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Environmental Implementation Review 2022
Country Report - SPAIN

Accompanying the document

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

Environmental Implementation Review 2022: *Turning the tide through environmental compliance*

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Executive summary

In previous Environmental Implementation Reviews (EIRs), the main challenges identified for Spain for the implementation of EU environmental policy and law were:

- Improving waste management and developing the potential of the circular economy;
- Improving water management, including completing urban wastewater treatment;
- Increasing environmental taxation, as well as reducing environmentally harmful subsidies.

There has been some progress on **circular economy and waste management**. As suggested in the 2017 and 2019 EIRs, Spain has approved a national Strategy on Circular Economy in June 2020, which is under implementation. Many Autonomous Communities have also adopted regional strategies on circular economy. A new Law on waste and contaminated soils for a circular economy has been adopted in April 2022. However, despite this progress, waste management remains a significant challenge. Spain is one of the countries that has missed the EU target of recycling 50% of municipal waste by 2020. The overall recycling rate was of 38% in 2019, against an EU average of 48%. Achieving the EU targets for the next decade, including reaching 55% recycling of municipal waste by 2025, will require significant efforts.

On **water management**, Spain has approved the Plan DSEAR on wastewater, sanitation, water efficiency, saving and reuse, and is close to adopting the third cycle River Basin Management Plans under the Water Framework Directive. Progress is made on wastewater, although many agglomerations do not yet comply with the Urban Waste Water Treatment Directive, and Spain is still paying heavy fines following a ruling of the Court of Justice of the EU of July 2018 (around EUR 72 million has been paid). Many challenges remain in the water sector, especially in the areas of water governance, water body rehabilitation and water efficiency. Further infrastructure investment is needed in many areas.

On **environmental taxation**, some progress can be observed. As part of the reforms under the Recovery and Resilience Plan (RRP), new taxes have been introduced on non-reusable plastics packaging and management of waste (landfill, incineration and coincineration), and a tax reform on fluorinated gases is underway. The RRP also provides for adopting further measures on green taxation, if agreed in the context of the wider tax reform.

Spain is an outstanding reference within the EU in terms of **natural capital**, which provides opportunities but implies a special responsibility too. Spain boasts a very rich biodiversity and contributes the largest terrestrial surface to the EU Natura 2000 network, covering 27.3% of its territory (EU average is 18.5%). Some designations are still needed in the marine part. The main challenge is to put in place the necessary measures to protect and manage the Natura 2000 network, providing sufficient resources. Spain could also further capitalise on its very valuable natural capital to promote green growth and job creation.

Personal transport exacerbates seasonal problems with **air quality** and traffic congestion in the major metropolitan areas in Spain, leading to health and economic costs. The Spanish authorities are taking further measures to tackle this issue, which have to be rigorously implemented.

Anticipating and managing the adverse effects of **climate change**, such as floods, coastal and soil erosion, desertification, droughts, heat waves and forest fires, remains a core challenge in Spain, which is one of the most affected countries in the EU.

Environmental **enforcement** needs to be strengthened in Spain. There is also room to improve the **coordination and cooperation** among the competent authorities in the environment. Moreover, **sustainable development** could be further mainstreamed into other policy areas.

The support of **EU funding** has significantly contributed to improving the implementation of EU environmental law and policy in Spain. Total environmental financing (EU plus national) reached around 0.5% of GDP in 2014-2020. Nevertheless, Spain still faces considerable challenges and investment needs, estimated to be at least 0.83% of GDP in the coming years, signalling a potential financing gap of over 0.35% of GDP compared to baseline financing levels. EU financing will continue to play a key role in addressing these shortcomings and closing the investment gaps. Under NextGenerationEU, Spain is due to receive EUR 69.5 billion (grants) from the Recovery and Resilience Facility (RRF). This considerable amount is expected to improve environmental implementation on the ground. The Spanish RRP earmarks around 40% of its budget to the climate change objectives. Several compoments have a genuine and ambitious environmental dimension, covering a wide range of environmental sectors. In 2021-2027, EU Cohesion Policy will support long-term development objectives in Spain by investing EUR 36.26 billion, including EUR 868.7 million from the new Just Transition Fund directed to alleviate the socioeconomic impacts of the green transition in the most vulnerable regions. The Partnership Agreement with Spain is under negotiation, but a relevant share of the ERDF will probably be

earmarked for environmental investments. Moreover, other EU Funds will also contribute to support environmental projects in Spain, such as EARDF, EMFAF, LIFE and Horizon Europe.

Part I: Thematic Areas

1.Circular Economy and waste

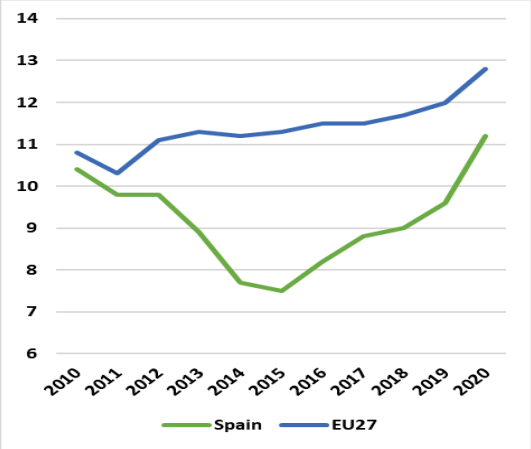
Measures towards a circular economy

The new Circular Economy Action Plan adopted in March 2020 is one of the main building blocks of the European Green Deal. The EU's transition to a circular economy will reduce pressure on natural resources and will create sustainable growth and jobs. It is also a prerequisite to achieve the EU's 2050 climate neutrality target and to halt biodiversity loss. The Action Plan announces initiatives along the entire life cycle of products, aiming to reduce the EU's consumption footprint and to double the EU's circular material use rate by 2030. It targets how products are designed, promotes circular economy processes, encourages sustainable consumption, and aims to ensure that waste is prevented and the resources used are kept in the EU economy for as long as possible.

The circular material use rate is a good indicator of an economy's circularity, as it includes all the materials that are fed back into our economy. Large differences in the circularity rate exist between countries. To help achieve the goal in the EU Circular Economy Action Plan of doubling the EU circular material use rate by 2030, ambitious measures targeting the whole product life cycle are needed at Member States' level. Such measures range from sustainable product design that makes it possible to increase the durability, reparability, upgradability and recyclability of products, to other measures like remanufacuring, increasing the circularity in production processes, recycling, as well as boosting eco-innovation and increasing the uptake of green public procurement.

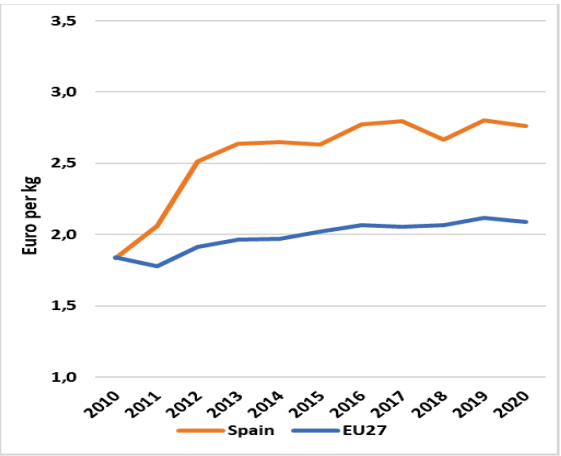
Spain's circular (secondary) use of material was 7.7% in 2014 and 11.2 % in 2020, compared to the EU average of 12.8. Therefore, while Spain has seen a progress between 2014 and 2020, it remains below the EU average.

Figure 1 – Circular material use rate (%), 2010-2020[1]



Resource productivity expresses how efficiently the economy uses material resources to produce wealth. Improving resource productivity can help to minimise negative impacts on the environment and reduce dependency on volatile raw material markets. As shown in Figure 2, with EUR 2.76 generated per kg of material consumed in 2020, resource productivity in Spain is well above the EU average of EUR 2.09 per kg. This positive performance is reflected in an overall increase in the resource productivity of Spain over the last decade.

Figure 2: Resource productivity 2010-2020[2]



[1] Eurostat, Circular Economy Monitoring Framework.
[2] Eurostat, Resource productivity.

Circular Economy Strategies

The Commission encourages Member States to adopt and implement national/regional circular economy strategies covering the whole life cycle of products. This is because such strategies are one of the most effective ways to progress towards a more circular economy at Member State level. Since the launch of the European Circular Economy Stakeholder Platform in 2017[3], national, regional or local authorities have used the platform to share their strategies and roadmaps.

Following some years of preparation, Spain adopted in June 2020 a comprehensive Circular Economy Strategy titled "España Circular 2030"[4]. This national strategy puts forward a long-term vision, which will be achieved through successive three-year action plans to complete the transition by 2030. It establishes guidelines, strategies and a series of quantitative objectives. The Strategy identifies six priority sectors of activity to address the challenge of increasing "circularity" in Spain. It also identifies key public policies to move towards a circular economy and sets up a framework of indicators in line with EU standards. The Government has already adopted a first Action Plan in May 2021, focusing on implementing actions in 2021-2023.

Spain does not have a specific sectoral strategy on plastics. However, some measures included in the Circular Economy Strategy are targeting plastics as a priority sector, including by working towards developing an ad-hoc sectoral Action Plan. Similarly, Spain has not adopted sectoral strategies on the textiles and construction sectors. However, the Circular Economy Strategy includes initiatives targeting these sectors.

As highlighted in the 2019 EIR, Spanish regions have also been very active in moving forward circular economy policies in Spain. Regional strategies on the circular economy are common and play a key role in supporting the circular transition on the ground. Civil society and the business community are also playing a crucial role in helping to shape the transition in Spain.

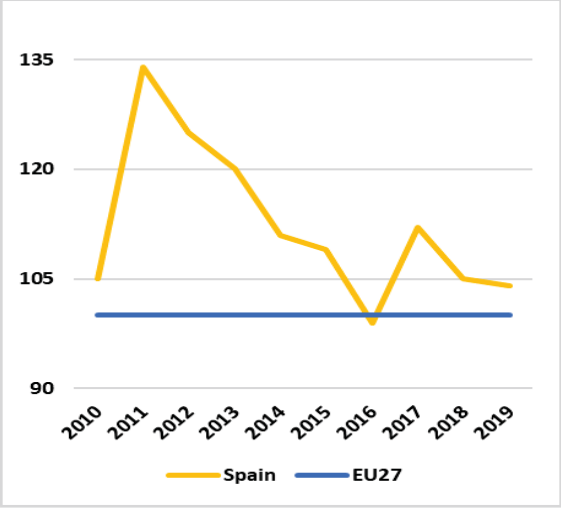
As part of the Recovery and Resilience Plan (RRP), Spain has planned to adopt a series of reforms to promote the transition towards a circular economy. First the abovementioned national strategy on circular economy, but also other measures such as a package of acts on the circular economy. These include the already approved regulation on shipment and disposal of waste in landfills, as well as other measures also already approved on end-of-life vehicles; batteries, accumulators and electrical and electronic equipment waste; management end-of-life tires. Finally, the new Law on waste and contaminated soils for a circular economy, including also a tax on non-reusable plastic packaging and other new taxes on waste management. The Spain's RRP also includes measures on circular economy in many components, such as the reform of the legal framework to improve the competitiveness of the tourism sector by fostering innovation and supporting energy efficiency and the circular economy, or the greening of the agro-food and fisheries sectors.

Eco-innovation

A successful transition to a circular economy requires social and technological innovation. This is because the full potential of the circular economy can only be reached when it is implemented across all value chains. Therefore, eco-innovation is an important enabling factor for the circular economy. New approaches to product design and new business models can help to produce systemic circularity innovations, creating new business opportunities.

Spain ranked 8th in the list of EU countries with a total score of 125 in the 2021 Eco-Innovation Scoreboard [5], and it performs as an eco-innovation leader. In all five components of the 2021 Eco-innovation Index, Spain performs above the EU average.

Figure 3 - Eco-innovation performance 2010-2019[6]



[3] Circular Economy Stakeholder Platform

[4] See the Spanish Strategy on Circular Economy, adopted by the Spanish Government on 2 June 2020.

[5] See the EU Eco-Innovation Scoreboard 2021.

[6] European Commission - Directorate-General for Environment (DG ENV), Eco-innovation Observatory, Eco-innovation scoreboard and the eco-innovation index.

Green Public Procurement (GPP)

Public procurement accounts for a large proportion of European consumption, with public authorities' purchasing power representing around 14% of EU GDP. Although GPP is a voluntary instrument, it has a key role to play in the EU's efforts to become a more resource-efficient and sustainable economy. The Commission is helping to increase the use of GPP or green purchasing. Thus, EU GPP criteria are set up for many sectors[7].

In Spain, a first national action plan for green public procurement was adopted in 2008. Two implementation reports of this plan were published in 2011 and 2015. An Interministerial Commission for the incorporation of ecological criteria in public procurement was created in 2018. The second national plan for green public procurement in the central public administration for the period 2018-2025 was approved in December 2018 and it is currently under implementation[8].

Some regions have also implemented measures on GGP. For example, Catalonia and the Basque Country, with GPP policies based on the EU GPP criteria. Others regions are also working on their action plans. At municipal level, there are also many actions to promote GPP.

EU Ecolabel and the eco-Management and audit scheme (EMAS)

The number of EU Ecolabel[9] products and EMAS[10] licensed organisations in a given country provides some indication of the extent to which the private sector and national stakeholders are actively engaged in the transition to a circular economy. It also shows how committed public authorities are to supporting instruments designed to promote the circular economy.

As of September 2021, Spain had 17.139 products and 289 licences registered in the EU Ecolabel scheme out of 83.590 products and 2.057 licences in the EU. This shows a very high uptake of these products and licences. In fact, Spain has the highest number of products in the EU. Moreover, in October 2021, 966 organisations from Spain were registered in EMAS, the European Commission's Eco-Management and Audit Scheme.

