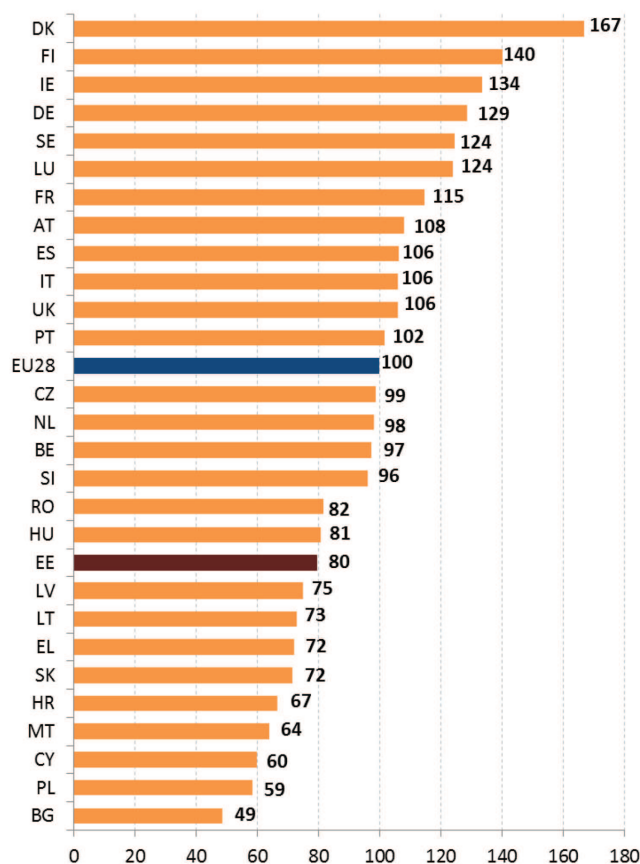
The strengthening cooperation between universities, public sector and businesses in the area of eco-innovation initiatives has led to examples emerging in the areas of smart cities and e-service, such as the bike parking system BIKEEP, an e-planner for public transport and other e-government initiatives, and further growth of Ülemiste Smart City.

As regards good practices in Estonia, Ocean Visuals developed complementary solutions for the oil-spill detection system Ocean Visuals, based on information and laser remote-sensing technology, as part of the Green Industry Innovation support scheme supported by European Economic Area (EEA) Grants.

Estonian eco-innovation performance has increased steadily throughout 2013-2015, but out of 28 countries analysed, Estonia is placed 19th. Estonia scores below EU average overall, due to resource-intensive industrial structure, lack of seed funding opportunities for early-stage start-ups and low level of media coverage on eco-innovation subjects.

Figure 2: Eco-Innovation Index 2015 (EU=100)¹⁰

¹⁰ [Eco-innovation Observatory](#): Eco-Innovation scoreboard 2015



Drivers of eco-innovation

- Estonian companies are strongly dependent on their foreign stakeholders. Demand and standards set by foreign owners of companies are seen as one of the main drivers of enforcing resource-efficiency standards among Estonian companies. Kunda Nordic Cement and ABB are examples of international companies that have brought around initiatives of resource efficiency in their Estonian divisions (Krusberg & Krustok, 2016).

Barriers to eco-innovation

- Low demand towards eco-innovation solutions from consumers as well as low level of knowledge. Lack of eco-innovation awareness is also an issue among public sector officials and businesses (Recommend Reports, 2014). The lack of knowledge transfer practices among companies is a barrier to sharing best practices and the spread of more efficient technologies (Krusberg & Krustok, 2016).
- Dependency on foreign financing mechanisms, such as EU funds or Norway Grants for financing the RD&I initiatives of businesses. This creates a barrier to entry for new and small companies with low project management capabilities.
- Lack of financing opportunities for start-up companies aiming to produce eco-innovative solutions, which characterises the scene of start-ups

in Estonia in general.

- Management routines in Estonian companies do not encourage recognising long-term strategies and trends, which is often a prerequisite of eco-innovation.
- Capabilities of the state as a smart consumer in environmental and innovative procurements are limited. The current procurement practices are seen as law-centred and rigid.

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/WPP¹¹ 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.

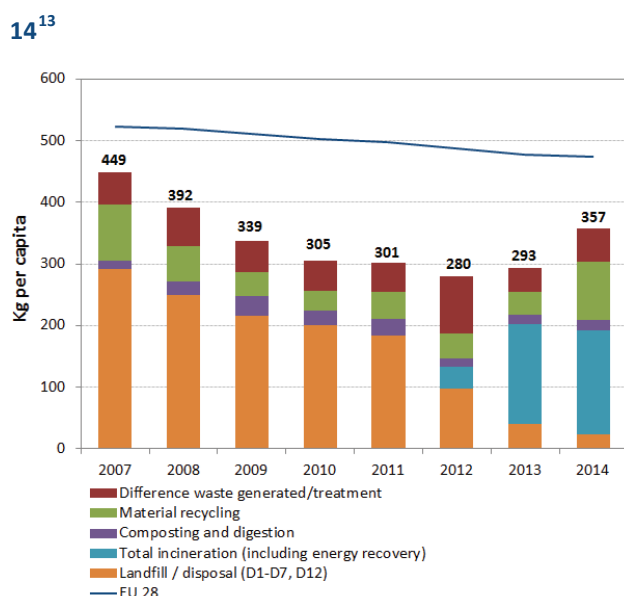
As shown in Figure 3, the amount of municipal waste generated in Estonia increased for the second year in a row from 280 kg per capita in 2012 and amounted to 357 kg per capita in 2014¹², while still remaining, below the EU average of 475 kg.

Figure 3 depicts the municipal waste by treatment in Estonia in terms of kg per capita, which shows the shift from landfilling to incineration. However, recycling rate has also increased. A recent study assessing separate collection in EU capitals rated Tallinn as the second best performing capital in the EU.

