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The EU Environmental Implementation Review
Country Report - ROMANIA

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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Table of Content

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 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 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

Romania has significantly improved its environmental performance since its accession in 2007. While Romanian legislation accurately reflects the environmental requirements agreed at EU level, their implementation on the ground is in general a challenge, prompted *inter alia* by a lack of planning, coordination and appropriate funding. The implementation gap is problematic in several areas, in particular waste management and waste-water treatment. Romania is encouraged to make better use of the EU funds to address these challenges and enhance the coordination of its administrative mechanisms.

Main Challenges

The main challenges Romania faces with regard to implementing EU environmental policy and law are:

- Improving **compliance with EU waste** and **urban waste-water legislations** in order to meet the EU targets, as the final deadlines set out in the Accession Treaty are drawing near.
- Improving **coordination** and enhancing the **administrative capacity** of the authorities and agencies involved in the implementation of EU legislation, in particular with regard to **water** and **waste** management and the protection and management of the Natura 2000 sites, as part of the broader strategy to strengthen public administration.

Main Opportunities

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

- Pulling together the best solutions into comprehensive, realistic **waste management** and **prevention plans** based on an inclusive public participation process;
- Eliminating the obstacles to adequate and targeted **use of EU funds** to support the implementation of the EU requirements;
- Using the **next river basin management cycle** to improve the monitoring networks and assessment methods of the water status.

Points of Excellence

Romania could share the innovative approaches it has developed with other countries. One good example is:

- The **Green Laboratory of Recycling** 2012 initiative has been awarded the Golden Medal of Excellency in the SMEs category as part of the European Corporate Social Responsibility (CSR) Awards.

[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.

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

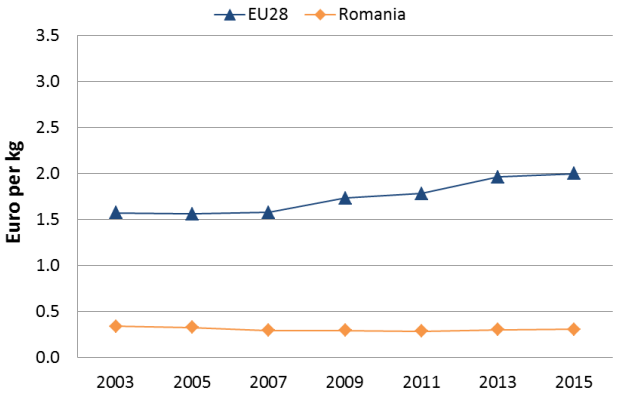
The transformation of our economies from linear to circular provides an opportunity to reinvent them and make them more sustainable and competitive. This will stimulate investments and bring both short and long-term benefits for the economy, the environment and citizens alike[5].

In Romania, resource efficiency is low and the circular economy remains underdeveloped. In 2015, "resource productivity"[6] (how efficiently the economy uses material resources to produce wealth) was with Bulgaria and Estonia the lowest in the EU, at. 0.31 EUR/kg compared with the EU average of EUR 2.0 EUR/kg. This can be seen in Figure 1, which also shows that Romania's resource productivity has been relatively stable since 2008.

This means that the economy is on average 40% less resource efficient than the EU level. This might be related to its low levels of competitiveness.[7] It is not resource scarcity, but rather the lack of efficient management of the available resources that poses problems to sustainable development in Romania.[8]

Romania is late to adopt the relevant planning instruments concerning waste management. Its landfilling rate is the highest in the EU (82 % in 2013)[9]. This indicates that resources are not kept within the economy when a product has reached the end of its life. A more circular economy, i.e. one focusing on recycling and re-use as well as on improving resource efficiency, would help boost investment. It would also generate both short- and long-term benefits for the environment, employment and the economy as a whole.

Figure 1: Resource productivity 2003-15[10]



A good practice example is The Green Laboratory of Recycling, a 2012 initiative launched by the selective waste collection and a recycling organisation, in partnership with the Ministry of Environment and the Ministry of Education. The project aims to inform, provide education and raise the awareness of the younger generation on environmental issues. Key success factors were the partnership with the local municipalities and the involvement of school teachers in the continuous promotion of recycling. The initiative has been awarded the Golden Medal of Excellency in the SMEs category as part of the European CSR Awards.[11]

Romania has not yet adopted a national policy for programme for a circular economy, although it does have some initiatives which suppor the transition to a circular economy, in particular focusing on waste:

– The national Law for Waste Management (adopted in November 2011[12]): this law establishes the mandatory character of selective waste collection for

[5] European Commission, 2015. Proposed Circular Economy Package
[6] Resource productivity is defined as the ratio between gross domestic product (GDP) and domestic material consumption (DMC).
[7] Schwab, WEF. The Global Competitiveness Report, 2014-2015
[8] Eco-Innovation Observatory, Country Brief 2013 Romania,p. 6
[9] Eurostat
[10] Eurostat, Resource productivity, accessed October 2016
[11] Eco-Innovation Observatory, Country Brief 2013 Romania
[12] Law no. 211/2011 on waste regime as amended, republished in the March 28th, 2014

large producers of waste and was seen as a major step forward.

- The implementation of the Waste Framework Directive, including of its provisions related to Hazardous Waste and to Waste Oils, has been driving the changes in the Romanian waste management regulations. Romania has set a target to reach a level of 50% of waste to be recycled or reused by 2020.[13]
- As of January 2014, the private sector[14] has to make higher fiscal contributions to the Romanian Fund for Environment (meant to stimulate a more sustainable use of natural resources and increase the reuse of waste throughout the value chains of the companies).[15]
- The Ministry of Environment, Water and Forests has as priorities for 2016 the creation of the framework to transform and accelerate the Romanian economy's transition towards a green economy, the development of green business and green entrepreneurship. Besides, according to information provided by Romanian authorities, a White Paper on Green Economy is being developed.
- Romania has increased its number of employees in the environmental goods and services sector from around 130,000 people in 2011 to around 146,000 in 2012[16]. The Romanian Ministry of Environment acknowledges the need for further investment into green skills and education of the labour force towards sustainable development. The National Labour Agency is engaged in the "Green Jobs" project, funded by the European Social Fund, in order to evaluate the Romanian market for green jobs and identify good practices for support measures in this sector.

In general, Romania does not use a lot of support measures for resource efficiency. The most developed measures are either implemented through third-party organisations or inspired by EU funded projects and oriented on waste recovery and recycling. One key example of a voluntary agreement in 2013 concerned packaging waste prevention and recycling. It is now implemented in 14 major cities, showing a spill over effect from the two pilot cities to 12 other major cities.[17]

SMEs and resource efficiency

Both Romanian Small and Medium-sized Enterprises (SMEs) and large enterprises have low awareness of their impact on the environment and the economic opportunities arising from circular economy/resource efficiency. In spite of this, there are some private sector initiatives in recycling and material re-use that have been strengthened in recent years.[18] Nevertheless, Romania is missing many opportunities as it fails to recycle its own waste, leaving the private sector to import recycled materials for their production activities.

Around 63% of Romania's SMEs have invested up to 5% of their annual turnover in their resource efficiency actions (EU28 average 50%), 26% of them are currently offering green products and services (EU28 average 26%), 37% took measures to save energy (EU28 average 59%), 26% to minimise waste (EU28 average 60%), 29% to save water (EU28 average 44%), and 32% to save materials (EU28 average 54%)[19].

From a circular economy perspective, 28% took measures to recycle by reusing material or waste within the company (EU28 average 40%), 12% to design products that are easier to maintain, repair or reuse (EU28 average 22%) and 16% were able to sell their scrap material to another company (EU28 average 25%).

Using the full potential of resource efficiency measures, the cost savings would be huge: for only four SME sectors (food & beverages; energy, power & utilities; environmental technologies; construction) the savings that would strengthen their competitiveness could already amount to around EUR 320 million[20]. According to the Flash 426 Eurobarometer, the resource efficiency actions undertaken allowed the reduction of production costs in a 60% of the Romania's SMEs (EU28 average 45%).

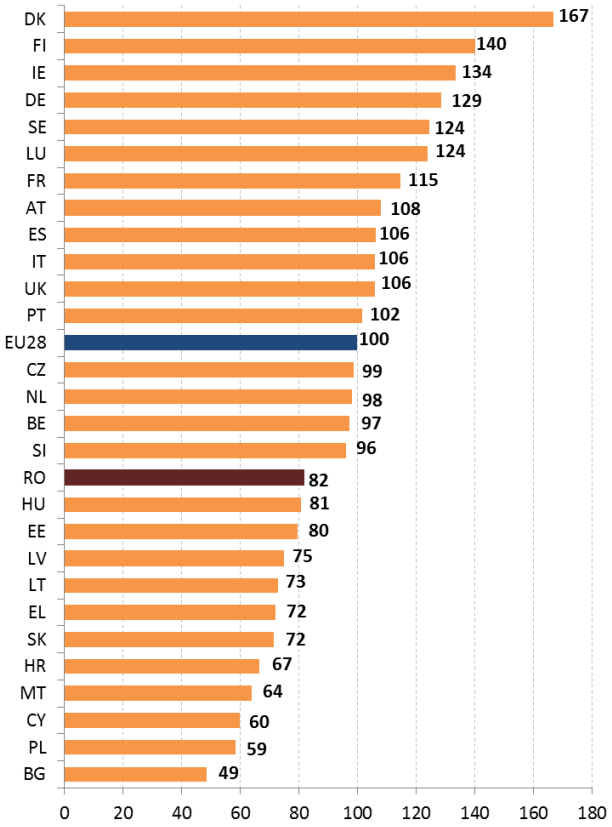
About 12,000 new jobs could be created and 33,600 jobs could be secured if all SMEs in the four sectors would fully use their potential for resource efficiency[21]. The Flash 426 Eurobarometer "SMEs, resource efficiency and green markets" shows that 41% of the SMEs in Romania have one or more full time employees working in a green job at least some of the time (EU28 average 35%). Romania has an average number of 3.6% full time green employees per SME (EU28 average 1.7%)[22].