The 2019 EIR included a priority action requesting Spain to complete, adopt and implement the Spanish National Strategy on Circular Economy. As explained above, this has been successfully carried out. Given that Spain's circular material use rate, remains below EU average a new priority action on this is proposed.

2022 priority actions

- Adopt further measures to increase the circular material use rate.

Waste management

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

This section focuses on management of municipal waste[11] for which EU law sets mandatory recycling targets.

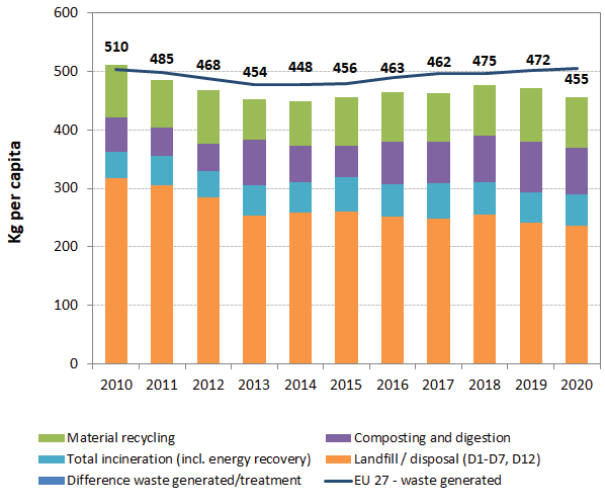
Preventing products and materials from becoming waste for as long as possible is the most efficient way to improve resource efficiency and to reduce the environmental impact of waste. Waste prevention and re-use are the most preferred options and are therefore at the top the waste hierarchy. The amount of municipal waste generated is a good indicator of the effectiveness of waste prevention measures.

The amount of municipal waste generated has overall decreased in Spain in the last decade. With a slight increase in the past few years, the average amount in Spain in 2019 (472 kg/y/inhabitant) remains below the EU average (502 kg/y/inhabitant), as Figure 4 shows, including also the municipal waste by treatment, in terms of kilos per capita. It can be observed that the treatment of municipal waste has not improved significantly these past few years.

[7] 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 EU GPP criteria are regularly published and updated.
[8] The details can be consulted on the Website on GGP of the Ministry for the Ecological Transition and the Demographic Challenge (MITECO).
[9] European Commission, Ecolabel Facts and Figures.
[10] EMAS is the European Commission's Eco-Management and Audit Scheme, a programme to encourage organisations to behave in a more environmentally sustainable way.

[11] Municipal waste consists of (a) mixed waste and separately collected waste from households, including paper and cardboard, glass, metals, plastics, bio-waste, wood, textiles, packaging, waste electrical and electronic equipment, waste batteries and accumulators, and bulky waste, including mattresses and furniture; (b) mixed waste and separately collected waste from other sources, where such waste is similar in nature and composition to waste from households. (Directive 2008/98/EC, Art. 3 2b).

Figure 4: Municipal waste by treatment in Spain, 2010-2020[12]



In 2019, over half of this waste was still landfilled (51%), more than double the EU average (23%). Incineration slightly increased since 2014 and stands at 11% (still below the EU average of around 26%). Material recycling amounts at 20% (compared to the EU average of 31 %) while with a slight increase 18% of the waste was composted (comparable to the EU average of 18%).

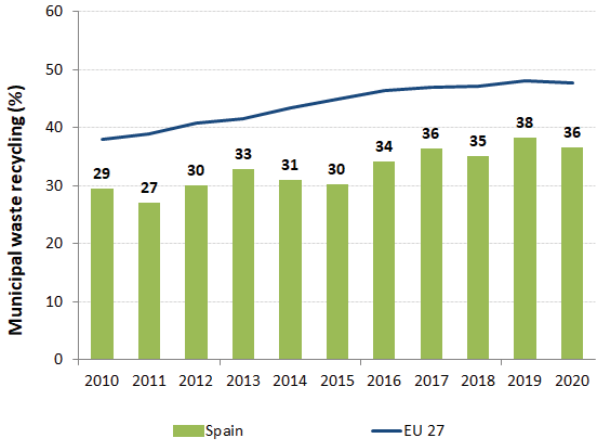
Illegal or sub-standard landfilling is still widespread in Spain. The Commission is closely monitoring the situation through several horizontal infringement procedures.

Moreover, a study[13] launched by the European Commission to examine the landfilling of untreated non-hazardous municipal solid waste has identified some possible shortcomings. The Commission services have therefore opened investigations to assess whether the waste disposal sites in Spain comply with the landfilling standards (e.g. obligation of appropriate treatment and removal of the organic faction before landfilling).

Spain has made some progress over the past decade on stepping up its recycling rate and diverting municipal waste from landfilling. However, the recycling rate for municipal waste in 2019 was 38% (20% of which was recycled, while 18% was composted). This is well below the EU average of 48% (EU 2019) and shows limited improvement since 2016. Furthermore, provisional data for 2020 shows a recycling rate of around 36%.

Figure 5 shows that Spain needs to step up investment in recycling to meet the EU recycling targets.

Figure 5: Recycling rate of municipal waste, 2010-2020[14]



Therefore, Spain is one of the countries that has missed the EU target of recycling 50% of municipal waste by 2020. The EU has set up even more ambitious targets for the next decade, including achieving 55% recycling of municipal waste by 2025.

Despite the progress made, improving waste management remains a major challenge for Spain, as highlighted in the 2019 and 2017 EIRs. The amount of landfilled waste, which remains considerable, is preventing faster progress towards the circular economy. Therefore, significant efforts are needed to increase the prevention, minimisation, sorting, reuse and recycling of waste, thereby diverting waste away from landfills or incinerators and to modernise waste recycling and treatment facilities. Barriers to investing in this sector include low landfill disposal charges and lack of coordination between the different administrative levels. There are important differences among the regions and the waste infrastructure is uneven across the country. Therefore, further efforts are clearly needed to improve waste management.

This was already reflected in the 2018 Commission's Early Warning report[15], which listed key priority measures which Spain should take to close the implementation gap, as well as in the 2019 EIR. The Commission is currently finalising its analysis of the progress on the recommendations from the 2018 Early Warning Reports as a well as an analysis of progress towards achieving the 2025 waste recycling targets. This report will be presented at the end of 2022. It will assess the progress made to date, and make new recommendations as appropriate.

[12] Eurostat, Municipal waste by waste operation, April 2022.
[13] European Commission, Study to assess the implementation by the EU Member States of certain provisions of Directive 1999/31/EC on the landfill of waste.

[14] Eurostat, Recycling rate of municipal waste, April 2022.
[15] European Commission, Report on the implementation of waste legislation, including the early warning report for Member States at risk of missing the 2020 preparation for re-use/recycling target on municipal waste, SWD(2018)422 accompanying COM(2018)656.

Implementation of the 2018 waste legislative package

By 5 July 2020 Member States had to bring their national laws in line with modifications included in the revised Waste Framework Directive, the Packaging and Packaging Waste Directive and the Landfill Directive[16]. Since Spain had not done what was needed, the Commission sent a reasoned opinion urging Spain to fully enact the new EU rules on waste into national legislation otherwise the case may be referred to the Court of Justice of the European Union. Spain has notified the transposition of the Landfill Directive to the Commission. A conformity assessment is now ongoing.

The main national transposing measure is the new Law 7/2022 on waste and contaminated soils for a circular economy, adopted on 8 April 2022, which replaces the existing law from 2011. A conformity assessement of the new legislation will also be made by the Commission.

Waste Management Plans and Waste Prevention Programmes are central for a sound implementation of the EU waste legislation. They set out key provisions and investments to ensure compliance with existing and new legal requirements (e.g. waste preventiion, separate collection for a number of specific waste streams, recycling and landfill targets). Revised plans and programmes were also due on 5 July 2020.

The 2016-2022 National Framework Plan for Waste Management (PEMAR)[17] sets out the strategic guidelines for waste management in Spain and the measures needed to meet EU targets. This national waste management plan as well as the national prevention programme have still to be revised in line with the new EU requirements in the waste sector. The regional waste management plans for the 17 Autonomous Communities and the 2 Autonomous Cities have also to be updated and should follow the guidelines set up by the national plan. It is worth mentioning that several regions have already communicated to the Commission their revised waste management plans.

As pointed out, there is room for improvement in terms of coordination and cooperation among the different competent public administrations dealing with waste management, considering the complex multi-level governance in this area. This would support Spain in meeting its EU obligations, which are very challenging in the coming years. Recycling targets have been cascaded down to the regional level, and the new national Law lays down that the Autonomous Communities may determine the contribution to these targets of local authorities. In order to achieve these objectives, the new Law introduces harmonised separate collection obligations for waste fractions under the jurisdiction of local authorities, and regulates the instruments for its implementation, including a specific administrative infringement for non-compliance with this obligation. However, these instruments to enforce them at local level may not be efficient enough. Strengthening the administrative capacity of the local authorities would also be helpful.

Therefore, coordination among the different levels of government, including for the planning and use of waste treatment infrastructures could be enhanced. The previous and the new national legislation sets up a Committee of Coordination in the field of waste[18]. As an inter-administrative coordination and technical cooperation body, its main role is to make recommendations, conduct studies, draft reports and guidelines. In addition, it can also play a key role in sharing best practices on waste management, and helping identify possibilities to share waste treatment capacities between municipalities. Moreover, existing mechanisms to avoid regulatory fragmentation should help avoid different interpretations leading to different outcomes in Spain. Other coordination tools are also possible. Finally, it is clear that further investments are also needed in the waste management area.

In the EIR 2019, six priority actions were suggested to Spain. Significant progress can be observed for some of them, considering the new Law on waste and contaminated soils for a circular economy. Some others are still relevant and applicable, and in view of the upcoming Early Warning Report they are proposed again, together with the new planning requirements.

2022 priority actions

- Ensure that a national waste management plan and regional waste management plans in line with the revised Waste Framework Directive are in place.
- Improve cooperation and coordination on waste management among the different competent public administrations.
- Foster the optimisation in the use of the existing waste treatment infrastructure.
- Close and rehabilitate the non-compliant landfills as a matter of priority.

[16] Directive (EU) 2018/851, Directive (EU) 2018/852, Directive (EU) 2018/850 and Directive (EU) 2018/849 amend the previous waste legislation and set more ambitious recycling targets for the period up to 2035.

[17] Plan Estatal Marco de Gestión de Residuos (PEMAR) 2016-2022.

[18] Information about the tasks carried out by the Committee of Coordination in the field of waste, on the MITECO website.

2. Biodiversity and natural capital

The EU Biodiversity Strategy for 2030 adopted in May 2020 aims to put the EU's biodiversity on a path to recovery and sets out new targets and governance mechanisms to achieve healthy and resilient ecosystems.
In particular, the strategy sets out ambitious targets to:
(i) protect a minimum of 30% of the EU's land area and 30% of its sea area and integrate ecological corridors, as part of a true trans-European nature network;
(ii) strictly protect at least a third of the EU's protected areas, including all remaining EU primary and old-growth forests;
(iii) effectively manage all protected areas, defining clear conservation objectives and measures, and monitoring them appropriately.
The strategy also sets out an EU nature restoration plan – a series of concrete commitments and actions to restore degraded ecosystems across the EU by 2030, and manage them sustainably, addressing the key drivers of biodiversity loss.

The Habitats and the Birds Directives are key legislative tools to deliver on the Strategy's targets, and are the cornerstone of the European legislation aimed at the conservation of the EU's wildlife[19].

The Spanish Government approved in September 2011 the Strategic Plan for the Natural Heritage and the Biodiversity, for the period 2011-2017. It sets up the general objectives, targets and actions for the conservation and sustainable use of biodiversity and natural heritage in Spain, and is the main development for the Law 42/2007 on the Natural Heritage and the Biodiversity. This plan might need to be adjusted or updated, taking into account the results of its implementation and the updated international and EU frameworks.

In any event, Spain has recently adopted other important strategies and plans in the biodiversity field, most of them committed as reforms in the framework of the Recovery and Resilience Plan (RRP) for Spain. This is the case of the National Strategy for Green Infrastructure, Connectivity and Ecological Restoration approved in July 2021[20]. Likewise, the National Strategy for the Convervation of Polinators was adopted in September 2020[21].

[19] These should be reinforced by the Nature Restoration Law, according to the new EU Biodiversity Strategy.
[20] The Spanish National Strategy for Green Infrastructure, Connectivity and Ecological Restoration, milestone number 63 of the RRP Spain.
[21] The Spanish National Strategy for the Conservation of Pollinators.

Nature protection and restoration

Natura 2000[22], the largest coordinated network of protected areas in the world, is the key instrument to achieve the Birds and Habitats 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 setting up of a coherent Natura 2000 network, the designation of Sites of Community Importance (SCI) as Special Areas of Conservation (SAC), and the setting of conservation objectives and measures for the Natura 2000 sites are key milestones towards meeting the objectives of the Directives.

Setting up a coherent network of Natura 2000 sites

Spain boasts a very rich biodiversity. It covers four of the nine bio-geographical regions defined for the implementation of the Habitats Directive: Alpine, Atlantic, Mediterranean and Macaronesian, and three of the five marine regions: Atlantic, Mediterranean and Macaronesian. Spain hosts 117 habitat types[23] and 426 species[24] covered by the Habitats Directive. The country also hosts populations of 165 bird taxa listed in the Birds Directive Annex I[25].

In 2021, 27.3% of Spain's national land area was covered by Natura 2000 (EU coverage 18.5%), with Special Protection Areas (SPAs) classified under the Birds Directive covering 20.2% (EU coverage 12.8%) and Sites of Community Importance (SCIs) under the Habitats Directive covering 23.4% (EU coverage 14.2%) of Spain's territory.

This makes Spain the Member State contributing the largest surface area to the EU Natura 2000 Network (138.083 Km² of terrestrial area), although it is not the first one in percentage, as Figure 7 shows.