Figure 3: Municipal waste by treatment in Estonia 2007-

¹¹ Waste Management Plans/Waste Prevention Programmes

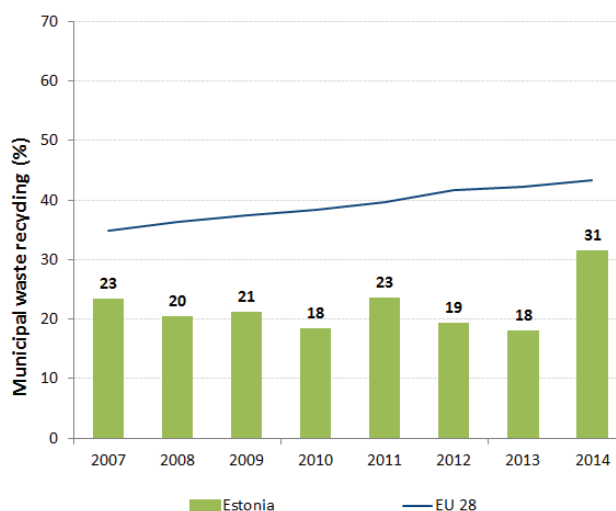
¹² This important increase as compared to previous years results from a correction of data to also include the relevant fraction of packaging waste.



The share of landfilled municipal waste in Estonia further decreased from 14% of the total waste in 2013 to 8% in 2014. While construction of an incineration plant and several MBT facilities has led to a significant reduction of landfilled municipal waste, at the same time incineration of municipal waste has increased dramatically from 16% in 2012 to 56% in 2014, becoming the main municipal waste treatment option.

Figure 4 depicts the recycling rate of Estonia over time, which shows some variation. Estonia has significantly increased recycling from 18% in 2013 to 31% in 2014, while composting has remained at the same level of 6% in view of the 2020 target of 50% recycling¹⁴.

Figure 4: Recycling rate of municipal waste 2007-14¹⁵



The level of municipal waste incineration may potentially pose a risk to Estonia's attainment of the target. In this regard, a clear scope remains for further waste management improvement, particularly for separate collection, recycling and composting, as well as consideration of an incineration tax to make recycling a more competitive option. In order to help bridging the implementation gap in Estonia, the Commission has delivered a roadmap¹⁶ for compliance.

The Government's new waste management plan for 2014–2020 mainly focuses on modern product design, clean resource-saving production and the recycling of already produced materials. It also discusses moving away from the model of municipal waste management based on tendering towards a free-market approach. The plan also includes Estonia's Waste Prevention Programme.

Full implementation of the existing legislation could create more than 1.300 jobs in Estonia and increase the annual turnover of the waste sector by over EUR 140 million. Moving towards the targets of the Roadmap on resource efficiency could create over 1.600 additional jobs and increase the annual turnover of the waste sector by over EUR 174 million.¹⁷

Suggested action

- Focus on improving the effectiveness of separate collection.
- Make more efficient use of the economic instruments (Extended Producer Responsibility schemes, PAYT) to further promote reuse and recycling.

¹³ Eurostat, [Municipal waste and treatment, by type of treatment method](#), accessed October 2016

¹⁴ 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.

¹⁵ Eurostat, [Recycling rate of municipal waste](#), accessed October 2016

¹⁶ European Commission, [Roadmap for Estonia](#)

¹⁷ 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.

- Shift reusable and recyclable waste away from incineration by introducing incineration taxes.

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 Areas 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 designation¹⁸ both in land

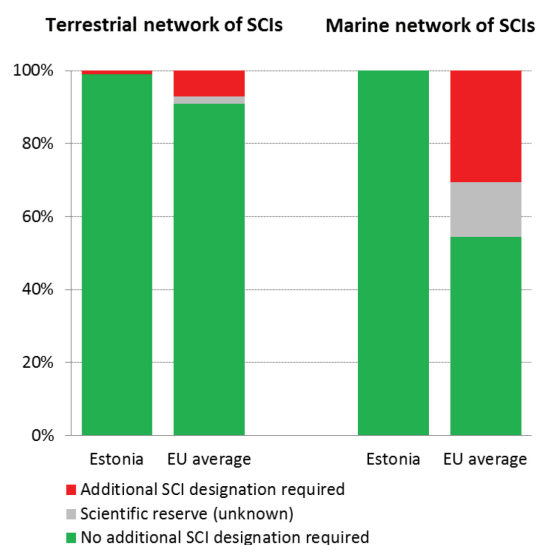
¹⁸ Sites of Community Importance (SCIs) are designated pursuant to the Habitats Directive whereas Special Areas of Protection (SPAs) are designated pursuant to the Birds Directive; figures of coverage do not add up due to the fact that some SCIs and SPAs overlap. Special Areas of Conservation (SACs) means a SCI designated by the Member States.

and at sea, should be the key items to measure the performance of Member States.

By early 2016, 17,9% of the Estonia national territory is covered by Natura 2000 (EU average 18.1%), with Birds Directive SPAs covering 13,8% (EU average 12.3%) and Habitats Directive SCIs covering 17,2% (EU average 13.8%). There are altogether 568 Natura 2000 sites in Estonia.

The latest assessment of the Natura 2000 network shows that the SCI part of the Natura 2000 network in Estonia is almost complete in the Marine Baltic region and close to be complete in the Boreal region¹⁹ as shown in Figure 5²⁰.

Figure 5: Sufficiency assessment of SCI networks in Estonia based on the situation until December 2013 (%)²¹



Estonia has designated the large majority of sites as

¹⁹ 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.

²⁰ 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 biogeographical 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.

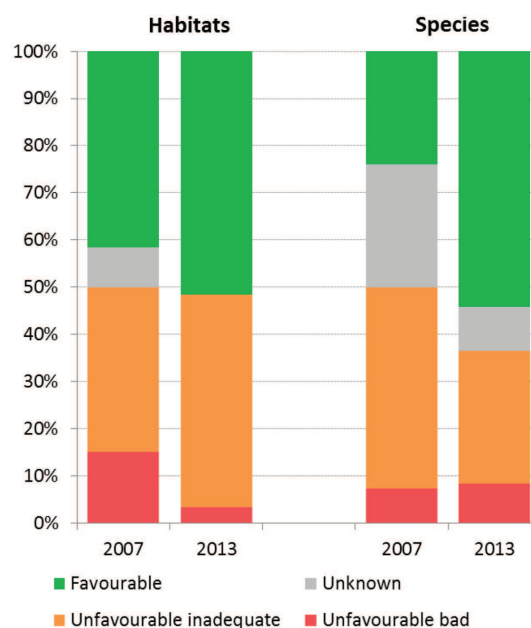
²¹ European Commission internal assessment.