[13] Eco-Innovation Observatory, Country Brief 2013 Romania, p. 11
[14] Ecomagazin, 2013. Parghii fiscale de protectie a mediului – noutati 2014
[15] Ecomagazin, 2013. Parghii fiscale de protectie a mediului – noutati 2014
[16] Eurostat, Employment in the environmental goods and services sector, accessed November 2015
[17] Ecologic Institute, IEEP, BIO by deloitte, 2015. A framework for Member States to support business in improving its resource efficiency. Study for the European Commission, p. 28
[18] Eco-Innovation Observatory, Country Brief 2013 Romania
[19] European Commission, 2015. Flash 426 Eurobarometer "SMEs, resource efficiency and green markets"
[20] RPA, 2015. Assessing the Potential Cost Savings and Resource Savings of Investments in 4 SME sectors, study for European Commission, p. 30
[21] RPA, 2015. Assessing the Potential Cost Savings and Resource Savings of Investments in 4 SME sectors, study for European Commission,, p. 38
[22] The Flash 426 Eurobarometer "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,

Eco-Innovation

Romania ranks 18th in the Eco-IS, obtaining a score of 87.1 in 2015 as shown in figure 2. This indicates it is below the overall EU28 average score by 13%. However, it is encouraging that the country has advanced three positions since 2013, from the previous rank of 21.

Figure 2: Eco-Innovation Index 2015 (EU=100)[23]



The landscape of eco-innovation initiatives has been evolving in Romania over the past years driven by EU-level regulation. Job creation and a more sustainable economy are among the drivers for eco-innovation.[24] Eco-innovation shortcomings are to a large extent related to a lack of an effective innovation system with a clearly defined institutional structure, legislative and fiscal framework and financial mechanisms for encouraging innovation and application of new technologies in the economy. When it comes to barriers in eco-innovation, many points can be mentioned. Suitable administrative capacity, availability of skilled personnel in the public and private sector, as well as the low propensity to collaborate, continue to be challenges for a systemic transformation agenda such as the circular economy, both in the public and private sector.

The Ministry of Environment is promoting the EU eco-label and voluntary participation to EMAS through campaigns, training and informative materials. Nevertheless, EMAS is not widely applied. Romania has 10 EMAS registered organisations. Although this seems a quite low number of registered organizations with respect to the total of 4034 organisations that hold a registration at EU level, Romania ranks on 17th position. It has seen a very slight increase in the number of registered organisation since October 2015, from 7 to 10. Romania's use of EU Ecolabel licences was very limited in 2015. Romania has 14 licenses, which is quite a low number with respect to the 1875 total number of licenses at EU level, but considering that Romania has become an EU Member State in 2007, it isn't the lowest achiever regarding the EU Ecolabel licenses.

Suggested action

- Increase support of and promotion of resource efficiency measures by SMEs, in particular by investing further in education and training. Export capacity of SMEs can be increased by improved resource efficiency.[25]
- Ensure that Romania's policy orientation has a strategic long-term view and an integrated approach for mainstreaming sustainable development and circular economy thinking and eco-innovation across the government's policies.
- Develop concrete actions from national/local level authorities and synergies between all level of governance and the private sector to make more effort to tap in using EU funds and invest in sustainable solutions.

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,

training, or experience (e.g. verifying compliance with environmental legislation, monitoring resource efficiency within the company, promoting and selling green products and services).

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

[24] Eco-Innovation Observatory, Country Brief 2013 Romania,

[25] European Commission, 2015 SBA Fact Sheet Romania,

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[26] 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.

Waste management remains a key challenge for Romania. The country's performance is characterized by extremely low recycling (5%) and slightly higher composting (11%), and high landfilling (82 %) rates, contrary to the waste hierarchy and the recycling targets set at EU level.

In 2013 (the last year for which the above data is available) in Romania there was a reduction in municipal waste generation compared to 2012. However, it remains considerably lower than the EU average (254 kg/y/inhabitant compared to around 481 kg).[27]

Figure 3: Municipal waste by treatment in Romania 2007-13[28]

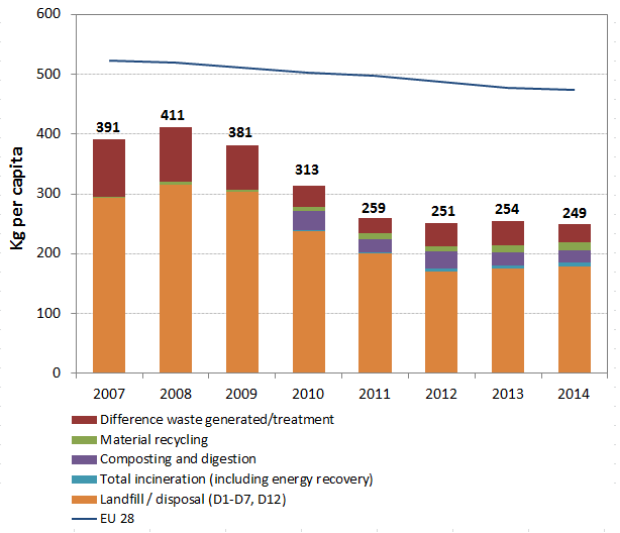
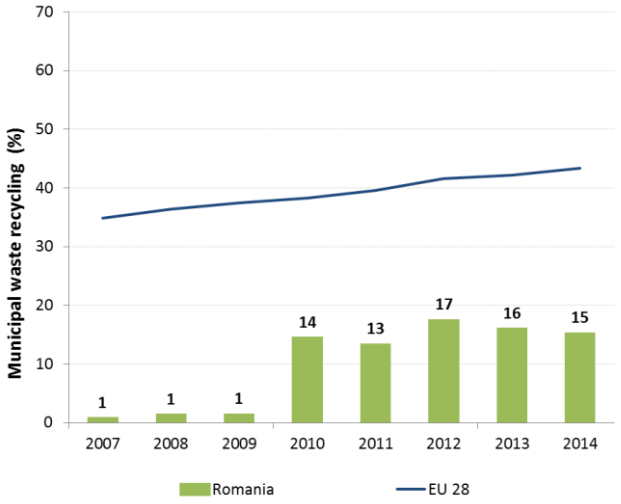


Figure 3 depicts the municipal waste[29] by treatment in Romania in terms of kg per capita, it is clear that Romania will have to put massive efforts to increase recycling and reduce landfilling.

Figure 4 shows that Romania must heavily invest in recycling in the next coming years in order to reach the 2020 recycling target.[30] This is also due to low waste tariffs, which do not generate sufficient income for future investments. The relevant strategies and instruments to divert the waste from landfills are not in place and there is no comprehensive and decisive enforcement action against illegal landfilling.

Figure 4: Recycling rate of municipal waste 2007-14[31]



The access of the population to municipal waste collection schemes was only 76% in 2012, with 90% in urban and 59% in rural areas. Moreover the landfills are very often substandard ones. Relatively few localities have implemented a selective waste collection system.

In 2017, the transition period granted to Romania through the Accession Treaty for the implementation of the Landfill Directive is going to come to an end and Romania will thus have to close 101 non-compliant landfills. Considering the high volumes of waste which are being landfilled, Romania could be faced with a serious landfill capacity problem as of 2017 and could be infringing the waste legislation. Romania made use of the possibility to postpone by four year years the attainment of the 2010 50 % landfill diversion target which they reported to have met in 2014. Romania opted for a new derogation until 2020 to implement the 35% diversion target (effective in 2016). Romania did not report data on packaging for 2013 and 2014, it is thus not clear if the packaging targets were met.

Furthermore, Romania is late in adopting waste management plans and waste prevention programmes (the national waste management plan was adopted in 2004 and was valid until 2013), which are the best tools to reflect on the existing policies and find realistic solutions to achieve the targets on waste management. In addition, these documents are necessary to secure key EU funds under the Cohesion policy (as part of the 'ex-

[26] Waste Management Plans/Waste Prevention Programmes

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

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

[29] Municipal waste consists of waste collected by or on behalf of municipal authorities, or directly by the private sector (business or private non-profit institutions) not on behalf of municipalities.

[30] 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.

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

ante conditionality criteria' on waste). The implementation gap concerning the waste management is also reflected in infringement cases for the bad application of the Landfill Directive and the non-conform transposition of the Waste Framework Directive.