[22] Natura 2000 comprises Sites of Community Importance (SCIs) designated pursuant to the Habitats Directive as well as Special Protection Areas (SPAs) classified 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.
[23] EEA, Article 17 dashboard, Annex I total, 2019.
[24] EEA, Article 17 dashboard, Annex II + Annex IV excluding those in Annex II + Annex V excluding those in Annex II, 2019. This counting only takes into account species and habitats for which assessment of conservation status was requested.
[25] EEA, Article 12 dashboard, Annex I, 2020. This counting only takes into account birds taxa for which information was requested.

The latest assessment of the SCI part of the Natura 2000 network shows that significant progress has been made in completing the network in Spain; in particular, a significant surface of new marine SCIs has been proposed for inclusion in the updated list of sites. However, there are still some deficiencies in the designation of sites mainly for some marine habitats and species, Therefore, Spain still needs to complete its Natura 2000 network, in particular the marine network[26]. The LIFE IP INTEMARES is likely to help solve these marine deficiencies by 2024[27].

Considering both Natura 2000 and other nationally designated protected areas, Spain legally protects 28% of its terrestrial areas (EU 27 coverage 26,4%) and 12 % of its marine areas (EU 27 coverage 10,7%).[28]

Figure 6: Marine & terrestrial protected area coverage, 2021[29]

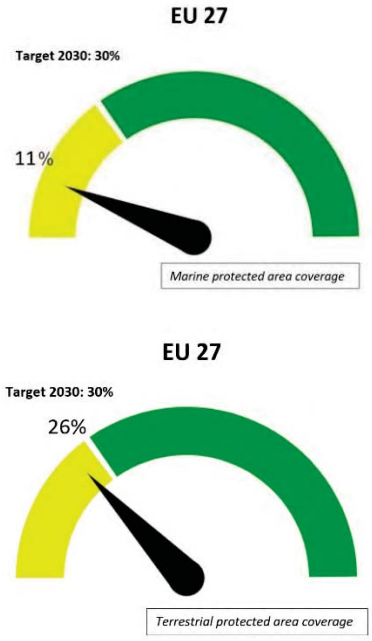
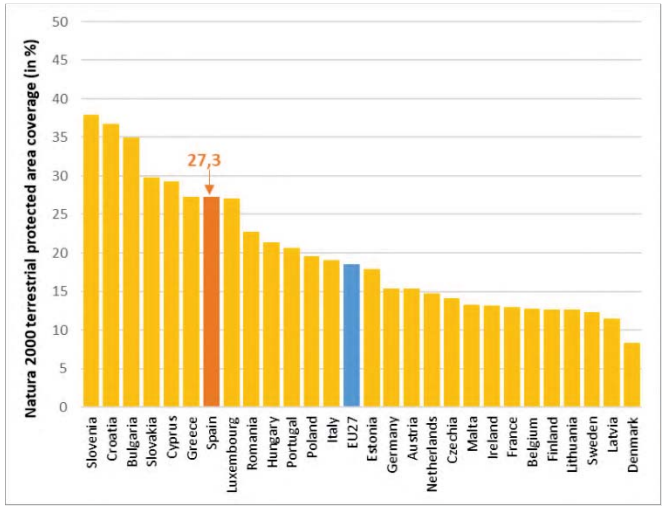


Figure 7: Natura 2000 terrestrial protected area coverage, 2021[30]



Designating Special Areas of Conservation (SACs) and setting conservation objectives and measures

Natura 2000 management and nature protection is mainly the responsibility of the regions in Spain, except for the marine sites, which are under the competence of the national Administration if they do not have ecological continuity with adjacent terrestrial sites.

Spain's basic legislation transposing the Habitats Directive is overall adequate. It requires management plans to be drawn up before sites can be designated as SACs. This ensures that the SAC designation triggers the adoption of conservation measures, as required under Article 6(1) of the Habitats Directive.

Spain has already designated the Macaronesian Biogeographical region's Sites of Community Importance (SCIs) as Special Areas of Conservation (SACs). These sites are in the Canary Islands.

The 6-year deadline set by the Habitats Directive to designate SCI as SAC and establish appropriate conservation objectives and measures has expired for 1.278 sites in the Alpine, Atlantic and Mediterranean biogeographical regions in Spain.

By July 2020, 345 SCIs have not yet been designated as SACs and therefore, site specific conservation objectives and measures have not been established for these SCIs. Since then, 156 sites in Aragón and 13 in Andalucía have been designated as SACs.

Furthemore, the quality of the set objectives is considered insufficient for 12 regions and the marine

[26] The milestones 67 and 68 of the RRP Spain refer to the extension of the marine protected areas.

[27] As highlighted in the 2019 EIR, the use of the LIFE Programme (LIFE project INDEMARES and LIFE integrated project INTEMARES) has been very helpful to designate a consolidate network of marine Natura 2000 sites in Spain.

[28] European Environment Agency, Protected Areas, terrestrial protected area percentage (2021) and marine protected area percentage (2019), March 2022.

[29] EU Biodiversity Strategy Dashboard, indicators A1.1.1 and A1.2.1, February 2022.

[30] European Environment Agency, Natura 2000 Barometer, February 2022.

sites under the competence of the central administration. The quality of the measures established is considered insufficient in 13 regions and the sites under the central administration competence. This failure is being pursued by the Commission in an ongoing infringement procedure, as for some other Member States.

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

To measure the performance of Member States, Article 17 of the Habitats Directive and Article 12 of the Birds Directive require reporting on the progress towards maintaining or restoring favourable conservation status of species and habitats.

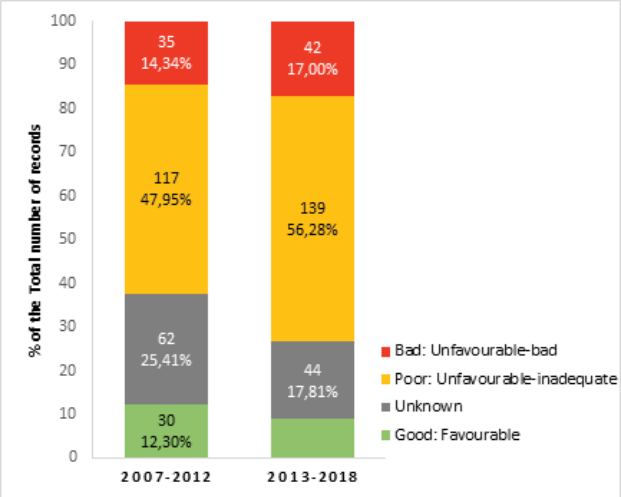
According to the report submitted by Spain on the conservation status of habitats and species covered by the Article 17 of the Habitats Directive for the period 2013-2018, the share of assessments for habitats in good conservation status in 2018 (8.91%) is less than the 12.3% reported in the previous reporting period (2007-2012). On protected species, the share of assessments in good conservation status in 2018 is 18.93%, less than the 21.63% reported in the previous reporting period (2007-2012).

On the other hand, it should be noted that of the 23% of EU forest area protected under the EU nature directives, less than 22% show a favourable conservation status[31]. In Spain, only 5.36% of the forest habitats are in favourable conservation status.

As far as birds are concerned, the EU protects over 460 species of wild birds throughout their entire life cycle under the EU Birds Directive. According to the latest assessment, around half of these wild bird species have a good population status at the EU level, which is slightly less (5 %) compared to the last reporting period (2008-2012). In the last 6 years, the proportion of birds having poor and bad conservation status has increased by 7% to reach a total of 39%. In Spain, 60% of the breeding species showed short-term and long-term increasing or stable population trends (for wintering species this figure was 71.16% for short-term trend and 65.39% for long-term trend in the case of key wintering species).

At the same time, the share of habitats in bad conservation status has increased to 17% and the share of assessments for species in bad conservation status has increased to 26.63%. The main pressures are agricultural, development, construction and use of residential, commercial, industrial and recreational infraestrucrue and areas, development and operation of transport systems, forestry and alien and problematic species.

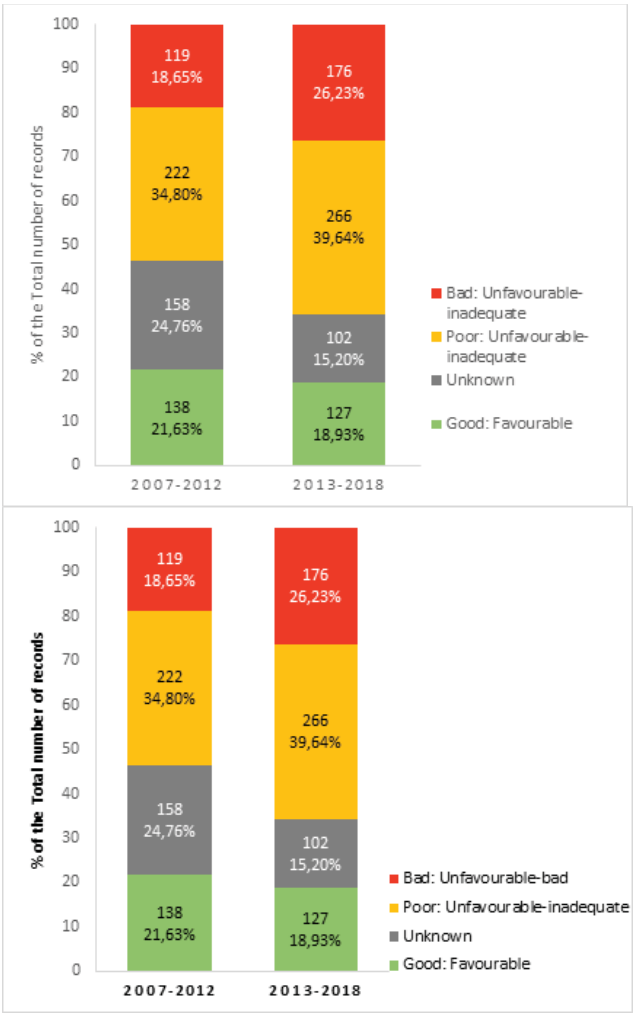
Figure 8: Assessments on conservation status for habitats in the 2007-2012 and 2013-2018 reporting periods[32]



[31] European Environment Agency – State of Nature Report, 2021.

[32] European Environment Agency, Conservation status and trends of habitats and species, December 2021. Please note that the figures shown for 2007-2012 and 2013-2018 are not necessarily directly comparable because changes in the Member State's conservation status may be due to changes of methods or to better data rather than reflecting genuine changes.

Figure 9: Assessments on conservation status for species in the 2007-2012 and 2013-2018 reporting periods[33]



As in other Member States, Spain showed a worsening in the conservation status of species and habitats of Community interest. However, knowledge has improved since the previous reporting period (2007-2012), when the conservation status was unknown for 25% of the habitats assessments while it was 17.81% in the previous report (2013-2018). In the case of breeding birds, double number of species are reported with a decreasing trend, both at short and at long-term compared with the previous period. However, the percentage of species presenting an increasing trend has increased at short-term as well as at long-term comparing both periods. The main pressures for bird species are agriculture, forestry and extraction and cultivation of biological living resources (other than agriculture and forestry).

The Commission receives a high number of complaints about the implementation of the Nature Directives in Spain. These mainly concern the degradation of designated sites, inadequate management and the poor quality of appropriate assessments under Article 6(3) of the Habitats Directive. The degradation of protected water-dependent habitats within Natura 2000 is also a frequent concern.

It is worth mentioning that, following the infringement procedure opened by the Commission, the Court of Justice of the European Union has ruled in June 2021 that Spain has failed to correctly implement the EU nature and water legislation in the Doñana area[34].

In the past, there has also been concerns about the implementation of the Birds Directive in Spain, particularly in relation to certain hunting models.

The most relevant factors limiting achievement of the objectives of the Nature Directives are the lack of sufficient financial resources and scientific knowledge for some species and habitat types to support appropriate management.

It is important to note that the management plans for Natura 2000 sites must provide for the necessary budget to apply defined measures to achieve specific targets and preventive measures to avoid deterioration, They need to focus on improving the situation.

In relation to the appropriate assessment of article 6(3) of the Habitats Directive, it is extremely important to have clear and quantified objectives. At site level, it must be specified what needs to be achieved at the level of specific habitats and species, otherwise it is not possible to conduct the appropriate assessment of the implications plans and projects may have for the sites. A reliable monitoring system for the implementation of the conservation measures and the conservation status of the sites is also very important. Specific attention should be put on the deployment of renewable energy infrastructure.

The definition of conservation objectives and measures is also key to reflect real needs in the Priority Action Framework (PAF) and getting access to available funds. This also must be taken into account in the review of the existing and future Natura 2000 sites' management plans. Natura 2000's conservation objectives must be integrated in other policies, such as the River Basin Management Plans or mapping sensitive habitats to Nitrogen and where the critical levels are reached.

As regards species protection, measures must be taken to prevent significant disturbance and to improve or

[33] Idem.

[34] Judgment of 21 June 2021 in Case C-559/19.

maintain their conservation status, both inside and outside Natura 2000, as regards other sectors such as fisheries, agriculture, forestry or energy.

It is worth mentioning that the wolf was reported in Spain in unfavourable inadquate conservation status in the three biogeographical regions (Alpine, Atlantic and Mediterreanean). In this regard, Spain has increased the protection of the wolf north of the Duero river (where it is listed in Annex V of the Habitats Directive) since its inclusion in the Spanish List of wild species under special protection regime in September 2021 .

In this sense, it is important to continue raising awareness and working on improving coexistence of large carnivores using Rural Development Funds and LIFE Funds, and as far as possible using farming practices that allow to reduce predation. In this regard, the initiative "Pro-Biodiversidad" won the socio-economic benefis Natura 2000 Award in 2020 for implementing a brand based on nature conservation, that has achieved a fair price for extensive lamb breeders joining the brand in Natura 2000 who commit among others conditions to coexist with large carnivores[35]. It is also important to make good use of derogations and submit complete reports on time.

Regarding the knowledge, monitoring and data necessary for the implementing the Nature Directives, the Spanish authorities have undertaken to fill-in the information gaps for 2030 and to ensure financing to implement the monitoring system after 2021. It is worth noting the effort done by Spain in the framework of the biogeographical process, celebrating five techical networking events to improve and homogenise knowledege and reporting of habitats of Community Interest at Mediterranean level and to share the experience with other regions. The RRP includes in Component 4, on biodiversity, outstanding measures to improve the digitalisation and knowledge of Spain's natural heritage.