Special Areas of Conservation. However, only 105 Natura 2000 sites have management plans in place. Further, action plans for semi-natural habitats, protected marshes and number of threatened species have been established. However, there appears to be gaps in the implementation of the plans. National Audit Office's report (2015) identifies problems in managing of semi-natural grasslands in protected areas due to lack of interest of land owners linked to modest support rates, lack of inspection and also due to lack of clarity in responsibilities between the authorities.

The level of nature-related complaints is low compared to many other countries. They are mainly linked to public participation and assessment of infrastructure projects.

According to the Estonian report under Article 17²² of Habitats Directive more than 50% of habitat assessments show favourable status (for comparison, 16% at EU27-level). 45% are considered to be Unfavourable–Inadequate (EU27: 47%) and only 3% are Unfavourable – Bad (EU27 is 30%) as shown in Figure 6²³. In terms of habitat groups only some forest habitats are reported having bad conservation status. Concerning species assessments (other than birds) 54% are at favourable status (EU27: 23%), 28% at unfavourable-inadequate (EU27: 42%) and only 8% unfavourable-bad status (EU27: 18%). Agriculture, forestry (for species) and changes in natural systems are reported as main high impact pressures. Estonia is one of the four Member States having more than 50% of its habitats and species assessments reported as favourable.

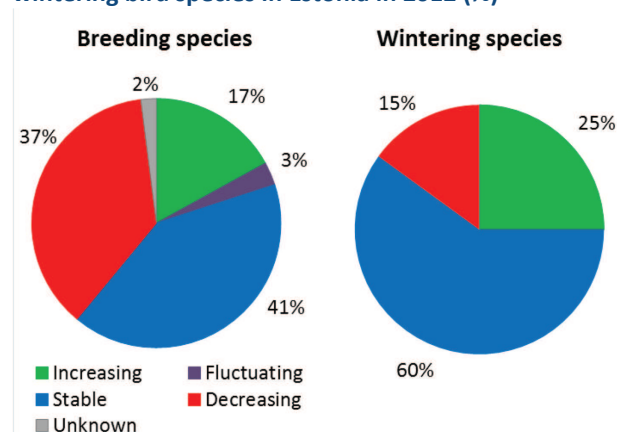
Figure 6: Conservation status of habitats and species in Estonia in 2007/2013 (%)²⁴



The results from the Article 12 report under Birds Directive show that short-term trends of breeding birds are improving for 17% of the species and are stable for 41%, however decreasing for 37% of species as depicted in Figure 7. The same categories for long-term trends are 26%, 32% and 37%. Although data under Article 12 does not provide pressure information for all bird species, pollution (e.g. oil spills) is reported by Estonia most frequently as a pressure of high impact.

Estonia has provided one of the most complete Prioritized Action Framework (PAF) which has been used successfully to ensure funding to Natura 2000 sites from different EU funds e.g. RDP. Estonia has been active in applying for LIFE funding to manage its Natura 2000 sites.

Figure 7: Short-term population trend of breeding and wintering bird species in Estonia in 2012 (%)²⁵



About 25% of forests in Natura 2000 sites are on

²² The core of the 'Article 17' report is the assessment of conservation status of the habitats and species targeted by the Habitats Directive.

²³ 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 genuine as they result from improved data/monitoring methods.

²⁴ These figures show the percentage of biogeographical assessments in each category of conservation status for habitats and species, respectively. The information is based on Article 17 of the Habitats Directive reporting - [national summary of Estonia](#)

²⁵ Article 12 of the Birds Directive reporting - [national summary of Estonia](#)

privately owned land. A recent study²⁶ in Estonia concludes that connectivity of forest protected areas should be improved.

Suggested action

- Complete the SAC 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.
- Ensure that Natura 2000 management plans are being effectively implemented.
- Develop and promote smart and streamlined implementation approaches, in particular as regards site and species permitting procedures, ensuring the necessary knowledge and data availability and strengthen communication with stakeholders.



Estimating Natural Capital

The EU Biodiversity Strategy to 2020 calls on the Member States to map and assess the state of ecosystems and their services in their national territory by 2014, assess the economic value of such services, and promote the integration of these values into accounting and reporting systems at EU and national level by 2020.

Estonian long-term climate change adaptation strategy and action plan on biodiversity and bioeconomy defined ecosystem services²⁷ (provisioning, regulating and cultural services) in 7 ecosystem classes (marine, freshwater, forest, wetland, grassland, soil and urban ecosystems). Pollination was addressed separately. Services were prioritised according to their relative socio-economic importance and vulnerability to climate change. Recent knowledge improvement efforts include notably the development of methods for the assessment and mapping of ecosystem services of marine and inland

²⁶ [Alategevuse LOORA teadusaruanne](#), Institute of Ecology and Earth Sciences, University of Tartu

²⁷ Ecosystem services are benefits provided by nature such as food, clean water and pollination on which human society depends.

waters (EMP)²⁸, completed in 2016, and a project on „Developing tools for the assessment and prognosis of biodiversity status, closely linked to socio-economic and climate change aspects, as well as for the improvement of biodiversity data accessibility” which develop among other duties also a roadmap for ecosystem services mapping and assessment by 2023²⁹.

Suggested action

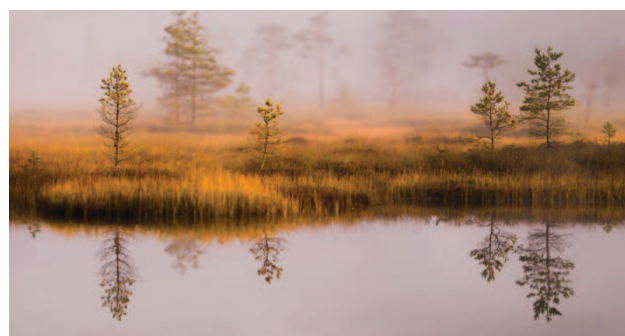
- Continue support to the mapping and assessment of ecosystems and their services, valuation and development of natural capital accounting systems.

Green Infrastructure

The EU strategy on green infrastructure³⁰ 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.