It is therefore not surprising that the use of the dedicated EU funds to improve waste management has been extremely low, mainly due to the lack of capacity of the final beneficiaries to prepare and implement large investment projects, lack of ownership and due to the long times spent on tender procedures.

Estimates show that full implementation of the existing waste legislation could create more than 29,100 jobs in Romania and increase the annual turnover of the waste sector by over EUR 3 billion. Moving towards the targets of the Roadmap on resource efficiency could create over 34,200 additional jobs and increase the annual turnover by over EUR 3.6 billion.[32]

The key recommendations (roadmap) made in 2013[33] in the context of the Commission's compliance promotion exercise are still largely not implemented, hence they remain valid: enforcement of the landfill tax has been postponed to 2017, whilst landfill charges (gate fees) are too low to divert waste towards higher ends of the waste hierarchy and make recycling and reuse economically attractive; the economic instruments in place are too limited to prompt and cover the costs of separate collection and recycling (e.g. limited Extended Producer's Responsibility, lack of 'pay-as-you-throw' schemes); separate collection (including for biodegradable waste) remains insufficient.

Suggested action

- Introduce a landfill tax and gradually increase it to divert recyclable waste from the landfills. 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.
- Urgently address the issue of illegal landfilling.
- Focus on implementation of the separate collection obligation to increase recycling rates.
- Extend and improve the cost-effectiveness, monitoring and transparency of existing EPR schemes and eliminate free-riding.
- Ensure enforcement of law related to waste.
- Complete the missing Waste Prevention Programme.

[32] 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.

[33] BiPRO, 2013. Support to Member States in improving waste management based on assessment of Member States' performance. Study for the European Commission, p. 47

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.

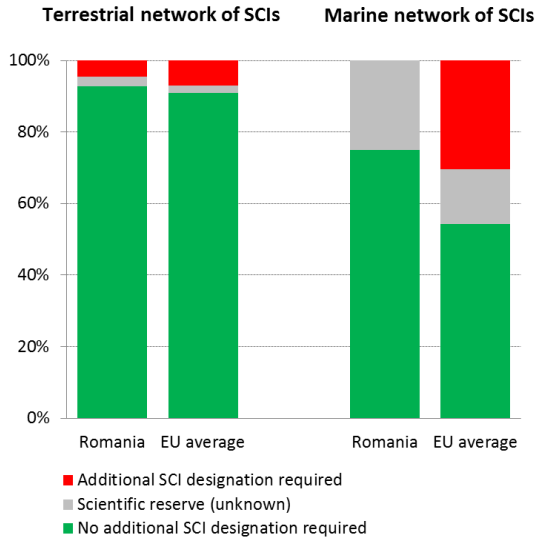
The 1992 EU Habitats Directive and the 1979 Birds Directive are the cornerstone of the European legislation aimed at the conservation of the EU's wildlife. Natura 2000, the largest coordinated network of protected areas in the world, is the key instrument to achieve and implement the Directives' objectives 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[34] both in land and at sea, should be the key items to measure the performance of Member States.

By the end of 2015, 22.56% of the national land area of Romania was covered by Natura 2000 (EU average 18.1%), with Birds Directive SPAs covering 14.83% (EU average 12.3%) and Habitats Directive SCIs covering 16.68% (EU average 13.8%). There were 539 Natura 2000 sites in Romania, including 9 marine sites. The terrestrial sites consisted of 148 Special Protection Areas designated under the Birds Directive, and 382 Sites of Community Importance (SCI´s) designated for the protection of habitats and other species. In 2016 Romania resumed the designation process by designating new SPAs and proposing new pSCIs

The implementation of the Nature Directives represents a considerable challenge for the country. The Romanian administration of Natura 2000 appears to struggle with a lack of administrative capacity and there are also problems due to a lack of knowledge and data. Only a minority of the Natura 2000 sites are managed by professional bodies, the majority having only voluntary administrators. A specialised agency responsible for the Natura 2000 sites in Romania has been discussed since its accession to the EU but has not concretized.

Figure 5: Sufficiency assessment of SCI networks in Romania based on the situation until December 2013 (%)[35]



The implementation of Natura 2000 goals is further affected by a lack of spatial planning. The 2015 assessment of the SCI part of the Natura 2000 network showed that there were insufficiencies in designation[36] as depicted in Figure 5[37]. The sufficiency of the 2016

[34] 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.

[35] European Commission, internal assessment.

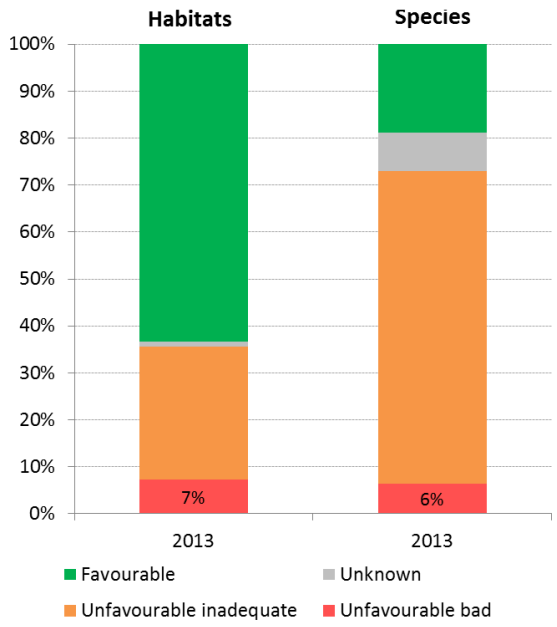
[36] For each Member State, the Commission assesses whether the species and habitat types on Annexes I and II of the Habitats Directive, are sufficiently represented by the sites designated to date. This is expressed as a percentage of species and habitats for which further areas need to be designated in order to complete the network in that country. A scientific reserve is given when further research is needed to identify the most appropriate sites to be added for a species or habitat. The current data, which were assessed in 2014-2015, reflect the situation up until December 2013.

[37] 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.

designation is currently being assessed.

According to the latest report on the conservation status of habitats and species covered by the Habitats Directive[38], 63% of the habitats' biogeographic assessments were favourable in 2013 (EU 27: 16 %). On the other hand, 28 % are considered to be unfavourable–inadequate[39] (EU27: 47%) and 7 % are unfavourable – bad (EU27: 30%).

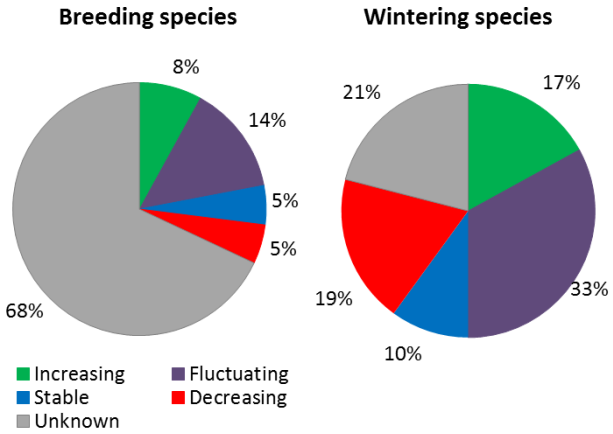
Figure 6: Conservation status of habitats and species in Romania in 2007/2013 (%)[40]



As for the species, 19 % of the assessments were favourable in 2013 (EU 27: 23%), 66 % unfavourable-inadequate (EU27: 42%), and 6% unfavourable-bad (EU27: 18%). This is depicted in Figure 6[41]. No unfavourable assessments for species and habitats were showing a positive trend in 2013.

Figure 7 depicts that, as far as birds are concerned, only 13% of the breeding species showed short-term increasing or stable population trends (for wintering species this figure was 27%).

Figure 7: Short-term population trend of breeding and wintering bird species in Romania in 2012 (%)[42]



The elaboration of Natura 2000 management plans was supported from a dedicated budget line under the 2007-2013 Operational Programme Environment administered by the Ministry of Environment. By the end of 2016 altogether 201 management plans were approved by the Romanian authorities. On the other hand no SAC was designated by that date.

It was found that habitats in Romania have achieved the best conservation status in the EU, while the conservation status of species is the worst. The implications of these findings are still to be fully addressed in the protection and management of the Natura 2000 sites.

In addition, the media have been reporting repeatedly about significant illegal logging in the country. The Commission is still assessing these reports, as well as the initiatives reported by the Romanian Government to fight illegal logging through extended administrative measures aimed at improving checking/inspection capacity and the legal framework. The Integrated Information System for Wood Tracking (SUMAL) has been improved by enabling the public to report to the emergency number 112 any vehicles suspected to be loaded with wood materials of illegal origin.

Beyond Natura 2000 areas, the natural environment of Romania is characterized by a variety of traditional landscapes. Extensively managed, high-nature value farmland and forests support remarkable biological diversity, but such areas are under threat due to agricultural intensification and the abandonment of traditional, extensive management practices.

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

[39] 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.

[40] 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 Article 17 of the Habitats Directive reporting - national summary of Romania

[41] 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.