The previous EIRs for Spain highlighted that the possibilities of developing sustainable or nature tourism should be further explored. Spain has implemented a System to rectonise sustainable nature-based tourism in Natura 2000 and signed the licence agreement with the Commission to use the Natura 2000 logo on the activities accredited by the national system. It has been the first Member State to sign this licence agreement.

In the same vein, and as also highligted in the previous EIRs, special attention should be paid to Spain's potential to take advantage of its very valuable natural capital to create jobs. Spain makes the largest contribution to the EU Natura 2000 network. Therefore, jobs related to the protection of biodiversity, reforestation, green infrastructure and ecosystem services have a great potential in Spain that should not be ignored.

It is worth emphasising that the Recovery and Resilience Plan (RRP) for Spain contains a dedicated Component 4 "Conservation and restoration of ecosystems and their biodiversity" that makes a significant contribution to the enhancement of biodiversity, which is also reflected in other components. It includes measures to increase the scientific and technical knowledge in this domain, as well as boosting digitalisation. There are reforms and investments related to the protection, conservation and restauration of marine and terrestrial ecosystems and their biodiversity, conservation of protected habitats and species, the fight against invasive alien species, etc. There are also actions to ensure ecological connectivity based on nature-based solutions and promote green infrastructure. Spain will invest in measures that contribute to climate change mitigation and adaptation, including a sustainable forest management and fire prevention policy, and measures to address soil erosion and desertification. This Component 4 has a considerable budget of EUR 1.642 million (grants), which exceeds previous amounts received for biodiversity from the EU funding, and it has to be implemented in the coming years (2021-2026). This provides a great opportunity to face many existing challenges. Moreover, as explained in Chapter 5, other EU Funds are also available.

Bringing nature back to agricultural land and restoring soil ecosystems

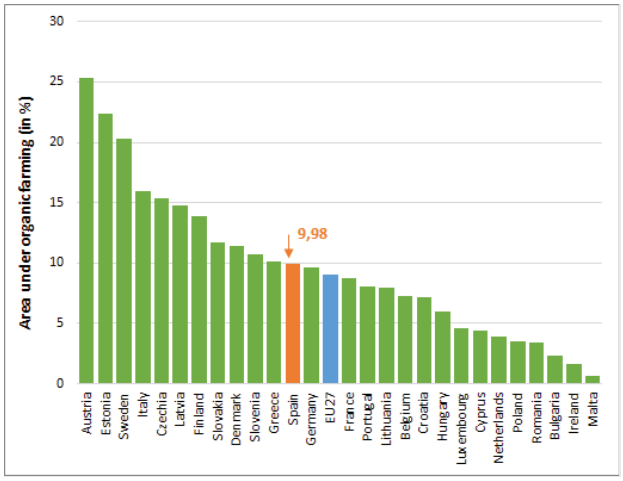
Agricultural land

The Biodiversity Strategy works in tandem with the new Farm to Fork Strategy and the new Common Agricultural Policy (CAP) to support and achieve the transition to fully sustainable agriculture.
The Biodiversity and Farm to Fork Strategies have set four important targets for 2030:
- a 50% reduction in the overall use of – and risk from – chemical pesticides;
- a 50% reduction in the use of more hazardous pesticides;
- a 50% reduction in losses of nutrients from fertilisers while ensuring there is no deterioration of soil fertility (which will result in a 20% reduction in the use of fertilisers);
- bring back at least 10% of agricultural area under high-diversity landscape features and increase areas under organic farming to at least 25%.

[35] See more about the Pro-Biodiversidad project.

As shown in Figure 10, Spain has an estimated 9.98% organic farming area, standing marginally above the EU average of 9.07% (2020 data, Eurostat).

Figure 10: Share of total utilised agricultural area occupied by organic farming per MS, 2020[36]



According to the Commission recommendations for Spain's CAP strategic plan[37], Spanish agriculture needs to make progress on the future CAP's specific objectives on the environment and climate. Taking into account the climate and environmental ambition promoted by the European Green Deal, action needs to be taken to reverse some trends and guarantee the sustainability of natural resources against the background of growing challenges arising from climate change.

This document also highlighted that Spain faces major challenges in relation to water quantity and quality. Moreover, the process of agriculture intensification has also increased the pressure on farmland biodiversity in the country, with a high share of agricultural land under Natura 2000. The extension of organic farming methods, which already show a positive trend in Spain (in terms of both supply and demand), would significantly help the country better cope with the on-going challenges associated with biodiversity loss.

Soil protection

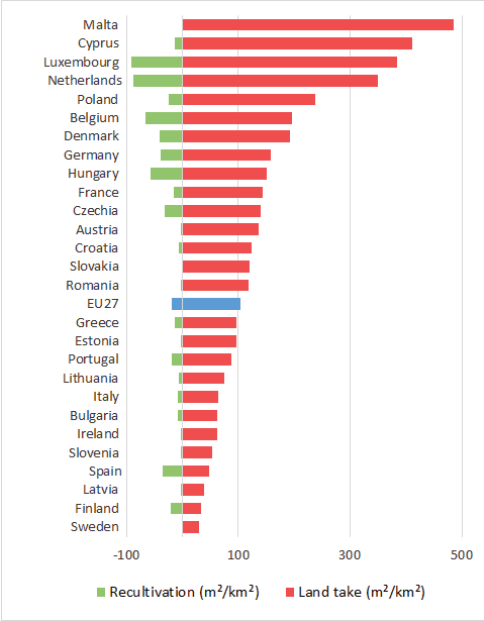
Soil is a finite and extremely fragile resource. It is increasingly degrading in the EU.
The new EU Soil Strategy for 2030, adopted on 17 November 2021, stresses the importance of soil protection, of sustainable soil management and of restoring degraded soils to achieve the Green Deal objectives as well as land-degradation neutrality by 2030.
This entails:
(i) preventing further soil degradation;
(ii) making sustainable soil management the new normal;
(iii) taking action for ecosystem restoration.

One factor of degradation of soil ecosystems is the area of soil that is sealed or atificialised[38]. In Spain (Figure 11) the land taken per year in the period 2012-2018 can be seen as a measure of one important pressure on nature and biodiversity. At the same time, land use change constitutes an environmental pressure on people living in urbanised areas.

Spain ranks below the EU average on land take with 11.8 m²/km² (EU-27 average: 83.8 m²/km²).

In 2018, Spain updated its reporting on land degradation according to the PRAIS3 reporting platform[39] with actions intended to combat the degradation identified.

Figure 11: Land take and re-cultivation in EU27 (m2/km2), 2012-2018[40]



[36] Eurostat, online data code: SDG_02_40, February 2022.
[37] Commission recommendations for Spain's CAP strategic plan. SWD(2020) 374 final of 18.12.2020.
[38] Artificial land cover is defined as the total of roofed built-up areas (including buildings and greenhouses), artificial non built-up areas (including sealed area features, such as yards, farmyards, cemeteries, car parking areas etc. and linear features, such as streets, roads, railways, runways, bridges) and other artificial areas (including bridges and viaducts, mobile homes, solar panels, power plants, electrical substations, pipelines, water sewage plants, and open dump sites).
[39] UNCCD, Prais3
[40] European Environment Agency, Land take in Europe, December 2021.

However, Spain has not yet committed to set Land Degradation Neutrality targets under the United Nations Convention to Combat Desertification (UNCCD)[41].

Contamination can severely reduce soil quality and threaten human health or the environment. Latest data from Member States estimated that potentially polluting activities have taken or are still taking place on approximately 2.8 million sites in the EU[42]. At the EU level, 650 000 of these sites have been registered in national or regional inventories. 65 500 contaminated sites have already been remediated. Spain has registered 181 sites where potentially polluting activities had taken or were taking place, and had already remediated or applied aftercare measures on 83 sites.

Soil erosion by water is a natural process, which can be aggravated by climate change and human activities such as inappropriate agricultural practices, deforestation, forest fires or construction works. High levels of soil erosion can reduce productivity in agriculture and can have negative and transboundary impacts on biodiversity and ecosystem service, and on rivers and lakes (increased volume of sediments, transport of contaminants). According to the RUSLE2015 model[43], Spain has an average soil loss rate by water of 2.31 tonnes per hectare per year compared to a EU average of 2.46 tonnes per hectare, which indicates soil erosion is around the average. These figures are the output of a model run at the EU level and therefore should not be considered as values measured on the ground. The actual soil loss rate can vary greatly within the country depending on local conditions.

Soil organic matter plays an important role in the carbon cycle and in climate change. Soils are the second largest carbon sink in the world after the oceans.

To face all these challenges, as part of the European Green Deal initiatives, the Commission has adopted in November 2021 the new EU Soil Strategy for 2030[44], Reaping the benefits of healthy soils for people, food, nature and climate.

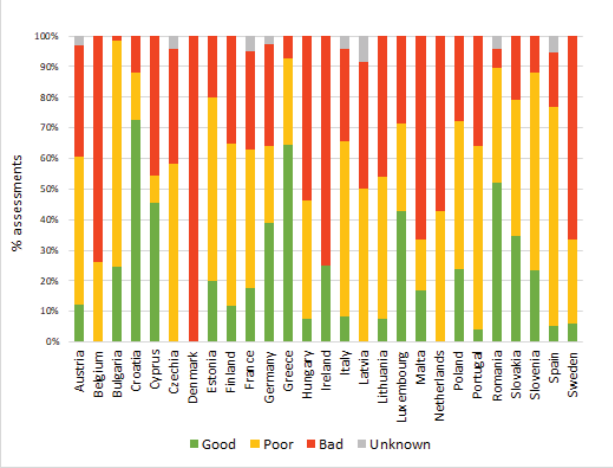
Forests and timber

The EU Forest Strategy for 2030 adopted in July 2021 is part of the 'Fit for 55' Package. The Strategy promotes the many services that forests provide. Its key objective is to ensure healthy, diverse and resilient EU forests that contribute significantly to strengthened biodiversity and climate ambition.
Forests are important carbon sinks and their conservation efforts are vital for the EU's vision of achieving climate neutrality by 2050.

Out of the 27% of EU forest area protected under the Habitats Directive, less than 15% of assessments show a favourable conservation status[45]. The share of forested areas in the EU with a bad conservation status increased from 27% in 2015 to 31% in 2018.

In Spain, forests cover 26.62% of territory[46] and more than 90% of the forest habitats assessments covered by the Habitats Directive reveal a bad to poor status [47] (Figure 12).

Figure 12: Conservation status of forests protected under the Habitats Directive in EU Member States, 2013-2018 (% assessments)[48]



The European Union Timber Regulation EUTR)[49] prohibits the placing on the EU market of illegally harvested timber. According to the EUTR, EU Member States' competent authorities must conduct regular checks on operators and traders, and apply penalties for non-compliance. With the amendment of Article 20 of

[41] The LDN Target Setting Programme | UNCCD
[42] Ana Paya Perez, Natalia Rodriguez Eugenio (2018), Status of local soil contamination in Europe: Revision of the indicator "Progress in the management Contaminated Sites in Europe".
[43] Panagos, P., Borrelli, P., Poesen, J., Ballabio, C., Lugato, E., Meusburger, K., Montanarella, L., Alewell, C., The new assessment of soil loss by water erosion in Europe, (2015) Environmental Science and Policy, 54, pp. 438-447.
[44] See the EU Soil Strategy for 2030
[45] EEA, State of Nature in the EU
[46] EEA, Forest information system for Europe
[47] EU Forest Strategy for 2030. SWD(2021) 652 final, of 16.07.2021.
[48] European Environment Agency. Conservation status and trend in conservation status by habitat group – forest. January 2022.
[49] Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010.

the EUTR, reporting every 2 years has been changed to become annual reporting, and covers the calendar year as of 2019.

In the period March 2017 – February 2019[50], Spain carried out 67 checks on domestic timber operators. It also carried out 104 checks on operators importing timber. It is estimated that Spain had 800 operators placing domestic and 6.000 operators placing imported timber types onto the internal market over the reporting period.

The new Deforestation Regulation[51] will repeal and replace the EU Timber Regulation, as it will essentially integrate and improve the existing system to check the legality of timber.

Invasive alien species (IAS)

IAS are a key cause of biodiversity loss in the EU (alongside changes in land and sea use, overexploitation, climate change and pollution).
Besides inflicting major damage on nature and the economy, many IAS also facilitate the outbreak and spread of infectious diseases, posing a threat to humans and wildlife.
The implementation of the EU Invasive Alien Species Regulation and other relevant legislation must be stepped up.
The EU Biodiversity Strategy for 2030 aims to manage recognised invasive alien species and decrease the number of 'red list' species they threaten by 50%.

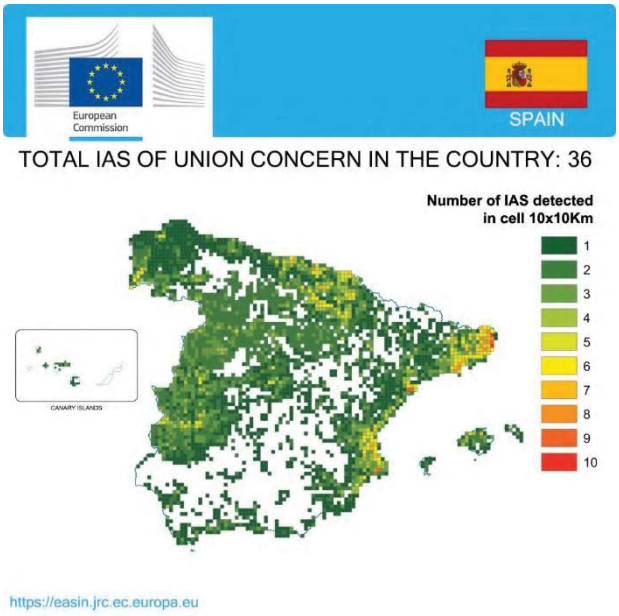
The core of the IAS Regulation (EU) 1143/2014[52] is the list of Invasive Alien Species of Union concern[53].