In Estonia, the establishment of the green network was launched back in 1999 in the form of a national spatial plan and county level thematic spatial plans. The nationwide spatial plan "Estonia 2030+"³¹ aims to achieve a rational use of space in Estonia. The main principles include "preserving the qualities of settlement pattern and landscape" and "preserving the good condition of the natural environment". The plan emphasises the importance of green infrastructure in the preparation of spatial measures.



The basic legislation for this network is the Planning Act that defines the green network and its elements.

²⁸ [Development methods for assessment and mapping of ecosystem services of marine and inland waters](#), 2016, Peipsi Center for Transboundary Cooperation

²⁹ Directive no 1136 of the Minister of Environment.

³⁰ European Union, Green Infrastructure — Enhancing Europe's Natural Capital, [COM/2013/0249](#)

³¹ [National Spatial Plan "Estonia 2030+"](#)

Currently these thematic spatial plans have been established for all counties and have also been brought into the general spatial plans at the municipal level in almost all municipalities (as the county thematic plans are much more generalized than the land cadastre, they need to be refined at the municipal level). However, there is a great amount of confusion, questions and information gaps at the municipal level in connection with preservation of the green network³². Therefore, although Estonia has spatially set up the green network at both national and local government level already more than ten years ago the main challenge still ahead is to analyse its effectiveness and based on that make spatial and functional corrections if needed.

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 0.82% in Estonia over the period 2006-12, well above the EU average (0.41%). It represented 789 hectares per year the most of

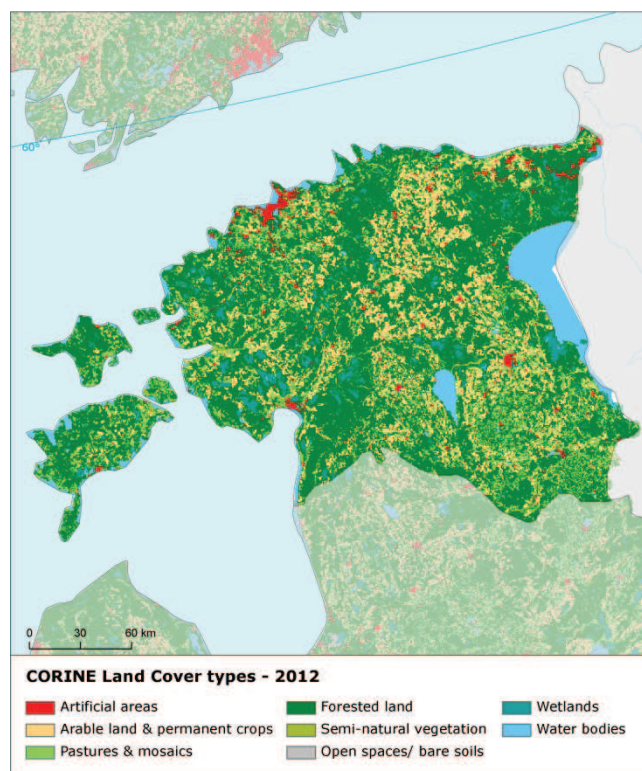
it being realized through extension of mineral extraction sites, with highly increased intensity compared to previous period³³. The percentage of built up land in 2009 was 0.89%, well below the EU average (3.23%)³⁴.

The soil water erosion rate in 2010 was 0.21 tonnes per ha per year, well below EU-28 average (2.46 tonnes)³⁵.

There are still no EU-wide datasets enabling the provision of benchmark indicators for soil organic matter decline, contaminated sites, pressures on soil biology and diffuse pollution. An updated inventory and assessment of soil protection policy instruments in Estonia and other EU Member States is being performed by the EU Expert Group on Soil Protection.

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

Figure 8: Land Cover types in Estonia 2012³⁶



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

32 [Estonian Nature Conservation in 2011](#), Estonian Environment Information Centre, Tallinn 2012, pages 74-76.

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

34 European Environment Agency, 2016. [Imperviousness and imperviousness change](#)

35 Eurostat, [Soil water erosion rate](#), accessed June 2016

36 European Environment Agency, Land cover 2012 and changes country analysis [\[publication forthcoming\]](#)

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)³⁷ 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 GES³⁸ 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.

Estonian marine waters are part of the Baltic Sea and Estonia is party to the Convention on the Protection of the Marine Environment of the Baltic Sea³⁹. In the Baltic Sea, main risks for biodiversity relate to eutrophication, overfishing and bycatch, pollution by contaminants and oil, and introduction of non-indigenous species⁴⁰.

First reporting under the MSFD in Estonia was done in 2012. The country assessed the status of its marine waters against specific thresholds/reference conditions and identified the main pressures on its marine environment. In its reporting, the country considered existing EU standards and made use of Regional Sea Conventions assessments. Estonia also made an effort to quantify Good Environmental Status boundaries⁴¹.

It is however too early to say whether Estonian marine waters are in a good state or not, as weaknesses were identified in Estonia's definition of good environmental status.

Estonia established a monitoring programme of its marine waters in 2014. However, it seems that its monitoring sub-programmes for all descriptors apart from those on biodiversity, eutrophication and contaminants in seafood need further refinement and development to constitute an appropriate framework to monitor progress towards environmental targets and Good Environmental Status, especially since the monitoring programme will not be fully in place before 2018 for most descriptors.⁴²

In 2012 Estonian marine protected areas covered 6758.5km². More specifically, 2716.81 km² of the 0-1 nm zone, 4030.61km² of the 1-12 nm zone and 11.10 km² of the 12- end of assessment area zone were covered by MPAs⁴³.

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 joint monitoring programmes developed at (sub) regional level.
- Enhance the comparability and consistency of monitoring methods within its marine region.
- Urgently report and implement its programme of measures⁴⁴.
- Ensure that the monitoring programme is implemented without delay, and is appropriate to monitor progress towards its GES.