[42] Article 12 of the Birds Directive reporting - national summary of Romania

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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.
- Strengthen the administrative capacity to improve the designation and management of protected sites. Strengthen communication with stakeholders.
- Enhance efforts to collect reliable data and to improve the quality of the assessments.
- Mitigate the current pressures on natural resources caused by the intensification of agriculture, by proper funding of agri-environmental measures under the Rural Development Programme and especially for the maintenance of High Nature Value Farming.

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.

At the country level, a project on "Demonstrating and promoting natural values to support decision-making in Romania" has been launched to implement the EU initiative on Mapping and Assessment of Ecosystems and their Services (MAES). The project includes a public policy analysis of the level of integration of the concept of ecosystems[43] and ecosystem services in different sectors: biodiversity, climate change, fishing and aquaculture, agriculture and sustainable development, transport, energy, regional development, tourism, and marine and forest for the period 2014-2020. An analysis and data management for the MAES process is being developed. Methodological guidance has been provided for mapping and assessing ecosystems at national level.

Suggested action

- Ensure government support to the mapping and assessment of ecosystems and their services, valuation and development of natural capital accounting systems.
- Improve such accounting systems based on best practice.

Green infrastructure

The EU strategy on green infrastructure[44] 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 Lower Danube Green Corridor[45] (LDGC) aims to coordinate national efforts and cross-border cooperation among the Lower Danube countries for the protection and restoration of wetlands and floodplain habitats. The governments of Romania, Bulgaria, Ukraine and Moldova have committed to establishing a large-scale ecological corridor of up to 1 million ha of existing and new protected areas and 223 608 ha of areas proposed to be restored to natural floodplains. A number of protection and restoration activities have been implemented demonstrating the multiple benefits of healthy wetlands such as wildlife habitat, fish breeding grounds, water purification and local tourism opportunities.

In the Territorial Development Strategy of Romania 2035 there is a clear reference to green infrastructure as an efficient way to adapt to climate change and diminish natural risks compared to physical or grey infrastructure. Specific measures include the protection of natural habitats (by ensuring diversity of and interconnectivity between natural areas, particularly in the context of Natural 2000 management) and the development of green spaces in urban areas as well as of green belts in the surroundings of major cities.

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

[44] European Union, Green Infrastructure — Enhancing Europe's Natural Capital, COM/2013/0249

[45] See SWD52013)155, p. 21

A national assessment has started funded by the EEA, Norwegian Grants and EU through DG Environment's service contract "Mapping of Ecosystems and their Services in the EU and its Member States" (MESEU).

The Romanian Master Plan for Transport in Romania 2030 mentions the need to respect conservation measures in future projects including integrating non-structural and green infrastructure measures, and avoiding negative impact on protected areas, forested areas as well as non-protected areas where species of community interest are identified by reconsidering planning of routes[46].

The Hungary-Romania Cross-Border Cooperation Programme aimed to identify relations between landscape, habitats quality and ecosystem services as perceived by local communities[47].

Specific barriers for the implementation of green infrastructure in Romania include: limited understanding of the way natural ecosystems function, which translates into limited capacity to conceive green infrastructure projects; lack of figures and examples on both socio-economic and environmental benefits to convince decision-makers of the opportunities of investing in green infrastructure; lack of pre-planning mentality and poor use of integrated spatial planning processes. If the large investment in infrastructure (motorways, speedways, railways, water and sewage networks, waste management facilities, etc.) needed in the near future is not properly planned, integrated and assessed, it will threaten habitat connectivity. In this respect, a thorough development and implementation of Operational Programmes taking Green Infrastructure into account should be envisaged. For example, the new Regional Operation Programme for the Western Region is considering smart growth, but fails to take into account Green Infrastructure and the functionality and coherence of the Natura 2000 network[48].

Benefits of green infrastructure are for instance illustrated through the following initiative: WWF in partnership with the Ukrainian NGO RachivEcoTur implemented the "Open Borders for Bears between Romanian and Ukrainian Carpathians" project in the regions of Maramures, Romania, and Ivano-Frankivsk and Zakarpatska, Ukraine. The goal of the project was to reduce habitat fragmentation, identify the critical corridors and the related reconstruction needs and secure sustainable use of natural resources. The critical habitats and wild life corridors are components of a Green Infrastructure delivering multiple benefits.

The benefits from the project include e.g. identification and implementation of tools to effectively manage natural resources that contribute to the conservation of the critical habitats and corridors for bears, and for sustainable development of the communities.

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.

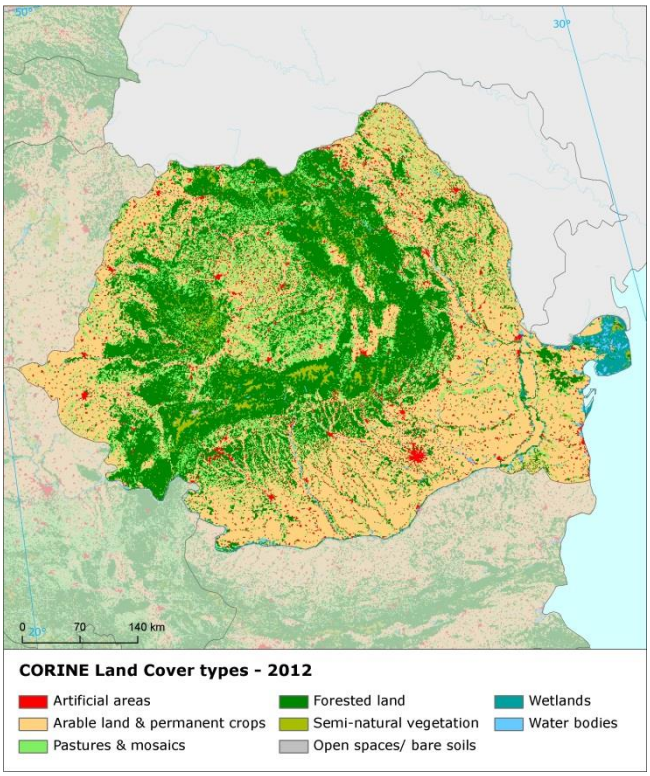
Figure 8 shows the different land cover types in Romania in 2012.

[46] Trinomics, 2016. Supporting the implementation of the European Green Infrastructure Strategy. Study for the European Commission, draft country fact sheet Romania

[47] Trinomics, 2016. Supporting the implementation of the European Green Infrastructure Strategy. Study for the European Commission, draft country fact sheet Romania

[48] Trinomics, 2016. Supporting the implementation of the European Green Infrastructure Strategy. Study for the European Commission, draft country fact sheet Romania

Figure 8: Land Cover types in Romania 2012[49]



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) was 0.15% over the period 2006-2012, well below the EU average (0.41%). It represented 1,917 hectares per year and was mainly driven by housing, services and recreation as well as industrial and commercial sites[50].

The percentage of built up land in 2009 was 1.58%, well below the EU average (3.23%)[51].

The soil water erosion rate in 2010 was 2.84 tonnes per ha per year, close to EU28 average (2.46 tonnes) [52].

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.

An updated inventory and assessment of soil protection policy instruments in Romania 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)[53] 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[54] 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). All these different elements of their marine strategy have to be reported to the Commission, which, in turn, assessed whether these elements constitute an appropriate framework to meet the requirements of the MSFD.

Romania's marine waters are part of the Black Sea marine region and the country is party to the Black Sea Convention. The main threats to the Black Sea region are land-based sources of pollution (e.g. nutrients coming from the River Danube). In addition, given the role of the Black Sea region as a transit route for major oil and gas exports, oil spills or accidental pollution may also become increasingly important. Finally, the Black Sea's fish stock has deteriorated dramatically over the past three decades, with the diversity of commercial fish caught shrinking from about 26 species to six. This is due to eutrophication, the introduction of alien species and overfishing[55].

Romania has been diligent with the implementation of the MSFD. Regarding the last deliverables under the MSFD (initial assessment, determination of GES and environmental targets), Romania made considerable

[49] European Environment Agency. Land cover 2012 and changes country analysis [publication forthcoming]
[50] European Environment Agency Draft results of CORINE Land Cover (CLC) inventory 2012; mean annual land take 2006-12 as a % of 2006 artificial land.
[51] European Environment Agency, 2016. Imperviousness and imperviousness change, Figure 1
[52] Eurostat, Soil water erosion rate, Figure 2, accessed November 2016
[53] European Union, Marine Strategy Framework Directive 2008/56/EC
[54] 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"
[55] European Environment Agency, 2015. State of the Environment report – Black Sea region

efforts to set quantitative targets when data was available and to give a GES description consistent with other EU legislation. However, weaknesses were identified in the definition of GES: for instance Romania initially only defined GES for 5 out of the 11 MSFD descriptors.

A number of EU-financed projects facilitate cooperation and support implementation of the MSFD in the Black Sea region. Romania should continue to pursue coordination at regional level to improve the quality of its next deliverables under the MSFD.

Romania established a monitoring programme of its marine waters in 2014. However, the monitoring programmes for all descriptors apart from eutrophication, contaminants and contaminants in seafood need further refinement to constitute an appropriate framework to monitor progress towards the GES. In addition, Romania reports that its monitoring programme will not be in place before 2018, the date by which the next assessment of Romania's marine waters is due.