The total number of invasive alien species (IAS) of Union concern is currently 66, of which: 30 are animal species and 36 are plant species; 41 are primarily terrestrial species, 23 are primarily freshwater species, 1 is a brackish-water species and 1 is a marine species.

According to a 2021 report[54] on the review of the application of the IAS Regulation, the implementation of the IAS Regulation is already starting to deliver on its objectives such as a coherent framework for addressing IAS at EU level and increased awareness of the problem of invasive alien species. At the same time, the above report identified some challenges and areas for improvement. Given that the deadlines for implementing the various obligations of the IAS Regulation applied gradually between July 2016 and July 2019, it is premature to draw conclusions on several aspects of the implementation of the IAS Regulation.

A 2021 report[55] on the baseline distribution shows that from the 66 species on the Union list, 36 have been observed in the environment in Spain. The spread can be checked in Figure 13.

Figure 13: Number of invasive alien species of EU concern, based on available georeferenced information for Spain, 2021



2022 priority actions

- Complete the designation process for the Natura 2000 network, and put in place clearly defined conservation objectives and the necessary conservation measures for the sites, providing sufficient 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 integration of biodiversity concerns into other policies (in particular in agriculture, but also in fisheries, urban and infrastructure planning

[50] COM/2020/629 final
[51] Proposal for the Regulation on the making available on the EU market and export of products associated with deforestation and forest degradation.
[52] Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species
[53] See the List of Invasive Alien Species of Union concern.
[54] Report from the Commission to the European Parliament and the Council on the review of the application of Regulation (EU) No 1143/2014. COM(2021) 628 final, 13.10.2021.
[55] Cardoso A.C., Tsiamis K., Deriu I., D' Amico F., Gervasini E., EU Regulation 1143/2014: assessment of invasive alien species of Union concern distribution, Member States reports vs JRC baselines, EUR 30689 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-37420-6, doi:10.2760/11150, JRC123170.

and sustainable tourism) and the promotion of communication between actors.

- Take additional measures to fight against land degradation, soil erosion and desertification.
- Take further measures to combat invasive alien species and improve the control of their pathways as well as advance their control and eradication.

Marine ecosystems

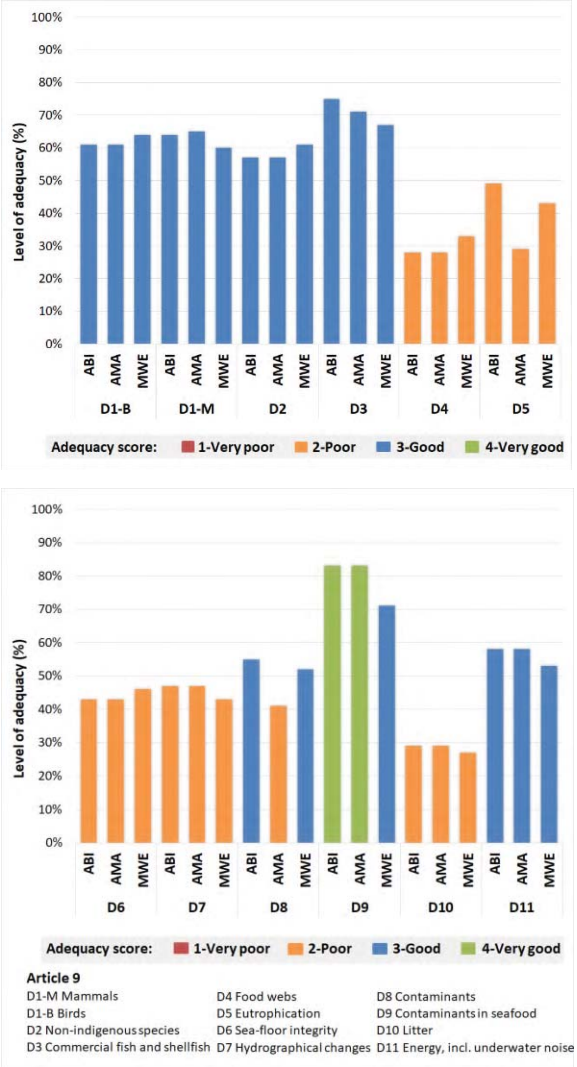
The EU Biodiversity Strategy for 2030 aims to substantially reduce the negative impacts on sensitive species and habitats in marine ecosystems and to achieve good environmental status as well as eliminate or reduce the incidental catches of protected, endangered, threatened and sensitive species to a level that allows species recovery and conservation[56].

The Marine Strategy Framework Directive (MSFD)[57] requires Member States to achieve Good Environmental Status (GES) of their marine waters. To that end, Member States have to develop marine strategies for their marine waters, and cooperate with Member States sharing the same marine region or subregion. These marine strategies comprise different steps to be developed and implemented over six-year cycles.

Among other obligations, the MSFD requires Member States by 15 October 2018 to define a set of GES characteristics for each descriptor (article 9), and to provide an initial assessment of their marine waters (article 8). The Commission then assesses whether this constitutes an appropriate framework to meet the requirements of the Directive.

The Commission assessed Spain's 2018 determinations of GES for each MSFD's 11 descriptors[58] and determined their level of adequacy in relation to the Commission GES Decision[59]. A good or very good score indicates that the national determinations of GES are well aligned with requirements of the Commission GES Decision, providing qualitative and quantitative national environmental objectives to be achieved for their marine waters.

Figure 14: Level of adequacy of GES determination by Spain (ABI and AMA region) with criteria set under the Commission GES Decision – article 9 (2018 reporting exercise)[60]



Spain is included in three marine sub-regions:

- ABI-NE Atlantic: Bay of Biscay and Iberian Coast. In this region, 6 out of 11 determinations of GES were assessed as good or very good. The national determination of GES by Spain is coherent for 6 out of 11 descriptors
- AMA-NE Atlantic: Macaronesia. In this region, 5 out of 11 determinations of GES were assessed as good or very good. The national

[56] The EU Common Fisheries Policy (CFP) aims to contribute to the achievement of the objectives of the environmental legislation for marine ecosystems.

[57] Marine Strategy Framework Directive 2008/56/EC

[58] Annex I of Directive 2008/56/EC.

[59] Commission Decision (EU) 2017/848 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment, and repealing Decision 2010/477/EU.

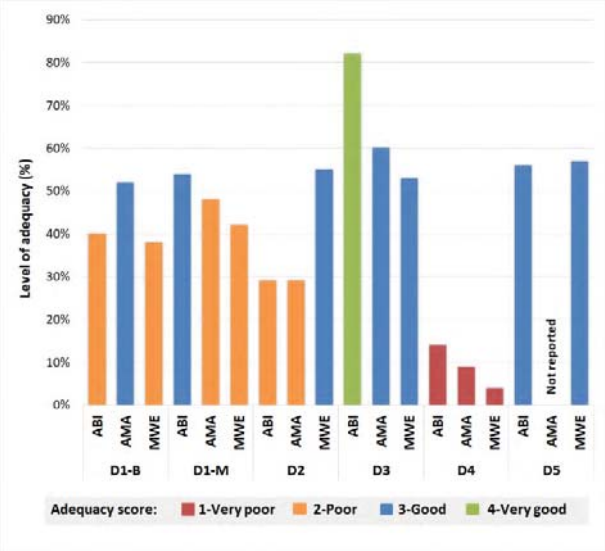
[60] Assessment carried out by the European Commission of the data reported by the Member States, January 2022. Please note that only two sub-sections of descriptor D1 are displayed (D1-M Mammals and D1-B Birds). For the analysis, these two sub-sections were considered as a whole after averaging them.

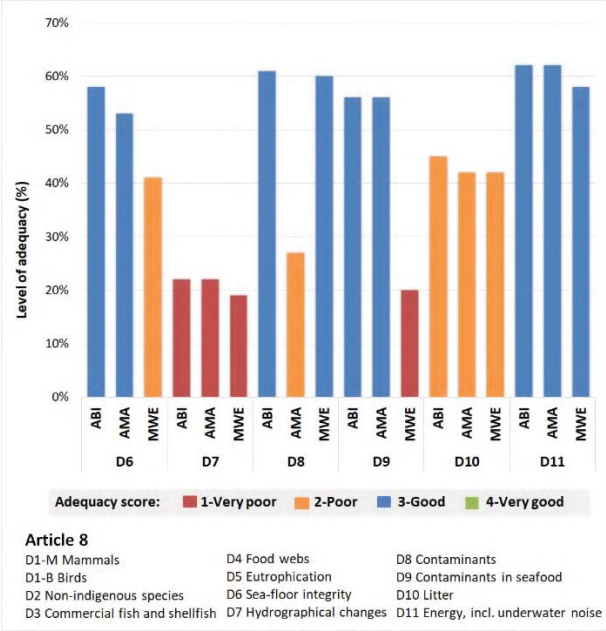
determination of GES by Spain is coherent for 5 out of 11 descriptors

– MWE-Mediterranean: Western Mediterranean, Sea. In this region, 6 out of 11 determinations of GES were assessed as good or very good. The national determination of GES by Spain is coherent for 6 out of 11 descriptors.

The MSFD also requires that Member States make an assessment of the current environmental status of their marine waters in relation to the determination of GES. A good or very good score indicates Member States has good capabilities to assess their marine environment in accordance with the requirements set out in the Commission GES Decision.

Figure 15: Level of adequacy of initial assessment of Spain's marine environment (ABI and AMA regions) with criteria set under the Commission GES Decision – article 8 (2018 – reporting exercise)[61]





In the marine sub-region ABI-NE Atlantic: Bay of Biscay and Iberian Coast, 6 desriptors out of 11 were scored as good or very good. Spain's assessment of its marine environment is coherent with requirements set under the Commission GES Decision for 6 out of 11 descriptors.

In the marine sub-region AMA-NE Atlantic: Macaronesia, 4 desriptors out of 11 were scored as good or very good. Spain's assessment of its marine environment is coherent with requirements set under the Commission GES Decision for 4 out of 11 descriptors.

In the marine sub-region MWE Mediterranean: Western Mediterranean, 5 desriptors out of 11 were scored as good or very good. Spain's assessment of its marine environment is coherent with requirements set under the Commission GES Decision for 5 out of 11 descriptors. Spain is missing data for the marine sub-region AMA-NE Atlantic: Macaronesia for D5 Eutrophication.

In the 2019 EIR, the Commission suggested Spain several priority actions related to the information to be provided and the measures to be adopted and another one on regional cooperation, which have been partially adressed

As highlighted in the Commission's report on the implementation of the MSFD[62], while regional cooperation has improved since the adoption of the MSFD, more cooperation is needed to attain full

[61] Idem.

[62] COM(2020)259

regional coherence of the marine strategies, as required by the Directive. Furthermore, in March 2022, the European Commission published a Communication with recommendations for Member States. The Commission assessment highlights that Member States need to step up their efforts to determine the good environmental status and the use of the criteria and methodological standards according to the Commission GES Decision. The above considerations form the basis for the 2022 priority actions.

2022 priority actions

- Ensure regional cooperation with Member States sharing the same marine (sub)region to address predominant pressures.
- Implement the recommendations made by the Commission in the Staff Working Document[63] accompanying the Communication[64] on recommendations per Member States and region on the 2018 updated reports for Articles 8, 9 and 10 of the MSFD.

Ecosystem assessment and accounting

The EU Biodiversity Strategy for 2030 calls on Member States to better integrate biodiversity considerations into public and business decision making at all levels and to develop natural capital accounting. The EU needs a better performing biodiversity observation network and more consistent reporting on the condition of ecosystems.

The ecosystem assessment is an analysis of the pressures and the condition of terrestrial, fresh-water and marine ecosystems and their services using spatially explicit data and comparable methodology based on European data about the functions of ecosystem assets and the ecosystem services they produce, using relative to the baseline year 2010.

The ecosystem accounting is built on five core accounts (ecosystem extent, ecosystem condition, physical ecosystem services, monetary ecosystem services and monetary ecosystem assets). These accounts are compiled using indicators of ecosystem assets and the ecosystem services they produce.

The Spanish National Ecosystem Assessment (SNEA)[65] began in 2009, completed its biophysical evaluation in 2012. This project included an assessment of the condition of the Spanish ecosystems and biodiversity, a future scenario exercise and a spatial explicit analysis on biodiversity, ecosystem services, land use change and socioeconomic variables. From 2012 to 2014 SNEA developed an economic valuation of a selection of ecosystem services at national level including three main methodologies: 1) a systematic review and meta-analysis studies of existing economic valuations studies in Spain; 2) mapping and valuation of 5 ecosystem services based on market based methods; and 3) a choice experiment to assess the socioeconomic valuation taking into account the use and non-use values of biodiversity and ecosystem services.

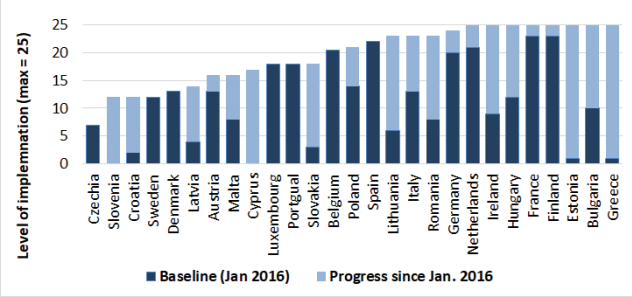
Spain took part in the ESMERALDA project[66] that aimed at delivering a flexible methodology to provide the building blocks for pan-European and regional assessments.

Within the framework of the LIFE Integrated Project INTEMARES (2017-2024)[67], an assessment of the state of ecosystems and their services within the Natura 2000 marine network is currently underway. In this context, a mapping and economic valuation of four different services is being conducted.

Spain is involved in the Ecosystem Service Partnership (ESP)[68], connecting over 3.000 ecosystem services scientists, policy makers and practitioners who work together in more than 40 Working Groups and a growing number of National Networks on all continents.