37 European Union, [Marine Strategy Framework Directive 2008/56/EC](#)

38 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"

39 [Helsinki Convention](#)

40 European Environment Agency, 2016. [The Baltic Sea](#)

41 Commission Staff Working Document Accompanying the Commission Report on "The first phase of implementation of the Marine Strategy Framework Directive (2008/56/EC) - The European Commission's assessment and guidance" ([SWD\(21014\)_049 final](#) and [COM\(2014\)097 final](#))[SWD\(21014\)_049 final](#) and [COM\(2014\)097 final](#))

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 As of 7.10.2016, Estonia has not yet reported its programme of measures to the Commission

3. Ensuring citizens' health and quality of life

Air quality

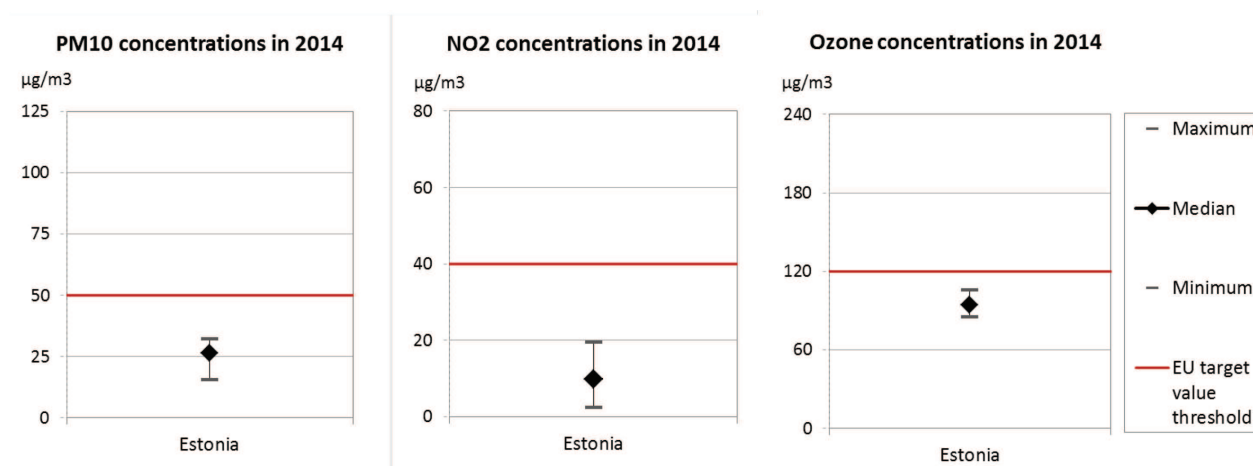
The EU Clean Air Policy and legislation require that air quality in the Union is significantly improved, moving closer to the WHO recommended levels. Air pollution and its impacts on ecosystems and biodiversity should be further reduced with the long-term aim of not exceeding critical loads and levels. 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 legislation⁴⁵, which establishes health-based

52%) ensure air emissions for these pollutants are within the currently applicable national emission ceilings⁴⁸.

Air quality in Estonia is reported to be generally good, with exceptions. Nevertheless, for the year 2013, the European Environment Agency⁴⁹ estimated that more than 690 premature deaths were attributable to fine particulate matter concentrations⁵⁰ and 30 to ozone concentrations⁵¹. For 2014, no exceedances above the EU air quality standards have been reported⁵². Figure 9 shows the attainment situation for PM₁₀, NO₂ and ozone in 2014⁵³. Figure 9 shows the attainment situation for PM₁₀, NO₂ and O₃ in Estonia in 2014.

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.

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 Estonia⁴⁶. Reductions between 1990 and 2014 for sulphur oxides (-85%), nitrogen oxides⁴⁷ (-56%), volatile organic compounds (-66%), as well as ammonia (-

It is estimated that the health-related external costs from

45 European Commission, 2016. [Air Quality Standards](#)

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

47 NO_x is emitted during fuel combustion e.g. from industrial facilities and the road transport sector. NO_x is a group of gases comprising nitrogen monoxide (NO) and nitrogen dioxide (NO₂).

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 (PM_{2.5}) 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 See [The EEA/Eionet Air Quality Portal](#) and the related Central Data Repository

53 These figures are based on European Environment Agency, 2016. [Air Quality in Europe – 2016 Report](#). (Figures 4.1, 5.1 and 6.1)

air pollution in Estonia are in the range of above EUR 414 million/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 170 thousand workdays lost each year due to sickness related to air pollution, with associated costs for employers of EUR 14 million/year (income adjusted, 2010), for healthcare of above EUR 1 million/year (income adjusted, 2010), and for agriculture (crop losses) of EUR 7 million/year (2010)⁵⁴.

Suggested action

- Maintain downward emissions trends of air pollutants, and reduce adverse air pollution impacts on health.

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 issues⁵⁵. 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.

Estonia's authorities have fulfilled all their obligations with regards to the Environmental Noise Directive⁵⁶ for the current reporting period.

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.

Estonia has provided information to the Commission from its second generation of RBMPs. However, as the Commission has not yet been able to validate this information for all Member States, it is not reported here.

In its first generation of RBMPs Estonia reported the status of 645 rivers, 89 lakes, 16 coastal and 39 groundwater bodies⁵⁸. According to information provided by Estonia, 62% of surface water bodies achieved a good or high ecological status or potential (in 2013)^{59,60}. Chemical status is reliably assessed only for 7.8% of surface water bodies – 5.5% of those are in good chemical status, 1.7% in bad status (mostly coastal water bodies due to Hg concentrations in biota)⁶¹. 80% of 39 groundwater bodies are in good qualitative and quantitative status. This will be verified during the assessment of the 2nd cycle RBMPs.

Point and diffuse sources of pollution, flow regulations and morphological alterations contribute to pressures

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., Kephelopoulou, 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

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.

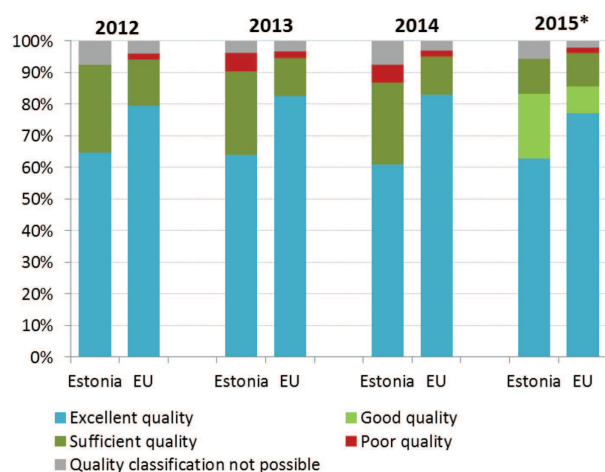
at similar level and affect 13%, 14% and 13% of surface water bodies respectively.