In 2012, Romanian marine protected areas covered 1887.5 square kilometres of their marine waters in the Black Sea. The country's six nationally designated Marine Protected Area sites almost entirely overlapped with the Natura 2000 sites[56].

The Transboundary Diagnostic Analysis of the Black Sea confirms (2007) that isolation from the flushing effects of the open ocean, coupled with its huge catchment, has made the Black Sea particularly susceptible to eutrophication. On the basis of this analysis, eutrophication/nutrient enrichment is acknowledged by the Strategic Action Plan for the Environmental Protection and Rehabilitation of the Black Sea adopted in Sofia, on 17 April 2009 as one of the four priority transboundary problems and one of the Ecological Quality Objectives of this Plan is therefore to reduce it.

The Commission financed a project to help the Black Sea countries address this problem, in cooperation with HELCOM[57].

In its reports on the implementation of the MSFD[58], the Commission provided guidance to assist Romania in its implementation of the Marine Strategy Framework Directive.

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 and information 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 other EU legislation and to implement joint monitoring programmes developed at (sub)regional level.
- Enhance, in cooperation with Bulgaria, the comparability and consistency of monitoring methods within its marine region.
- Urgently report and implement the national programme of measures.
- Ensure that its monitoring programme is implemented without delay and is appropriate to monitor progress towards its GES.

[56] 2012 Data provided by the European Environment Agency to the European Commission – Not published

[57] European Commission, 2014. Environmental monitoring of the Black Sea with focus on nutrient pollution, Final report

[58] 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 & 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)

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.

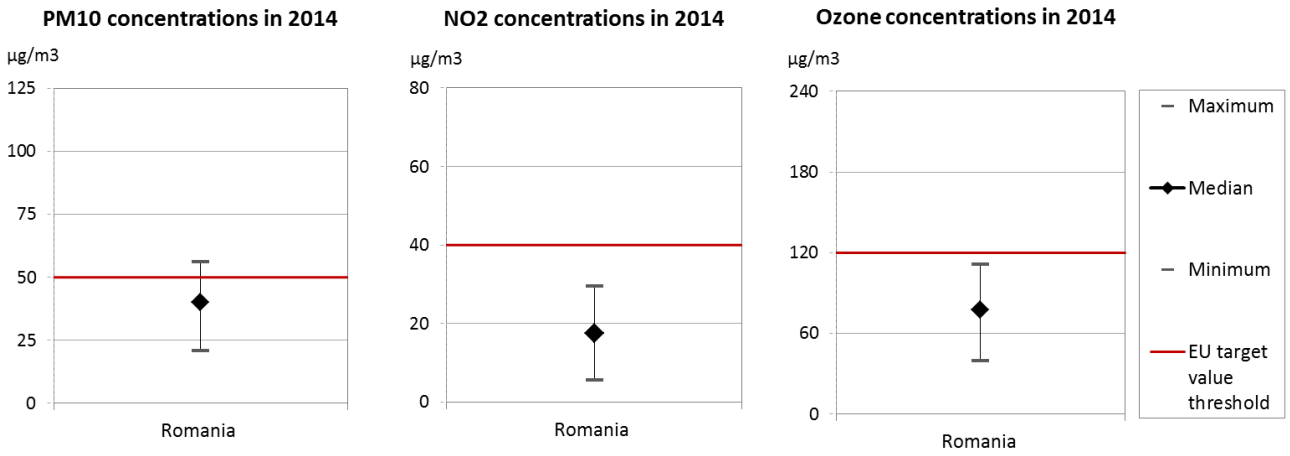
The EU has developed a comprehensive suite of air quality legislation[59], which establishes health-based standards and objectives for a number of air pollutants. As part of this, Member States are also required to ensure that up-to-date information on ambient concentrations of different air pollutants 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 Romania[60]. Reductions between 1990 and 2014 for sulphur oxides (-79%), nitrogen oxides (-53%), ammonia (-46%) as well as volatile organic compounds (-10%) ensure emissions from these pollutants are within the currently applicable national emission ceilings.[61] These trends must continue if Romania is to achieve compliance with air quality standards, too.

At the same time, air quality in Romania continues to cause concern. For 2013, the European Environment Agency estimated that about 25 330 premature deaths were attributable to concentrations of fine particulate matter[62], 430 to ozone concentrations and 1 900 to nitrogen dioxide concentrations[63]. This is also due to exceedances above the EU's air quality standards as shown in Figure 9[64].

For 2013, exceedances above the EU air quality standards have been registered related to nitrogen dioxide in two air quality zones (Bucharest and Brasov), and related to particulate matter(PM_{10}) in three air quality zone

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.*

[59] European Commission, 2016. Air Quality Standards

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

[61] 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.

[62] 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

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

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

(Bucharest, Iasi and Ilfov).

For 2014, the Romanan authorities have communicated exceedances above the EU air quality standards related to particulate matter (PM_{10}) in one zone (Bucharest). Furthermore, the target values and long-term objectives regarding ozone concentrations are not being met in several air quality zones[65].

The persistent breaches of air quality requirements (for PM_{10}), which have severe negative effects on health and environment, are being followed up by the European Commission through infringement procedures covering all the Member States concerned, including Romania. The aim is that adequate measures are put in place to bring all zones into compliance.

It is estimated that the health-related external costs from air pollution in Romania are above EUR 10 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 4.5 million workdays lost each year due to sickness related to air pollution, with associated costs for employers of EUR 257 million/year (income adjusted, 2010), for healthcare of above EUR 31 million/year (income adjusted, 2010), and for agriculture (crop losses) of EUR 106 million/year (2010)[66].

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 nitrogen oxide (NO_x) emissions to comply with currently applicable national emission ceilings[67] and/or to reduce nitrogen dioxide (NO_2) (and ozone concentrations), inter alia, by reducing transport related emissions - in particular in urban areas.
- 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[68]. 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.

Romania's implementation of the Environmental Noise Directive[69] is delayed. The noise mapping for the most recent reporting round, for the reference year 2011, is mostly complete. Action plans for noise management in the current period have been adopted for 53% of agglomerations, 3.7% of major roads and 33.33% of major railways. For airports, the Romanian authorities have fulfilled all their obligations.

Suggested action

- Complete the missing noise maps and action plans.

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*[70] seeks to ensure good status of all water bodies

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

[66] Based on the Impact Assessment for the European Commission Integrated Clean Air Package (2013)

[67] Under the provisions of the revised National Emission Ceilings Directive, Member States now may apply for emission inventory adjustments. Pending evaluation of any adjustment application, Member States should keep emissions under close control with a view to further reductions.

[68] 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

[69] 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.

[70] This includes the Bathing Waters Directive (2006/7/EC); the Urban

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 River Basin Management Plans[71] Romania reported the status of 3262 rivers, 131 lakes, 2 transitional, 4 coastal and 142 groundwater bodies. 64% of natural surface water bodies achieve a good or high ecological status and only 38% of heavily modified or artificial water bodies achieve a good or high ecological potential. 94% of surface water bodies, 90% of heavily modified and artificial water bodies and 87% of groundwater bodies achieve good chemical status. 100% of groundwater bodies are in good quantitative status.

The main pressure on Romanian surface waters is diffuse pollution that affects 33% of water bodies. Flow regulation and morphological alterations affect 13% and point sources of pollution affect 8% of water bodies.[72]

The Romanian River Basin Management Plan has a number of deficiencies that result in uncertainties about the status, and the link between identified pressures, objectives and measures is not always clear. In particular there are weaknesses in methods for assessment and classification of the status. A number of exemptions were applied without transparent justification. The planned measures are expected to result in improvement of ecological and chemical status of surface water bodies by 4% and 1% respectively. The measures should also bring improvement of ecological potential of artificial and heavily modified water bodies by 9% and improvement of chemical status by 3%. In terms of ecological status, it has to be noted that the progress regarding individual status quality elements may be masked due to the application of the 'one-out all-out' rule. This level of improvement of ecological status has also to be seen in relation to the fact that Romania is still under transitional periods for the implementation of the Urban Waste Water Treatment Directive which has driven to a large number of exemptions.

No change in chemical and quantitative status of groundwater can be expected.

No change in chemical and quantitative status of groundwater can be expected.

Romania is considered rich in water resources as it has a much higher theoretical availability of freshwater resources than the European average. The water exploitation index for the period 1998-2007 was less than 5% of available water resources, which means that it is not a water stressed country (around 20%)[73].

However, the actual usable water resource is one third of this, which makes Romania a country with relatively scarce usable water resources[74]. This is largely due to the widespread contamination of water reserves caused by the domestic, industrial as well as agricultural sectors, and it is aggravated by the severe drought events of the past years[75].

Romania has an integrated water strategy for the period 2010–2035, which covers various policy areas affecting water resources, such as urban development, environmental protection, agricultural and forest development, transport infrastructure, tourism and construction.

Since 2013, Romania has a revised action programme in place implementing the nitrates directive and applying to the whole national territory. The revised legislation has brought significant improvements as compared to the previous action programme implementing the Nitrates Directive. The Romanian authorities decided to apply whole territory approach instead of nitrate vulnerable zones designation and changed some measures of the Action Programme, with significant improvements.