Spain has not provided updated information and therefore no progress has been recorded since January 2016 (Figure 16). This assessment is based on 27 implementation questions and updated every six months.

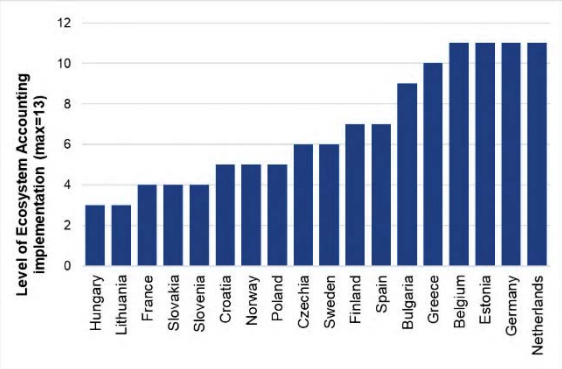
Figure 16: ESMERALDA MAES Barometer, January 2016 – March 2021[69]



[63] SWD(2022)1392.
[64] COM(2022)550.
[65] See www.ecomilenio.es
[66] See the ESMERALDA project.
[67] See the LIFE IP INTEMARES
[68] See the Ecosystem Service Partnership (ESP).
[69] European Commission, Joint Research Centre, Publication Office, EU Ecosystem assessment: summary for policymakers, page 80, 2021.

Progress on ecosystem accounting implementation is assessed at national scale based on 13 questions (see figure below).

Figure 17: Ecosystem accounting Barometer, September 2021[70]



In Spain, the development of ecosystem accounting is seen as complementary to a broad range of national and international policy needs. It contributes in particular to the SEEA-EEA, the European Environmental Economic Accounts (EEA) and the EU and Spanish Biodiversity strategies.

Ecosystem accounting is being developed on two different levels: at the national level and at the regional level for Andalusia.

At the national level, an ecosystem extent and a forest condition account have been developed and will be published soon. They are also working on a range of multiple ecosystem services and biodiversity accounts, and in the near future they will develop ecosystem asset accounts. The work developed under the MAIA project will contribute to the experimental development and implementation of certain ecosystem accounts, therefore contributing to the preparation of official national environmental accounts in the future, which will be addressed in the context of the modification of Regulation (EU) 691/2011 on environmental accounts.

At the regional level and in Andalusia, the focus has been to develop forest asset accounts in monetary terms that have been published, along with ecosystem services accounts, carbon and biodiversity accounts.

The main data gaps are related to evaluation and quantification of some ecosystem services, mainly regulating and some cultural. Otherwise, developing accounts in some specific ecosystem such as marine ecosystems present an additional difficulty. One of the main challenges is to improve the participation of all relevant institutions which possess the relevant information, and to ensure the availability and update of the data and information necessary for responding to the needs of ecosystem account, as well as to promote political and legislative actions.

2022 priority actions

- On the topic of ecosystem accounting, there is a need for training for some Spanish government institutions. Moreover, a simple guide of applications of the different accounts would be helpful for the process. Sharing experiences and systematic communication between the different MAIA partners will be very useful.

[70] MAIA Portal, Mapping and assessment for Integrated Ecosystem Accounting (EU Horizon 2020 project), 2022. MAIA uses the System of Environmental Economic Accounting – Experimental Ecosystem Accounting (SEEA-EEA) as the methodological basis for the ecosystem accounting. The SEEA EA is an integrated an comprehensive statistical framework that is based on five core accounts: ecosystem extent, condition, services and monetary ecosystem asset.

3. Zero Pollution

Clear air

EU clean-air policies and legislation need to significantly improve air quality in the EU, moving the EU closer to the quality recommended by the WHO and curbing emissions of key air pollutants.
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 EU clean-air legislation and defining strategic targets and actions for 2030 and beyond.
The 2030 zero-pollution action-plan targets are to reduce the health impacts of air pollution by 55% and to reduce the EU ecosystems threatened by air pollution by 25%, compared to 2005.

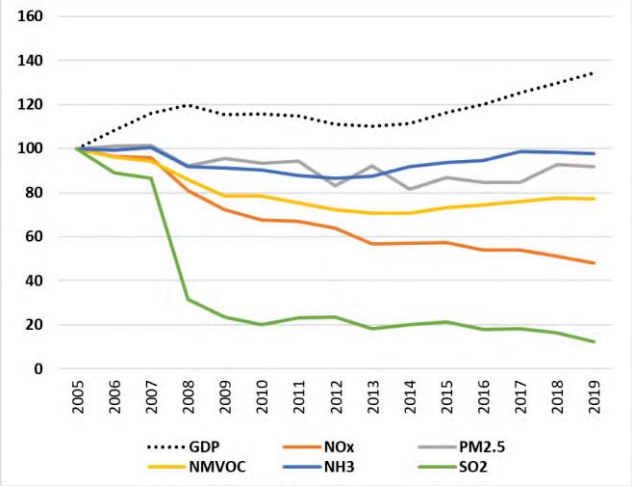
The EU has developed a comprehensive suite of air quality legislation, which establishes health-based air quality standards[71] and emission reduction commitments[72] per Member State for a number of air pollutants.

Air quality in Spain continues to give cause for concern. The latest available annual estimates (for 2019) by the European Environment Agency[73] point to about 23.300 premature deaths per year (or 251.300 years of life lost (YLL)) attributable to fine particulate matter concentrations[74], 1.820 (20.400 YLL) to ozone concentrations[75] and 6.250 67.500 YLL) to nitrogen dioxide concentrations[76]. These figures refer to the impacts of individual pollutants, and to avoid double-counting cannot be added up to derive a sum.

The emissions of key air pollutants have decreased significantly in Spain over the last years, while GDP growth continued (Figure 18). According to latest projections as submitted under Article 10(2) of the National Emission Reduction Commitments Directive (NECD)[77], Spain projects to reach emission reduction commitments for all air pollutants covered by the Directive for the period 2020 to 2029 and for most pollutants for 2030 onwards. The projections however do not demonstrate reaching the 2030 onwards emission reduction commitments for NMVOC. Latest inventory data submitted by Spain, prior to review by the Commission, indicate that Spain is in compliance with the emission reduction commitments for NO_x, NMVOC, SO_2 and $PM_{2.5}$, and in non-compliance with the emission reduction commitment for NH_3 in 2020.

Spain has submitted its National Air Pollution Control Programme (NAPCP) on 31 January 2020.

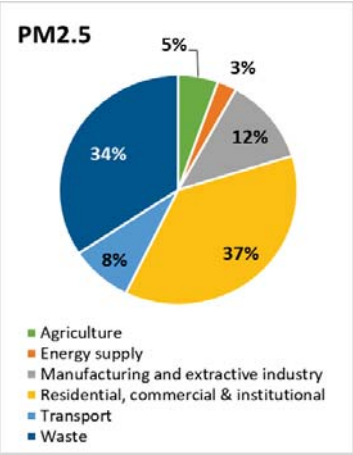
Figure 18: Emission trends of main pollutants/ GDP 2005-2019 in Spain[78]

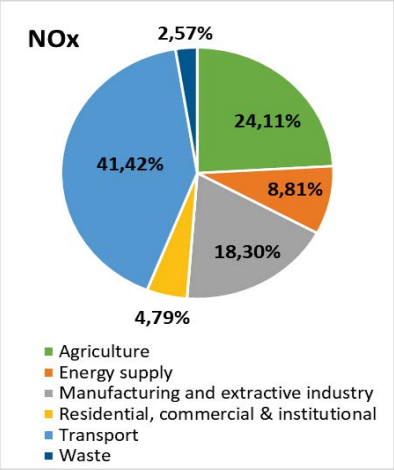


[71] European Commission, 2016. Air Quality Standards
[72] Reduction of national emissions of atmospheric pollutants.
[73] European Environment Agency. Air Quality in Europe – 2021 Report. Please see details in this report as regards the underpinning methodology, p.106.
[74] Particulate matter (PM) is 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.
[75] Low-level ozone is produced by photochemical action on pollution.
[76] NOx is emitted during fuel combustion e.g. from industrial facilities and the road transport sector. NOx is a group of gases comprising nitrogen monoxide (NO) and nitrogen dioxide (NO2).

[77] Directive 2016/2284/EU
[78] European Environnent Agency.

Figure 19: PM2.5 and NOx emissions by sector in Spain, 2019[79]





For the year 2020, exceedances above the limit values established by the Ambient Air Quality Directive (AAQD) were registered for nitrogen dioxide (NO_2) in one air quality zone and in one zone for particulate matter (PM_{10}). Furthermore, for several air quality zones the target values regarding ozone concentration have not been met[80].

Persistent breaches of air quality requirements, which have severe negative effects on health and environment, are being followed up by the European Commission through infringement procedures (mainly over PM_{10} and NO_2 exceedances) covering all Member States concerned, including Spain for exceedances of PM_{10} and NO_2 limit values. The European Commission has referred Spain to the Court of Justice of the European Union over exceedances of NO_2 limit values[81]. The aim of this legal action is that appropriate measures are put in place to bring all air quality zones into compliance with EU norms.

In the 2019 EIR, Spain received four priority actions, related to the forthcoming NAPCP and the need to reduce the main emission sources for the main pollutants through targeted actions. Although the NACPCP has been adopted, there has been limited progress. Therefore, priority actions in this regard are still pertinent.

2022 priority actions

- Take, in the context of the National Air Pollution Control Programme (NAPCP), actions towards reducing emissions from the main sources mentioned above.
- Ensure full compliance with the EU air quality standards and maintain downward emissions trends of air pollutants, to reduce adverse air pollution impacts on health and economy with a view to reaching WHO guideline values in the future.

Industrial emissions

The main objectives of EU policy on industrial emissions are to:
(i) protect air, water and soil;
(ii) prevent and manage waste;
(iii) improve energy and resource efficiency;
(iv) clean up contaminated sites.
To achieve this, the EU takes an integrated approach to the prevention and control of routine and accidental industrial emissions. The cornerstone of the policy is the Industrial Emissions Directive[82] (IED). As announced in the European Green Deal, the Commission undertook an impact assessment for the revision of the IED in 2021 with a view to tabling a proposal in early 2022[83]. The revision seeks to enhance the directive's contribution to the zero pollution objective, as well as its consistency with climate, energy and circular economy policies.

The overview of industrial activities regulated by IED below is based on data reported to the EU Registry (2018)[84].

In Spain, around 6.280 industrial installations are required to have a permit based on the IED. It represents an increase of almost 700 installations since 2015,

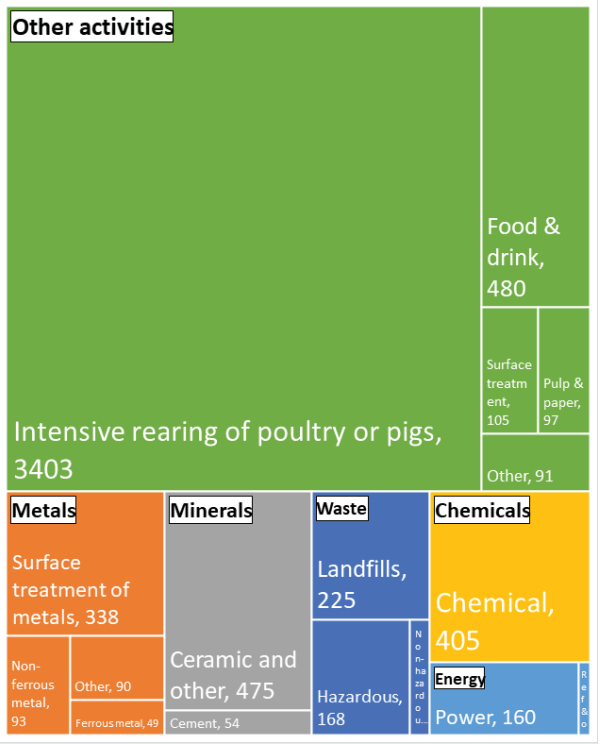
[79] European Environment Agency.
[80] European Environment Agency, Eionet Central Data Repository.
[81] Case C-125/20. It concerns Madrid and Barcelona.

[82] Directive 2010/75/EU covers industrial activities carried out above certain thresholds. It covers energy industry, metal production, mineral and chemical industry and waste management, as well as a wide range of industrial and agricultural sectors (e.g. intensive rearing of pig and poultry, pulp and paper production, painting and cleaning).
[83] The revision of the IED is performed in parallel to the revision of Regulation (EC) No 166/2006 on the European Pollutant Release and Transfer Register (E-PRTR).
[84] European Environment Agency, European Industrial Emissions Portal.

essentially in the intensive rearing of poultry or pigs. The distribution of installations is shown in Figure 20.

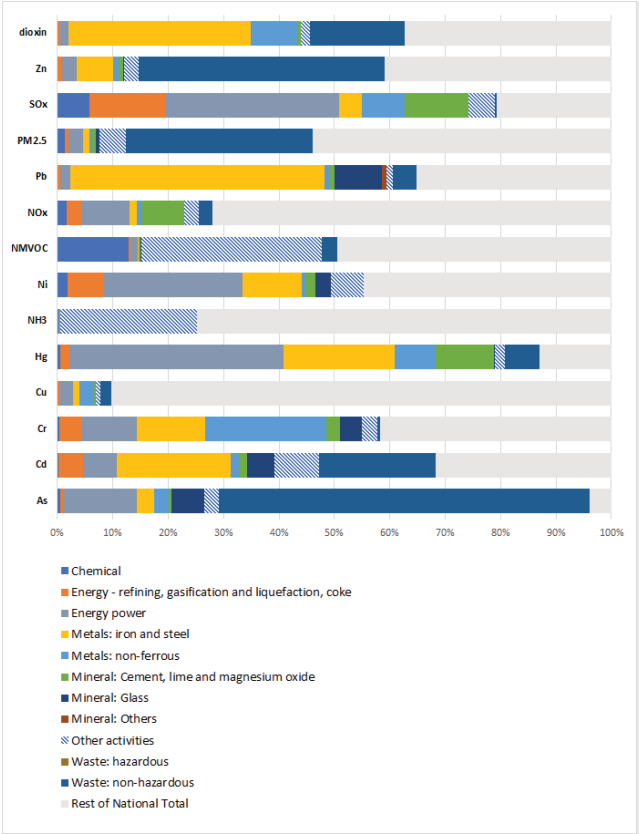
Industrial sectors in Spain with most IED installations in 2018 are intensive rearing of poultry and pigs (54%), followed by the food and drink sector (8%) and the mineral production (8%).