The Estonian RBMP have significant weaknesses including methodological deficiencies related to the analysis of pressure, monitoring and status assessment resulting in uncertainties about the status of water bodies and effectiveness of Programmes of Measures. The programmes of Measures are expected to result in improvement of the ecological status of natural surface water bodies by 9% and the ecological potential of artificial and heavily modified bodies by 5%.

As regards drinking water, Estonia reaches very high compliance rates of 99-100% for microbiological, chemical and indicator parameters laid down in the Drinking Water Directive⁶².

As shown in Figure 10, in 2015, in Estonia out of 54 bathing waters, 63.0% were of excellent quality, 20.4% of good quality, 11.1% of sufficient quality while it was not possible to assess remaining 3 bathing waters.

Figure 10: Bathing water quality 2012 – 2015⁶³



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

With a total generated load of 1.6 million population equivalents (p.e.), the final deadline to fully comply with the Urban Waste Water Treatment Directive (UWWTD) in Estonia was end 2010 for all the agglomerations (59 above 2000 p.e.). In 2012, 89.4% of the waste water load collected was subject to more stringent treatment in accordance with Article 5 of the UWWTD. It should be noted that all the Estonian territory is considered as sensitive, i.e. more stringent treatment is applicable in all the agglomerations whose size is above 10000 p.e. Estonia demonstrates, in general, high compliance rates

62 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

63 European Environment Agency 2016, [European bathing water quality in 2015](#)

with the UWWTD (with compliance rates of 94.3% and 97.1% for collection (Article 3) and secondary treatment (Article 4), respectively).⁶⁴

The estimated investment needs (reported under Article 17 of the UWWTD) to reach full compliance with the Directive in Estonia are of EUR 88 million.⁶⁵

According to the last report on the implementation of the Nitrates Directive, referring to the period 2008-2011, Estonian groundwater is showing an increase in nitrates and the Baltic Sea eutrophication is also a concern.

Suggested action

- Improve the methods for analysis of pressures and assessment of water status as well as the monitoring system to ensure certainty about the status of water bodies.
- Further prevent and reduce nitrate pollution from agricultural sources by fully implementing the requirements of the Nitrates Directive.

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.⁶⁶ 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,

64 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 (COM(2016)105 final) and Commission Staff Working Document accompanying the report (SWD(2016)45 final).

65 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 (COM(2016)105 final) and Commission Staff Working Document accompanying the report (SWD(2016)45 final).

66 European Environment Agency, [Urban environment](#)

including air quality and housing⁶⁷.

The European Commission will launch a new EU benchmark system in 2017.⁶⁸

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.



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, Tallinn Urban Planning Department is also amongst partners of the Baltic Urban Lab project, which aims at identifying and promoting best practices on brown field regeneration.

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 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.

Estonia has signed and ratified almost all MEAs. At the 8th Environment for Europe Ministers' meeting in Batumi, Georgia, in June 2016, in the framework of the Batumi Action for Clean Air, Estonia took a voluntary commitment to ratify the CLRTAP-Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg Protocol) and establish a national action programme on the reduction of emissions, which would help to achieve the targets set by the Gothenburg Protocol for 2020. National procedures for ratification of the Nagoya Protocol⁶⁹ were planned to be finalised by the end on 2016.

⁶⁷ <http://urbanagendaforthe.eu/>

⁶⁸ 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. EURO CITIES, ICLEI, CEMR, Committee of the Regions, Covenant of Mayors and others.

⁶⁹ 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.

The share of environmental taxation in total tax revenue in Estonia is high (2.67% of GDP and 8.22% of total taxation in 2014). In the same year environmental tax revenues accounted for 8.28% of total revenues from taxes and social-security contributions⁷⁰ (EU 28 average: 6.35%), as depicted in Figure 11. Environmental tax revenues have slightly increased since 2013. However, certain issues, such as the absence of vehicle taxation, which would promote the purchase and use of fuel-efficient cars and thus contribute to the EU's energy and climate objectives, still remain.

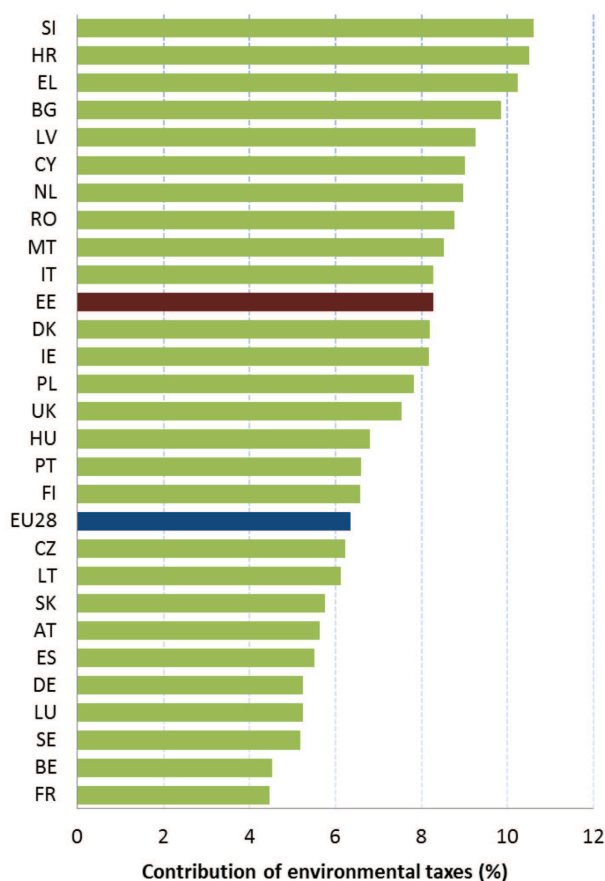
In Estonia, transport taxes (excluding fuel taxes) remain amongst the lowest in the EU or are not applied (registration or circulation taxes for example). Heavy Goods Vehicles are charged with a tax according to number of axles, weight, and suspension type, however, the tax is below the EU average and CO₂ emissions are not taken into account. Furthermore, there is no charge applying to road use. In 2014, the least efficient cars were bought in Estonia (141 g CO₂/km), followed by Latvia (140 g CO₂/km) and Bulgaria (136 g CO₂/km)⁷¹. Estonia remains also amongst the most energy and resource intensive countries in the EU.