At the same time, the enlargement of the agricultural territory subject to mandatory rules/measures brings some challenges in terms of effective implementation and enforcement of measures, which is key also in view of the possible intensification of the agricultural sector. A recent Court of Auditors report "Danube river basin II: Quality of water" stated there is a lack of ambition in the Member States concerned including Romania to address causes of pollution. It stated that Member States are not using all the possibilities offered by the Nitrates Directive.

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)

[71] More information on the implementation status and more specific recommendations can be found at European Commission, Water Framework Directive Implementation Reports

[72] More information on the implementation status and more specific recommendations can be found at European Commission, Water Framework Directive Implementation Reports

[73] European Environment Agency, 2010. Use of Freshwater resources

[74] More information on the implementation status and more specific recommendations can be found at European Commission, Water Framework Directive Implementation Reports

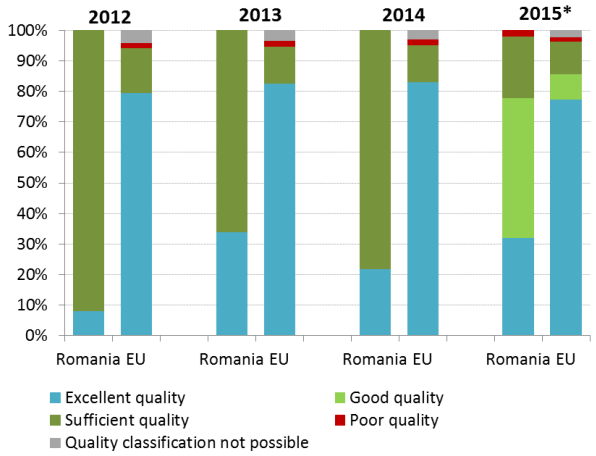
[75] Policy Research Corporation, 2009. The economics of climate change adaptation in EU coastal areas – Romania. Study for the European Commission

The implementation level of the Drinking Water Directive is low[76]. For example, 72% of the large water supply zones were not sufficiently monitored (2010). However, the drinking water quality is overall acceptable, and enforcement is, in general, working, i.e. remedial actions in case of non-compliance are taken. Nevertheless, in rural areas, missing infrastructures lead to the absence of distribution systems. In addition, there have been Accession Treaty exemptions on several parameters until the end of 2015[77].

As shown in Figure 10, in 2015, in Romania out of 50 bathing waters, 32.0% were of excellent quality, 46.0% of good quality and 20% of sufficient quality. One bathing water was of poor quality or non- compliant[78].

It shows that the number of bathing waters with excellent water quality status has slightly improved since 2014.

Figure 10: Bathing water quality 2012 – 2015[79]



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

Only slightly more than half of the population has access to water supply (55% of the population). In most of the installations used for water supply and treatment are based on outdated and ineffective technologies. As a result, such publicly supplied water may suffer from bacteriological infestation, turbidity, and ammonia, nitrates and iron content.

Romania is also still under transitional periods for the implementation of the Urban Waste Water Treatment Directive, therefore with limited compliance obligations. The outcome of the last reporting exercise – even though it only concerned the expiry of the first transitional deadline in 2010 – was not promising, as only one out of 1852 agglomerations in Romania was reported to be in full compliance. Romania will therefore have to make a considerable effort to improve compliance in the coming years, as the final deadline in the Accession Treaty is end of 2018.

Figure 11: Urban waste water Romanian situation 2012 – Final deadline 2018[80]

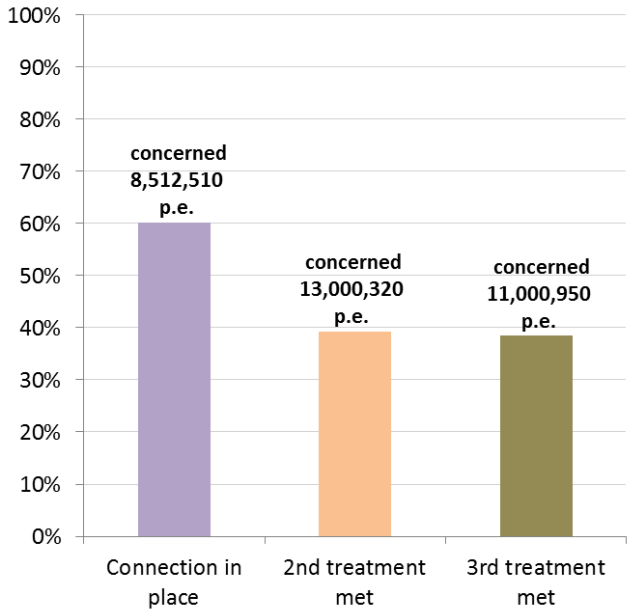


Figure 11 shows the total generated load at Member State level (in population equivalent and regardless of agglomerations) and the load that remains to be addressed by Romania.

An adequate and targeted use of EU funds would be desirable in order to facilitate reaching compliance, not only as regards construction/improvement of treatment plants but also on renewal/enlargement/construction of collecting systems.

The most significant water management issues are related to the organic pollution caused by untreated wastewater from agglomerations[81], industrial units and agricultural farms, by nutrient pollution, caused mainly by agglomerations and agricultural activities, by hazardous substances pollution due to industrial or agricultural activities, and the pressures from hydromorphological alterations. The implementation of the UWWTD is the most important measure to reduce

[76] 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

[77] European Commission, 2014. Reporting requirements and Synthesis Reports

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

[79] European Environment Agency, State of bathing water, 2016

[80] European Commission, 2016. Urban waste water, 8th implementation reports

[81] ANAR. 2012. Romanian Waters: National Administration. See Annex 1 to Chapter 3 Water 3.5.1 Structure of wastewater discharged in 2012-Table 3.5.1.-1: Summary of wastewater volumes discharged in 2012 on economic activities and Table 3.5.2.1 Summary of pollutant load discharged in 2012 on economic activities

both organic and nutrient pollution.

Romania is one of the seven countries taking part in the "Structured Implementation and Information Framework", which helps Member States with the implementation of the UWWTD and more particularly with reporting of information for the next reporting exercise.

The flood protection and control activities represent also one of main water management issue in Romania. 12.7% of Romania's territory is covered by floodplains which are prone to flood events. The country's flood management activities involve a mixture of short-, medium- and long-term policies to protect life, assets and the environment. Most of flood hazard maps for the river basins were prepared with EU funds and became available in March 2014. Technical studies identifying the measures required to further reduce the exposure to the flood risks of the vulnerable activities are under preparation and are subject of the first Flood Risk Management Plans of the river basins. Between 2002 and 2013, for the 20 floods recorded the total direct costs were EUR 3.6 billion (damages found for 10 out of 19 floods)[82].

Romania is called to address flood management including with Green Infrastructure approaches under the ERDF, Rural funds and state budget. Green Infrastructure can play an important role regarding flood management as it represents a cost-effective solution to flood protection compared to traditional 'grey' measures. Given the natural capacity of floodplains to absorb large quantities of water, maintaining or restoring wetlands should be pursued as a logical response against flood risk besides classical measures.

Suggested action

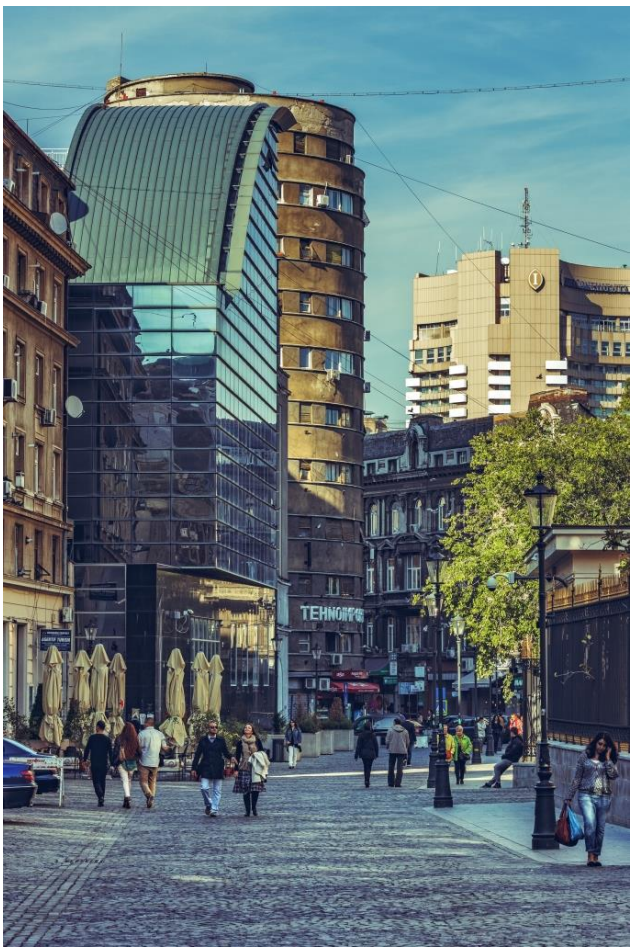
- Improve the water policy in line with the intervention logic of the Water Framework Directive, i.e. to do a more detailed assessment of the link starting from the significant pressures identification to improve monitoring to know the status of water bodies and design effective Programmes of Measures.
- Continue to prioritise the investments for urban waste water treatment plants in order to meet the transitional deadlines set in the Accession Treaty.
- Better define the basic/mandatory measures that all farmers should adhere to and the additional supplementary measures that can be financed to reduce pressures from agriculture[83].