Figure 20: Number of IED industrial installations per sectorin Spain, 2018[85]



The industrial sectors identified as contributing the largest burden to the environment for emissions to air were the energy sector for Sulphur Oxides (SOx), Nitrogen Oxides (NOx) and for Mercury (Hg), Copper (Cu) and Nickel (Ni); the production and processing of metals (in particular iron and steel) for Chromium (Cr) and Lead (Pb); the waste management sector for Arsenic (As), Cadmium (Cd), Particulate Matter (PM2.5), Zinc (Zn) and dioxins; and intensive rearing of poultry or pigs for Ammonia (NH_3) and surface treatment and food, drink, milk sector for Non Methane Volatile Organic Compounds (NMVOCs). The breakdown is shown in Figure 21.

Figure 21: Emissions to air from IED sectors and rest of national total air emissions in Spain, 2018[86]



In 2017, three Spanish installations were among the top 30 E-PRTR facilities having the highest absolute damage costs from emissions of the main air pollutants and greenhouse gases[87]. These are two power stations burning coal and one burning lignite.

The environmental burdens for industrial emissions to water mainly result from the chemicals sector and energy sector for heavy metals, from the waste management sector (including landfills) for polycyclic aromatic hydrocarbons (PAH), from intensive rearing for poultry and pigs for total nitrogen and total phosphorus, and from pulp and paper sector for total organic carbon (as total C or COD/3) (TOC).

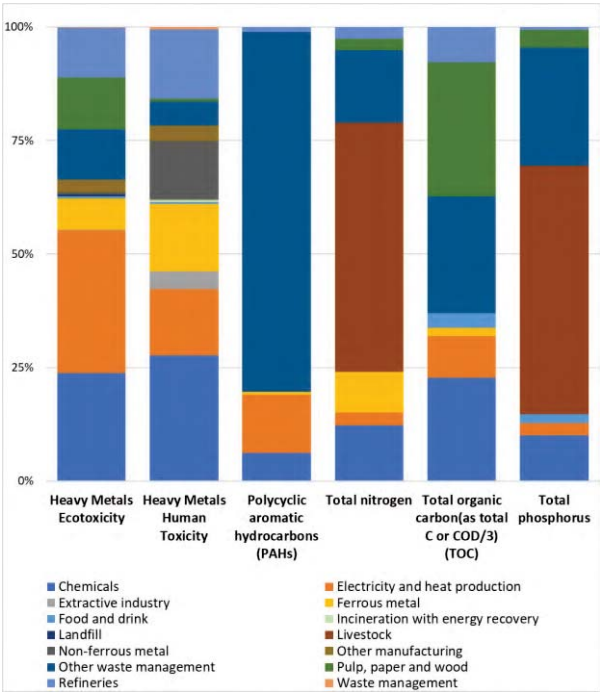
The breakdown, based on E-PRTR data, is presented in Figure 22.

[85] European Environment Agency, EU Registry, European Industrial Emissions Portal (data retrieved on 3 November 2021).

[86] European Environment Agency, LRTAP, Air pollutant emissions data viewer (Gothenburg Protocol, LRTAP Convention) 1990-2019 (data retrieved on 3 November 2021).

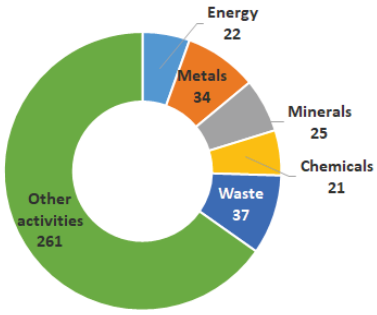
[87] EEA (2021). Costs of air pollution from European industrial facilities 2008–2017. Eionet Report - ETC/ATNI 2020/4. The ranking is based on the approach accounting for the value of a life year (VOLY), table 41 and table 44.

Figure 22: Relative releases to water from industry in Spain, 2018[88]



The EU approach to enforcement under the IED creates direct rights for the public to have access to relevant information and to participate in the permitting process for potentially polluting installations. This empowers the public and NGOs to ensure that permits are appropriately granted and that the conditions of these permits are complied with. As part of environmental inspection, competent authorities undertake site visits to IED installations to take samples and to gather necessary information. According to Article 23(4) of the IED, site visits must be carried out between once a year and once every three years, depending on the environmental risks posed by the installations. In 2018 Spain undertook 400 site visits, most of which concerned the intensive rearing of poultry or pigs (51%), followed by the waste management sector, including landfills (9%), and food drink milk sector (8%).

Figure 23: Number of inspections in IED installations in Spain in 2018



The development of Best Available Techniques (BAT) Reference Documents (BREFs) and BAT Conclusions ensures a good collaboration with stakeholders and enables a better implementation of IED[89]. Since the last EIR report, BAT Conclusions were adopted for Waste Incineration, for the Food, Drink and Milk Industries and for Surface Treatment Using Organic Solvents including Wood and Wood Products Preservation with Chemicals.

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

In 2019, Spain received the priority actions to review permits to ensure that they comply with the newly adopted BATC conclusions and to strengthen monitoring and enforcement to ensure compliance with BAT conclusions. The Commission has followed up on these actions through the reporting by Spain to the EU Registry. The Commission is currently checking with Spain the reported information about the permits granted for each installation in the scope of the IED.

In 2019, Spain also received a priority action to address air and water pollutant emissions and the odour from plants engaged in the intensive rearing of poultry or pigs. Spain was also asked to tackle air pollution from coal-fired power generation plants and from the co-incineration of waste in cement plants. As mentioned above, emissions from intensive rearing of poultry or pigs and from large combustion plants are still relevant and need to be addressed by the implementation of the BAT Conclusions for intensive rearing of poultry or pigs and for large combustion plants, to be implemented by February 2021 and August 2021, respectively.

[88] European Environment Agency, E-PRTR, European Industrial Emissions Portal. The heavy metals are presented both as a weighted sum of eco toxicity and human toxicity factors to illustrate both the ecological and human impact (based on USEtox) (data retrieved on 3 November 2021).

[89] European Commission BAT reference documents.

2022 priority actions

- Continue addressing pollution from large combustion plants, in particular lignite-firing plants.
- Address pollution from intensive rearing of poultry or pigs

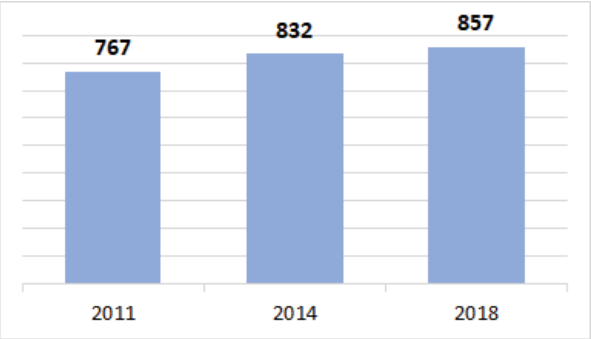
Major industrial accidents prevention, SEVESO

The main objectives of EU policy on the prevention of major industrial accidents are to:
(i) control major accident hazards involving dangerous substances, especially chemicals;
(ii) limit the consequences of such accidents for human health and the environment;
(iii) continuously improve prevention, preparedness and response to major accidents.
The cornerstone of the policy is Directive 2012/18/EU (the Seveso-III Directive[90]).

The overview below of industrial plants regulated by the Seveso-III Directive, hereafter 'Seveso establishments', is based on data reported to the eSPIRS database (2018)[91] and the Spain report on the implementation of the Seveso-III Directive for the period 2015-2018[92].

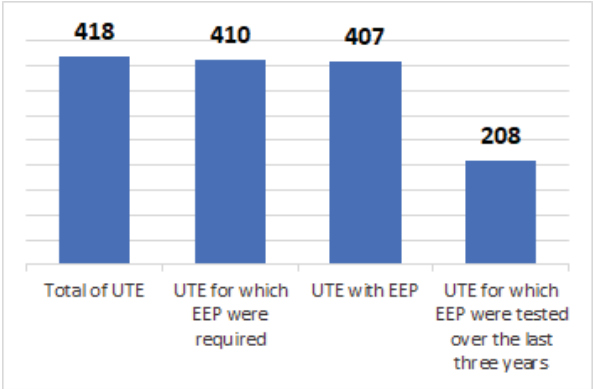
In Spain, among the 857 Seveso establishments, 439 are categorised as lower-tier establishments (LTE) and 418 as upper-tier establishments (UTE) – based on the quantity of hazardous substances likely to be present. The UTE are subject to more stringent requirements. The evolution of the number of Seveso establishments is presented below.

Figure 24: Number of Seveso establishments in Spain, 2011, 2014 and 2018[93]



According to Spain, the External Emergency Plan (EEP) is required for 410 UTE. In 2018, 407 UTE had an EEP and 208 of these EEP had been tested over the last 3 years. The summary is shown in Figure 25. The establishment of EEPs is essential to allow proper preparation and effective implementation of the necessary actions to protect the environment and the population should a major industrial accident nevertheless happen.

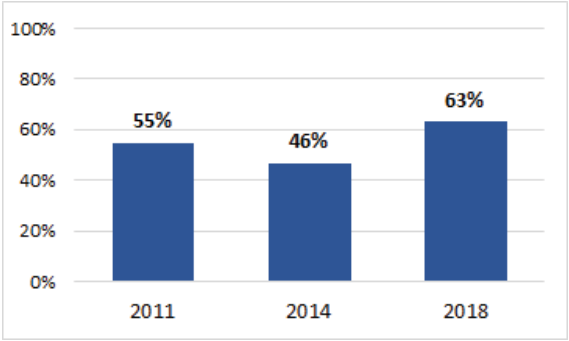
Figure 25: Situation regarding EEP in Spain (2018)[94]



The information to the public referred to in annex V of the Seveso-III Directive – especially about how the public concerned will be warned in case of a major accident ; the appropriate behaviour in the event of a major accident; and the date of the last site visit – are permanently available for 92% of the Seveso establishments in Spain.

The share of UTE for which information on safety measures and requisite behaviours were actively made available to the public over the last years are presented in Figure 26. This is an important provision of the Seveso-III Directive as the knowledge of these information by the public may reduce the consequences of a major industrial accident.

Figure 26: Share of UTE for which information on safety measures and requisite behaviours were actively made available to the public in Spain, 2011, 2014 and 2018[95]



[90] Directive 2012/18/EU on the control of major accident hazard involving dangerous substances.
[91] European Commission, Seveso Plants Information Retrieval System.
[92] As provided for by Article 21(2) of the Seveso-III Directive
[93] European Commission, Assessment and summary of Member States' implementation reports for Implementing Decision 2014/896/EU (implementing Directive 2012/18/EU on the control of major accident hazards involving dangerous substances), 2022.
[94] Idem.
[95] Idem.

2022 priority actions

- Strengthen control and enforcement to ensure compliance with Seveso-III Directive provisions, especially on public information and EEP.

Noise

The Environmental Noise Directive[96] provides for a common approach to avoid, prevent and reduce the harmful effects of exposure to environmental noise, although it does not set noise limits as such. The main instruments it uses in this respect are strategic noise mapping and planning. A relevant 2030 zero pollution action plan target is a reduction by 30% of the share of people chronically disturbed by transport noise compared to 2017.

Excessive noise from aircraft, railways and roads is one of the main causes of environmental health-related issues in the EU. It produces ischemic heart disease, stroke, interrupted sleep, cognitive impairment and stress[97].

In Spain, based on a limited set of data[98], environmental noise is estimated to cause at least around 800 premature deaths and 4 000 cases of ischaemic heart disease annually[99]. Moreover, some 600 000 people suffer from disturbed sleep. In Spain, the overall exposure in 2012, the latest year with almost complete data, was 15 million citizens. On the basis of the latest full set of information that has been analysed, noise mapping of agglomerations, roads and railways remains incomplete. Moreover, Spain still lacks action plans for around 50 agglomerations and most roads and railways. These instruments, adopted after a public consultation, should include the measures to keep noise low or reduce it.

Due to these shortcomings in the implementation of the Noise Directive, the Commission opened an infringement procedure in 2016, which is currently at reasoned opinion stage.

In the 2019 EIR, Spain received two priority actions to complete noise maps and action plans. Although Spain has recently made some progress, they are still valid and are therefore reiterated.

2022 priority actions

- Complete noise mapping.
- Complete action plans for noise management.

Water quality and management

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

Water Framework Directive

The Water Framework Directive (WFD)[100] is the cornerstone of the EU water policy in the 21st century[101]. The WFD along with other water-related legislation[102] set the framework for sustainable and integrated water management, which aims at a high level of protection of water resources, prevention of further deterioration and restoration to good status.

Spain has 25 River Basin Management Plans (RBMPs) in accordance to the WFD, related to the correspondent River Basin Districts (RBDs).

By March 2022, Member States have to report the third generation of RBMPs under the WFD. The Commission will assess the reported status and progress, checking how the findings identified in the assessment of the second RBMPs[103] have been addressed. Spain has not yet reported the third RBMPs.