A 2016 study suggests that there is considerable potential for shifting taxes from labour to environmental taxes⁷². Under a good practice

scenario⁷³, these taxes could generate an additional EUR 0.2 billion by 2018, rising to EUR 0.38 billion by 2030 (both in real 2015 terms). This is equivalent to an increase by 0.89% and 1.22% of GDP in 2018 and 2030, respectively. A circulation tax differentiated by CO₂ emissions could be introduced to improve environmental performance of the vehicles, with inclusion of company cars and private vehicles within the scheme.

New Government of Estonia put forward a proposal for vehicle registration based on CO₂ emission, but it was removed from the agenda until the beginning of 2017.

Figure 11: Environmental tax revenues as a share of total revenues from taxes and social contributions (excluding imputed social contributions) in 2014⁷⁴



⁷⁰ Eurostat, [Environmental tax revenues](#), accessed June 2016

⁷¹ European Environment Agency, 2016, [New cars' CO₂ emissions well below Europe's 2015 target](#)

⁷² 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.

⁷³ The good practice scenario means benchmarking to a successful taxation practice in another Member State.

⁷⁴ Eurostat, [Environmental tax revenues](#), accessed October 2016

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 GDP⁷⁵. 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 criteria⁷⁶.

A National Action Plan (NAP) or a National Strategy on GPP is currently not in force in Estonia⁷⁷. However, the Ministry of the Environment has set the targets of having 15% GPP from all the procurements in public sector by 2018, developing an e-procurement platform in collaboration with the Ministry of Finance. Trainings are also organised for local government and state authorities' specialists, explaining the concept of an environmentally sound procurement, possibilities for conducting this, etc.

Mandatory environmentally friendly requirements are currently imposed only for vehicles. There will be mandatory furniture, cleaning product and services, copying and graphic paper and office IT equipment criteria by 2017. There was 10 850 public procurement in 2015 from which 605 (5.6%) was green public procurement. According to a 2011 survey, Estonian authorities included at least one of the EU core green criteria in 40% of the contracts (regardless of the product group), and 11% of the contracts included all the relevant EU core green criteria⁷⁸.

Investments: contribution of EU funds

European Structural and Investment Funds Regulations

75 European Commission, 2015. [Public procurement](#)

76 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.

77 European Commission (October 2015), [Documentation on National GPP Action Plans](#)

78 CEPS 2012. [Monitoring the Uptake of GPP in the EU27](#)

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)⁷⁹ 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 the EFSI80 may also support implementation and spread of best practice. Estonia, through 3 national and regional programmes, benefits from ESIF funding of EUR 4.4 billion over the period 2014-2020⁸¹ (see Figure 12).

The biggest share – EUR 1.9 billion (42%) of funding is coming from the European Fund for Regional Development (ERDF). EUR 1.1 billion (24.1%) - from the Cohesion Fund (CF).

EUR 823 million (18.5%) – from the European Agricultural Fund for Rural Development (EAFRD).

EUR 587 million (13.2%) - from the European Social Fund (ESF).

EUR 101 million (2.3%) from the European Maritime and Fisheries Fund (EMFF).

In total, EUR 420 million a dedicated to the Thematic objective (TO)6 *Environment Protection and Resource efficiency* EUR 254 million through the CF EUR 141 million through the EAFRD programme, EUR 25 million through the EMFF. In addition, EUR 318 million is foreseen for TO4 *Low Carbon Economy* (CF, ERDF, EAFRD and EMFF) and EUR 197 million for TO5 *Climate Change Adoption and Risk Prevention* (EAFRD and CF).

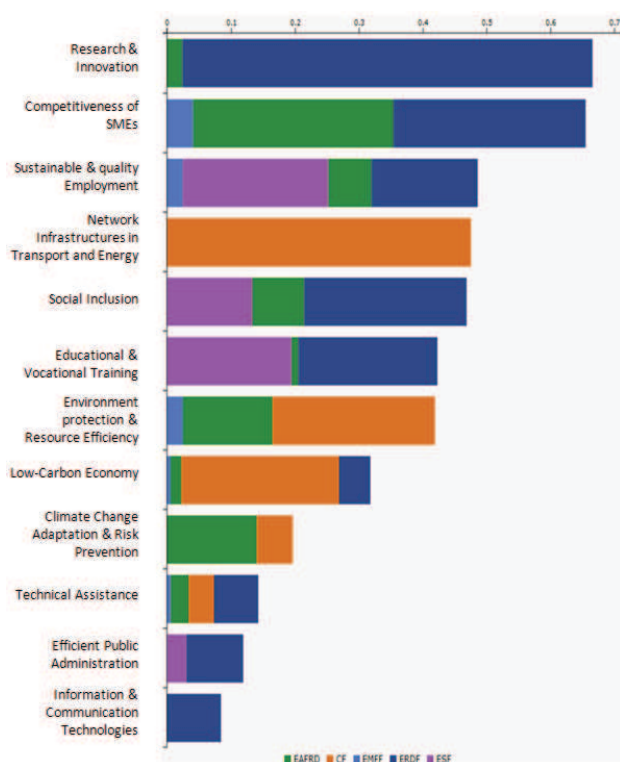
Figure 12: EU Structural and Investment Funds 2014-2020: Budget Estonia by theme, EUR billion⁸²

79 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.

80 European Investment Bank, 2016 [European Fund for Strategic Investments](#)

81 European Commission : European Structural and Investment Funds [Country Data for Estonia](#)

82 European Structural and Investment Funds [Country Data for Estonia](#)



2015-2020 is EUR 630 million⁸⁴ 30% of which (EUR 189 million) 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 Estonia could review its implementation of this.

It is too early to draw conclusions as regards the use and results of ESIF 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 spent⁸³.