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.[84] 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,

[82] RPA, 2014. Study on Economic and Social Benefits of Environmental Protection and Resource Efficiency Related to the European Semester. Study for the European Commission, Annex 1: Country fiches

[83] Commission Staff Working Document, Report on the Implementation of the Water Framework Directive River Basin Management Plans – Romania (SDW(2012)379 final

[84] European Environment Agency, Urban environment

including air quality and housing[85].

The European Commission will launch a new EU benchmark system in 2017[86].

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.

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.

Romania has signed and ratified almost all MEAs. It has signed but not yet ratified the Nagoya Protocol[87].

[85] http://urbanagendaforthe.eu/

[86] 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.

[87] 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.

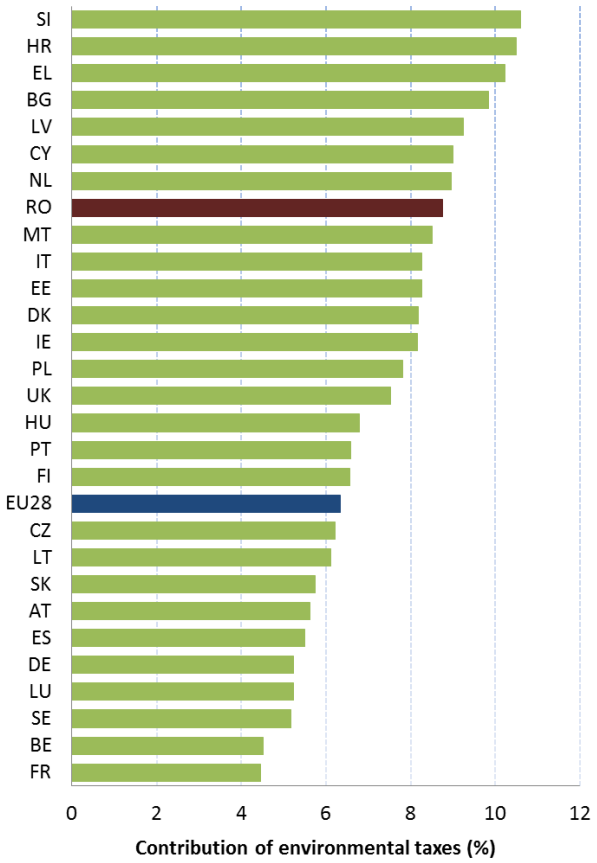
Taxing pollution and resource use can generate increased revenue and bring important social and environmental benefits.

The latest ESTAT data for Romania has environmental tax revenues amounting to 2.42% of GDP in 2014 (EU28 average: 2.46% of GDP).[88] In the same year environmental tax revenues accounted for 8.76% of total revenues from taxes and social security contributions (up from 7.47% in the preceding year and much higher than the EU28 average of 6.35%) as shown in Figure 12. Romania's environmental tax revenues have increased continuously since 2011. The implicit tax rate on energy remains lower than the EU average (136 versus 233), indicating an energy-intensive economy and scope for improving energy efficiency.

Given that Romania faces problems with achieving environmental goals for water, waste and air, further actions in the area of environmental taxation are justified due to the considerable potential for additional revenue from environmental taxes[89].

A 2016 study suggests that there is considerable potential for shifting taxes from labour to environmental taxes[90]. Under a good practice scenario[91] these could generate an additional EUR 2.19 billion by 2018, rising to EUR 4.38 billion by 2030 (both in real 2015 terms). This is equivalent to an increase by 1.26 and 1.7% of GDP in 2018 and 2030, respectively. The largest potential source of revenue would come from increases in vehicle taxation. The suggested increase of vehicle taxation could account for EUR 2.6 billion of additional revenue by 2030 (real 2015 terms), equivalent to 1.26% of GDP.

Figure 12: Environmental tax revenues as a share of total revenues from taxes and social contributions (excluding imputed social contributions) in 2014[92]



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.

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

[89] European Commission, 2015. Tax Reforms in EU Member States 2015, Institutional Paper 008 Sept. 2015, p.68

[90] 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.

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

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

The purchasing power of public procurement in the EU equals to approximately 14% of GDP[93]. 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[94].

Romania had adopted in April 2016 a law dedicated to green public procurement and a set of criteria in the procurement of green products and services categories will be further established.

In 2017, the Ministry of Environment, Waters and Forests will start a consultation with stakeholders for the selected categories for developing and set the strategically directions of the National Action Plan for Green Public Procurement (GPP).

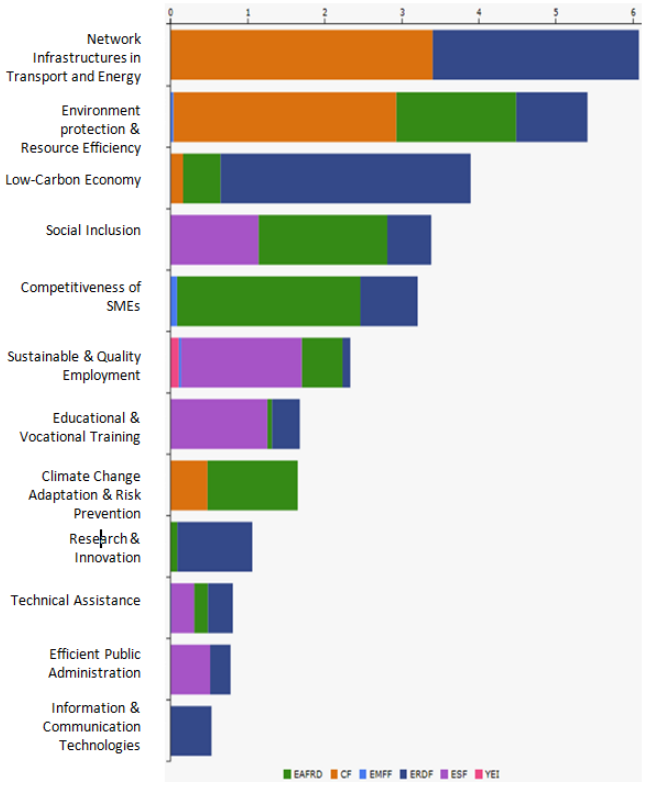
Currently, the Ministry of Environment in partnership with Regione Basilicata (IT), Fondazione Ecosistemi (IT), Regione Lazio (IT), and Regione Sardegna (IT) are developing a LIFE project to promote instruments and actions for planning, improving, and best practice transfers for green public procurement

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)[95] 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 European Fund for Strategic Investment[96] (EFSI) may also support implementation and spread off best practice.

Figure 13: European Structural and Investment Funds 2014-2020: Budget Romania by theme, EUR billion[97]



The lack of stability of the administrative structures coupled with insufficient implementation capacity often delay structural reforms and affect the effective use of EU funds. Based on the last available information from the 2007-2013 period, the expected investments approved under the Operational Programme (OP) Environment were not fully implemented and a relevant number of projects were not completed.

Under the 2014-2020 period, investments will continue supporting Romania to improve the quality of environment and promote the sustainable use of natural resources. Waste management, water supply and wastewater treatment, biodiversity and nature protection, risks prevention and management will be the main sectors targeted by the investments.

The global budget allocation for Cohesion Policy for the 2014-2020 period is EUR 22.4 billion, out of which EUR 3.8 billion are allocated for environmental investment (see Figure 13). For the period 2014-20 there is no separate OP for environment as was the case for the period 2007-13, but environment is part of the Large Infrastructure OP, together with transport and energy, for which the Managing authority is the Ministry of European Funds. Romania is also targeting environmental implementation gaps with its ESIF investment OPs.

[93] European Commission, 2015. Public procurement

[94] 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.

[95] 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.

[96] EIB: European Fund for Strategic Investments

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

The EIA/SEA and water ex-ante conditionalities, which are preconditions to access EU funding, were expected to be fulfilled by the end of 2016. The waste ex-ante conditionality is not fulfilled as the waste management plan (WMP) and the waste prevention programmes (WPP) are not yet available. Effective economic instruments are also missing, i.e. the lack of transparent and effective Extended Producer Responsibility (EPR) or equivalent system is in place to cover the operational costs of separate collection and recycling of the main waste streams. The Action Plan included in the Roadmap is the minimum necessary to ensure achievement of the targets on preparation for reuse and recycling.

The planned environmental investments are focused on the right priorities, such as building the necessary environmental infrastructure, depolluting and rehabilitation, the development of the tools to meet the management and monitoring requirements, increasing urban green areas and improving mobility.

However, due attention should be paid to the fact that most of the environmental major projects have not yet been completed and should be finalized under the 2014-20 programming period.

The National Rural Development Program (EARDF amounts overall to EUR 3.252 billion - 40% of the total budget to environmental measures), but only 11% is dedicated to agri-environment-Climate measures. The RDP has a sound intervention logic which makes the link with its contribution for implementing the environmental legislation. Romania should still complete the RDP with adequate environmental safeguards, make adjustment to the agri-environment climate measure and make sure the RDP covers proper funding and coverage once Natura 2000 management plans and the 2nd RBMPs are approved.

With regard to the integration of environmental concerns into the Common Agricultural Policy (CAP), the two key areas for Romania (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 Direct Payment envelope of Romania is EUR 8 949 million[98]), 30 % of which (2 740) is 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 the Romania could review its implementation of this.

[98] According to 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[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 central, regional and local administrations have the necessary capacities, skills and training to carry out their own tasks while cooperating and coordinating effectively with each other, within a system of multi-level governance.

In 2000, a study showed that significant changes were required to achieve adequate levels of cooperation between ministries and coordination between the national and county level in Romania, to achieve adequate implementation of the EU environmental legislation[100]. Although since then substantial EU funds have been made available to improve environmental and other Cohesion Funds-related themes in particular in the 2007-2013 programming period[101], it seems that, overall, there is considerable room for improvement in terms of administrative capacity. To tackle the structural weaknesses, a strategy for strengthening public administration was adopted in 2014 together with an action plan for its implementation in 2014-2020[102]. The strategy addresses the dedicated *ex ante* conditionality for the new programming period of the EU structural and investment funds[103]. Implementation seems, however, starting with substantial delay.

Perceptions on the quality of public services, the civil service, policy-making and implementation, as well as the credibility of the government's commitment to policies, which are captured by the 'government effectiveness'

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

[100] Ecotec, 2000. Administrative Capacity for Implementation and Enforcement of EU Environmental Policy in the 13 Candidate Countries. Final Report to the European Commission

[101] Between 2007 and 2013, over EUR 1 billion was available for capacity building(including for local governments) through a programme for Administrative Development and a programme for Technical Assistance.

[102] European Commission, Commission Staff Working Document Country Report Romania 2015 Including an In-Depth Review on the prevention and correction of macroeconomic imbalances

[103] Ex ante conditionality 11: The existence of a strategic policy framework for reinforcing the Member States' administrative efficiency including public administration reform.

indicator, are well below the EU average.[104] There is a lack of trust among political and administrative layers, resulting in weak ownership of decisions and policies.

Environmental policy developments in Romania are mainly driven by EU Regulations and Directives. An important part of the implementation challenge is timely transposition of EU environmental law by national authorities into national legislation. Romania sometimes transposes environmental directives belatedly. The legislation is generally correctly transposed and when instances of non-conformity occur, the country cooperates and amends its legislation accordingly.

Implementation remains however the real challenge as indicated by the fact that Romania, although a new Member State, is among the countries with the highest number of environmental infringements mainly in the areas of waste management (e.g. operation of substandard landfills), air pollution (e.g. exceedances of PM10 emission limit values), non-adaptation of old large combustion plants to EU standards, and authorisation of projects without the necessary assessments and permits.

The number of complaints is increasing. Complaints and petitions received are often related to the authorisation of energy projects (wind farms in Dobrogea region, micro-hydropower plants in Natura 2000 areas) and the operation of industrial installations.

Suggested action

- Improving the administrative capacity and the coordination of the agencies involved in implementation is urgently needed to reverse this trend and avoid hefty penalties in medium and long term. This will also contribute towards addressing such implementation gaps.
- Romania should speed up the implementation of the strategy for strengthening public administration, within which environment should be given due attention.

Coordination and integration

There is a need to enforce coordinated implementation. For example, water supply is frequently given higher priority than sanitation. However, households can only be connected to the water supply network if they are already hooked up to a sewerage disposal system. These discrepancies often lead to illegal household connections, in addition to which the lack of sewage disposal places intense stress on groundwater and surface water.[105]

In the area of waste services, the introduction of contracts at county level would allow better planning of waste collection services for the entire municipality or region, including rural areas.

Impact assessments are important tools to ensure environmental integration in all government policies.[106] Romania uses regulatory impact analysis (RIA) on all legislative projects to be approved by the Government. The RIA in principle covers also environmental impacts. In practice, it seems that such impacts are usually only presented qualitatively and not in-depth, and there is no quality control in place.[107] Romania has fully aligned the strategic environmental assessment for plans and programmes (SEA) and environmental impact assessment for projects (EIA). The transposition of the revised EIA Directive will be an opportunity to streamline the regulatory framework on environmental assessments, and enhance the quality of the impact assessments carried out.

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 2016108 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.

Suggested action

- Romania should further enforce coordinated implementation, in particular with regard to water and waste management as well as to the quality of the impact assessments.

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

[104] World Bank, Worldwide Governance Indicators 2015
[105] UNECE, 2012. Environmental Performance Reviews - Romania
[106] Article 11 of the TFEU provides that "Environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development."
[107] RPA, 2015. Study on the potential of impact assessments to support environmental goals in the context of the European Semester, Study for the European Commission
[108] 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).

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[109] 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 14.

Figure 14: Environmental compliance assurance

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*[110], *EUFJE*[111], *ENPE*[112] *and EnviCrimeNet*[113], is a valuable tool for sharing experience and good practices.

Currently, there exist a number of sectoral obligations on inspections and the EU directive on environmental liability (ELD) [114] 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[115] .

Romania has taken some significant steps to underpin risk-based compliance assurance:

- The main pillar, the National Environmental Guard (NEG) has ISO 9001 and ISO 14001 certification.
- NEG has established a risk-based approach to environmental inspections[116].

The NEG coordinates a network of environmental volunteers (Environmental Volunteer Corps) which consists of about 1000 registered volunteers and is an innovative tool for citizens' involvement in compliance assurance work. The main functions of the Corps relate to notification of identified breaches of environmental law to the competent authorities, awareness raising, participation in compliance assurance activities carried-out by the NEG and provision of specific technical expertise.

Up-to-date information would 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 both at the strategic level and in specific problem-areas highlighted elsewhere in this Country Report, i.e. non-compliant landfills, the threats to protected habitat types and species, poor air quality, poor drinking water and the pressures on water quality from diffuse water pollution and inadequate waste-water treatment;
- tools for ensuring cooperation and coordination between NEG and other relevant authorities, such as memoranda of understanding and protocols, are in

[109] European Union, Environmental Crime Directive 2008/99/EC
[110] European Union Network for the Implementation and Enforcement of Environmental Law
[111] European Union Forum of judges for the environment
[112] The European Network of Prosecutors for the Environment
[113] EnviCrimeNet
[114] European Union, Environmental Liability Directive 2004/35/CE

[115] 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.
[116] However, IMPEL has observed that the risk criteria used have a generic character and do not sufficiently consider local and regional contexts, see IMPEL IRI Romania Report, 2014, p. 42

place. However, evidence indicates that the potential for data collection and sharing and joint compliance monitoring and enforcement actions is not sufficiently used[117]. Romania is very active within IMPEL. It was the first Member State to have been the host of two Impel Review Initiative (IRI) projects and it has hosted the first IMPEL IRI on nature protection inspections.

For the period 2007-2013, Romania reported four cases of environmental damage handled under the Environmental Liability Directive. Romania shows an interest in implementing the Directive effectively, as demonstrated by a pioneering role in setting up a training programme. However, more support measures are needed. There is no mandatory financial security (to pay for remediation where an operator cannot) and there is insufficient insurance on offer.

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 the activities of ENPE, EUFJE and EnviCrimeNet.
- 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. 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 up).

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 Romanian legal review system, including court actions in environmental matters, is clear and predictable. The legislation grants broad standing to individuals and groups, including NGOs, by requiring only a legitimate public interest in order to take an environmental case to the court. However, one shortcoming seems to be the lack of timely judicial proceedings, an issue which concerns, however, all areas of law. This problem could only be tackled with a general reform of the judicial system, making it in particular more efficient. However, the costs of judicial proceedings are considered as prohibitively high. In Romania no legal aid is available for environmental cases[118].

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 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 Convention[119], the Access to Environmental Information Directive[120] and the INSPIRE Directive[121]

[117] IMPEL IRI Romania Report, 2014, p. 17 and 41.

[118] See study on access to justice in environmental matters 2012/2013

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

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

[121] http://inspire.ec.europa.eu

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[122]. 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.

Romania's performance on the implementation of the INSPIRE Directive as enabling framework to actively disseminate environmental information to the public leaves room for improvement. Romania has indicated in the 3-yearly INSPIRE implementation report[123] 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 yet fully implemented. Romanian public authorities are obliged to share spatial data free of charge between public administrations. Lack of resources, knowledge and collaboration has delayed the implementation. A recent update of the legal framework for the National Infrastructure for Spatial Information, backed-up by the necessary funding for implementation should address the existing bottlenecks and implementation gaps.

Assessments of monitoring reports[124] issued by Romania and the spatial information that Romania has published on the INSPIRE geoportal[125] 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.

[122] European Union, EU eGovernment Action Plan 2016-2020 - Accelerating the digital transformation of government COM(2016) 179 final
[123] European Commission, INSPIRE reports
[124] Inspire indicator trends
[125] Inspire Resources Summary Report