With regard to the integration of environmental concerns into the Common Agricultural Policy (CAP), the two key areas for Estonia (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 857 million. The planned spending on the ecosystem priority is EUR 287 million, which represents 33.5% of the total budget, and EUR 194 million, 22.7% of the total budget is dedicated to agri-environment-climate measures. The RDP is underpinned by a reasonable description and diagnosis of the environmental and climate conditions for biodiversity and ecosystems including the prioritized action framework as referenced in the strategy, soil, water and forestry.

The Direct Payment envelope of Estonia for the period

⁸³ Final data for the period 2007-2013 will only be available at the end of 2017

⁸⁴ Commission delegated regulation (EU) [No 994/2014](#) of 13 May 2014

5. 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.⁸⁵ 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 like clean air and water and a healthy biodiversity 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, individuals and others ("compliance assurance"). Civil society also has a role to play as does business. 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,

⁸⁵ The Commission has work ongoing to improve the country-specific knowledge about quality and functioning of the administrative systems of Member States.

and the governance of the enforcement process.

Capacity to implement rules

Estonia is sometimes late in transposing EU law but this has improved very much in recent years and the delays are usually only couple of months. Bigger delays are expected once non-conformities have been detected. This is due to the fact that amendments to existing laws take quite some time internally to be adopted.

Estonia has very small amount of infringements. The pressure from environmental NGOs and complainants is extremely low.

Most environmental issues fall within the area of governance of the Ministry of Environment headed by Minister of Environment that acts through a central body, and number of agencies. Local municipalities play a key role in building and territorial planning. The most important agencies within the area of governance of the Ministry of Environment are the Keskkonnaamet (Environmental Board), which has various functions in the field of nature protection, environmental protection, resource use and radiation; the Keskkonnainspeksioon (Environmental Inspectorate), which is the primary enforcement agency; and the Keskkonnaagentuur (Estonian Environment Agency), which implements national environmental monitoring programme, prepares reports and assesses the state of the environment.



International and European cooperation is, in principle, the task of the Ministry of Foreign Affairs. This includes representing the Estonian formal position in infringement proceedings.

Estonian sustainable development strategy "Sustainable

Estonia 21" was adopted in September 2005⁸⁶.

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 2016⁸⁷ 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 law⁸⁸ 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*⁸⁹, *EUFJE*⁹⁰, *ENPE*⁹¹ and *EnviCrimeNet*⁹², 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)⁹³ 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 recently published implementation report and REFIT evaluation.⁹⁴

Estonia has taken steps towards risk-based compliance assurance, in particular in relation to inspections of industrial facilities. Some relevant data collection and analysis are undertaken and risk assessment tools developed by IMPEL are used for planning and targeting

86 Government Office of the Republic of Estonia, [Sustainable development](#)

87 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).

88 Directive 2008/99/EC of The European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law.

89 [European Union Network for the Implementation and Enforcement of Environmental Law](#)

90 [European Union Forum of judges for the environment](#)

91 [The European Network of Prosecutors for the Environment](#)

92 [EnviCrimeNet](#)

93 Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage (OJ L 143, 30.4.2004, p.56)

94 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.

of inspection work⁹⁵. Efforts are being made to evaluate the effectiveness of compliance monitoring work⁹⁶.

Up-to-date information is lacking 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 critical activities outside of industrial installations, especially specific problem-areas highlighted elsewhere in this Country Report, i.e. the threats to protected habitat types and species, and the pressures on water quality from diffuse sources of pollution.
- how the Estonian authorities ensure a targeted and proportionate response to different types of non-compliant behaviour, in particular in relation to serious breaches detected.

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

For the period 2007 to 2013, Estonia reported four cases of environmental damage, including imminent threat of damage, and four pending cases handled according to the Environmental Liability Directive. Estonia follows the Directive closely and has established a record of environmental damage incidents at national level. However, 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.
- Encourage greater participation of competent authorities in environmental compliance networks.
- Step up efforts in the implementation of the Environmental Liability Directive (ELD) with proactive initiatives, in particular by drafting national guidance. It should moreover 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 out).

⁹⁵ See for details Study on 'Assessment and summary of the Member States' implementation reports for the IED, IPPCD, SED and WID. Industrial Emissions Directive, 2016, Amec Foster Wheeler Environment&Infrastructure UK Ltd in collaboration with Milieu Ltd.

⁹⁶ Remarkable in this respect are the relevant reports of the Estonian Court of Auditors, see <http://www.eurosaiwgea.org/audits>.

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.

The judicial review procedures in environmental cases in Estonia appear sufficiently effective and provide the necessary legal standing for the public to take environmental cases to the courts. The costs of administrative court proceedings, though, may cause a problem. The established loser-pays principle and the lack of a restricted legal aid system for NGOs may prevent that relevant environmental cases are taken to the court by the public⁹⁷.

Suggested action

- Take the necessary measures to ensure that the costs of legal challenges involving EU environmental law are not prohibitively expensive, and in line with the requirements of EU law as well as the Aarhus Convention.

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

⁹⁷ See [study on access to justice in environmental matters in 2012/2013](#)

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 electronic means.

The Aarhus Convention⁹⁸, the Access to Environmental Information Directive⁹⁹ and the INSPIRE Directive¹⁰⁰ 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 Plan¹⁰¹. 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 reviewed¹⁰².

Estonia's performance on the implementation of the INSPIRE Directive as enabling framework to actively disseminate environmental information to the public leaves room for improvement. Estonia has indicated in the 3-yearly INSPIRE implementation report¹⁰³ 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 but not fully implemented. Estonia identifies lack of specific competences and resources as main reason for existing implementation delays impeding the access to spatial data.

Assessments of monitoring reports¹⁰⁴ issued by Estonia and the spatial information that Estonia has published on

the INSPIRE geoportal¹⁰⁵ 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.

98 European Commission, [The Aarhus Convention](#)

99 European Union, [Directive 2003/4/EC on public access to environmental information](#)

100 European Commission, 2016. [INSPIRE Directive](#)

101 European Union, EU eGovernment Action Plan 2016-2020 - Accelerating the digital transformation of government [COM\(2016\) 179 final](#)

102 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.

103 [Inspire Resources Summary Report](#)

104 [Inspire indicator trends](#)

105 [Inspire Resources Summary Report](#)