[96] Directive 2002/49/EC.
[97] WHO 2018, Environmental Noise Guidelines for the European Region.
[98] For further information: European Environment Agency, Noise Fact Sheets 2021.
[99] These figures are an estimation by the European Environmental Agency based on: (i) the data reported by Member States on noise exposure covered by Directive 2002/49/EC; (ii) ETC/ATNI, 2021, Noise indicators under the Environmental Noise Directive 2021: Methodology for estimating missing data, ETC/ATNI Report No 2021/06, European Topic Centre on Air Pollution, Transport, Noise and Industrial Pollution; (iii) the methodology for health impact calculations, ETC/ACM, 2018, Implications of environmental noise on health and wellbeing in Europe, Eionet Report ETC/ACM No 2018/10, European Topic Centre on Air Pollution and Climate Change Mitigation.
[100] The Water Framework Directive (2000/60/EC).
[101] The EU Water Policy.
[102] This includes the Groundwater Directive (2006/118/EC), the Environmental Quality Standards Directive (2008/105/EC), the Floods Directive (2007/60/EC), the Bathing Water Directive (2006/7/EC), the Urban Waste Water Treatment Directive (91/271/EEC), the new Drinking Water Directive (2020/2184/EC), the Nitrates Directive (91/676/EEC), the Marine Strategy Framework Directive (2008/56/EC), the Industrial Emissions Directive (2010/75/EU) and the new Regulation on minimum requirements for water reuse (2020/741).
[103] Detailed information can be found in the 5th Report from the Commission on the implementation of the Water Framework Directive and the Floods Directive, as well as in the 2019 EIR.

The Commission published in December 2021 the 6th Implementation Report[104]. It includes, amongst others, an interim assessment on progress of the implementation of the Programmes of Measures and on monitoring of the new priority substances. The assessment report for Spain[105] showed that as regards the effectiveness of the measures and their contribution to the achievement of the WFD objectives, the reported gap indicator values indicated progress in 2021 in all RBDs except the Canary Islands RBDs, the inland Catalonia RBD and Melilla RBD). In the following period, the indicator values confirmed the downward trend, all RBDs showed progress from 2021 to 2027 on all occasions except Ebro RBD and Tenerife RBD where some indicators reflect stagnation. However, although the progress is clear, the indicators values reflect that some action is still necessary beyond 2027 to cope with the pressures or chemical substances in eight RBDs (Duero RBD, Tagus RBD, Guadiana RBD, Guadalquivir RBD, Andalusian Mediterranean Basins, Segura RBD, Ebro RBD and Tenerife RBD).

Based on the 2nd RBMPs reporting and data published 2020[106], in Spain 55.6% of all surface water bodies[107] reach good ecological status (with unknown status 2.1%) and 87.5% have good chemical status (with unknown 6.1%). For groundwaters, 35.0% failed to achieve good chemical status and 24.3% are in poor quantitative status.

Figure 27 illustrates the proportion of surface water bodies in Spain and other European countries that failed to achieve good ecological status.

Figure 27: Proportion of surface water bodies (rivers, lakes, transitional and coastal waters) in less than good ecological status per River Basin District[108]

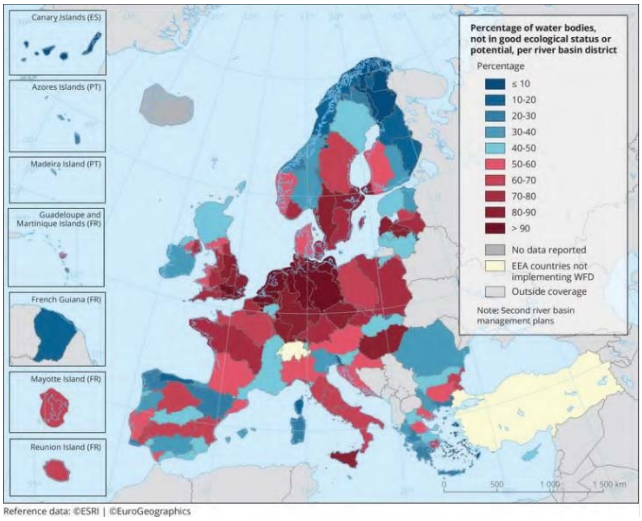
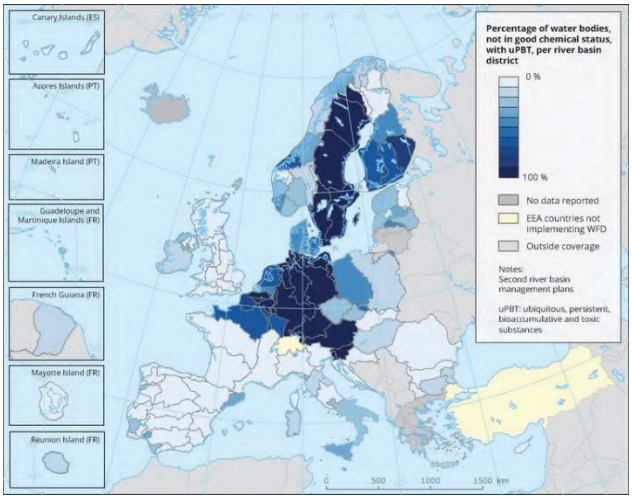


Figure 28 presents the percentage of surface water bodies in Spain and other European countries failing to achieve good chemical status. For Spain the percentage is 6.4%, if one includes water bodies failing due to substances behaving as ubiquitous PBTs (Persistent, Bio-accumulative, Toxic). Without uPBTs, 5% of surface water bodies are failing good chemical status.

Figure 28: Percentage of surface water bodies not achieving good chemical status[109]



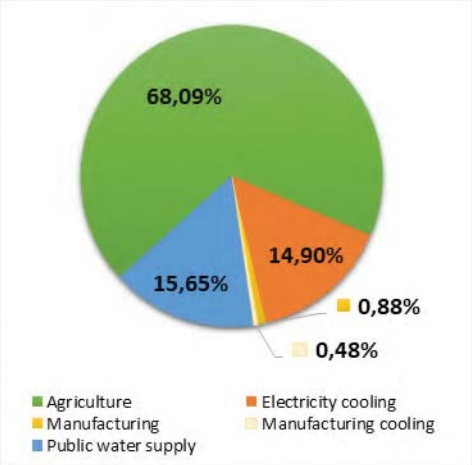
Under the IED framework, it should be stressed that Spain showed an increase over the last decade (2.6%) in releases of heavy metals like Cd, Hg, Ni, Pb and a

[104] See the 6th Implementation Report of the WFD and FD.
[105] European Commission, Directorate-General for Environment, Assessment of Member States' progress in Programmes of Measures during the second planning cycle of the Water Framework Directive. Member State: Spain, 2022.
[106] See WISE - Freshwater
[107] Rivers, lakes, transitional, coastal, territorial.
[108] European Environment Agency, 2021.
[109] European Environment Agency, December 2019.

significant increase in Total Organic Carbon –TOC (169.2%) to water[110].

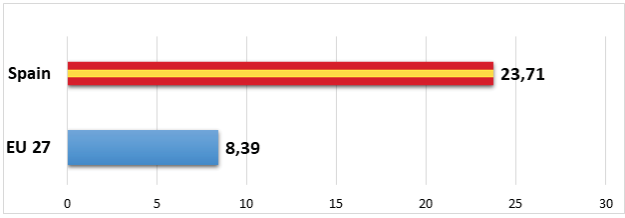
Total water abstracted annually (corresponding to 2019 baseline) in Spain from surface and groundwater sources is 30,504.20 hm^3 (EEA, 2022). The percentage for water abstraction per sector is 68.09% for agriculture, 15.65% for public water supply, 14.9% for electricity cooling, 0.88% for manufacturing and 0.48% for manufacturing cooling, as illustrated in the following figure. Spain is developing an electronic water register to control all water permits. All abstractions require be authorised in Spain both surface and groundwater sources.

Figure 29: Water abstraction per sector in Spain[111]



In Spain, the water exploitation index plus (WEI+)[112] is 23.71%, which is higher than 20% that is generally considered as an indication of water scarcity[113]. Spain is ranked 3rd (from high to low score) in the EU level in terms of WEI+.

Figure 30: Water exploitation index plus (WEI+) inside EU, 2017[114]



As a good practice, it is worth mentioning the LIFE ALNUS TAEJO project[115], on the conservation and restoration of Mediterranean alder forests priority habitat in Western International Tajo river basin. This project, shared with Portugal, aims to protect and restore rivers and riverbanks dominated by residual alluvial forests (a priority habitat type under the Habitats Directive). The project's goal is to restore alluvial forests on 432 hectares, along 216 km of river, and restore riverbanks and enable natural river regeneration to promote ecological connectivity. The project's actions will help recover soil on eroded river corridors, improve river flows by removing illegal barriers, and enhance water quality. Another outstanding LIFE project is the LIFE REMAR[116], which will demonstrate in the Catalonia region the viability of recharging an aquifer with treated water using managed aquifer recharge (MAR) technology. This will involve using two infiltration basins located next to the WWTP's secondary effluent outlet, with a reactive barrier installed at the bottom of each basin to remove contaminants. The aim is to remove contaminants of emerging concern, pathogens and microplastics, and reduce antibiotic resistance genes, from the treated wastewater. The system will be optimised for replication at other WWTPs.

Floods Directive

As mentioned, the Commission published in December 2021 the 6th Implementation Report. It includes, amongst others, the review and update of the Preliminary Flood Risk Assessments during the second cycle (2016-2021).

The assessment report[117] shows that Spain has taken into consideration a new climate change study in this second cycle and has identified areas of potential significant flood risks (APSFR), with some evidence for a clear methodology for the designation of APSFRs including

[110] European Environment Agency, June 2021.
[111] European Environment Agency, Water abstraction by source and economic sector in Europe, 2022.
[112] The Water Exploitation Index plus (WEI+) is a measure of total fresh water use as a percentage of the renewable fresh water resources (groundwater and surface water) at a given time and place. It quantifies how much water is abstracted and how much water is returned after use to the environment.
[113] By May 2022, EEA will develop seasonal WEI+ at river basin and NUTS2 level, which provide a more complete picture of water stress and water scarcity for each Member State.
[114] European Environment Agency, Water exploitation Index Plus, 2022.
[115] LIFE20 NAT/ES/000021
[116] LIFE20 ENV/ES/000284
[117] European Commission, Directorate-General for Environment, Assessment of Second Cycle Preliminary Flood Risk Assessments and Identification of Areas of Potential Significant Flood Risk under the Floods Directive : Member State : Spain, 2022.

criteria to distinguish between significant flood risk existing presently in an APSFR, or significant flood risk likely to arise in the future in an APSFR (consideration of long term developments). However, the assessment identified several areas for further development related mainly to mapping, level of detail for historic floods and criteria inconsistencies for the designation of APSFRs. It is noted that the report does not assess Balearic Islands, since their Preliminary Flood Risk Assessment was reported to the Commission in November 2021.

Spain has not adopted and reported yet the second generation of Flood Risk Management Plans (FRMPs) under the Floods Directive. The European Commission will assess progress since the adoption of the first Flood Risk Management Plans and publish a new report, as done in 2019.

Drinking Water Directive

As regards the Drinking Water Directive, no new assessment of the quality of drinking water is available since the 2019 EIR. The quality of drinking water in Spain has not been indicated as an area of concern.

The recast Directive 2020/2184 entered into force on 12 January 2021, Member States have until 12 January 2023 to transpose it into their national legal system. Spain will have to comply with the reviewed quality standards.

Bathing Water Directive

Regarding the Bathing Water Directive, it should be highlighted that in 2020, out of the 2239 Spanish bathing waters, 88.5% were of excellent quality[118].

Detailed information on the Spanish bathing waters is available from a national portal[119] and via an interactive map viewer of the European Environment Agency[120].

Figure 31: Bathing water quality in Europe in the 2020 season[121]

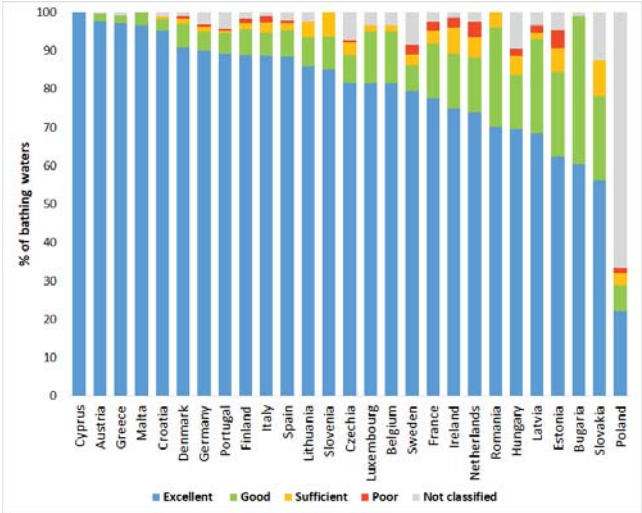
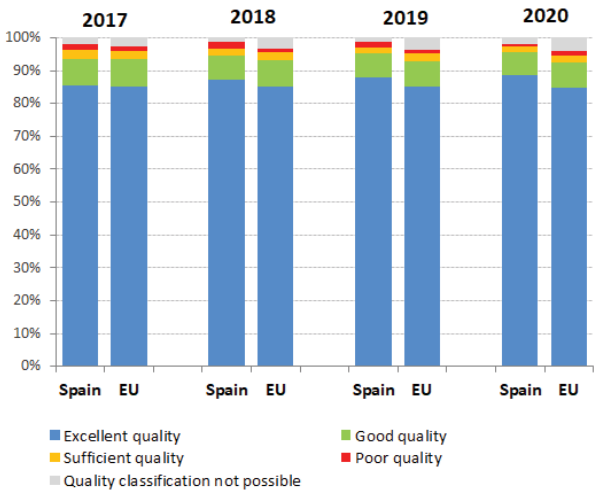


Figure 32: Spain, Bathing water quality 2017-2020[122]



For 2017, 2018 and 2019, data about the UK bathing waters are included under the EU average.

Nitrates Directive

The latest Commission Report on the Implementation of the Nitrates Directive[123], referring to the period 2016-2019[124], warns that nitrates are still causing harmful pollution to water in the EU. Excessive nitrates in water are harmful to both human health and ecosystems, causing oxygen depletion and eutrophication. Where national authorities and farmers have cleaned up waters,

[118] European Environment Agency, 2021. State of bathing waters in 2020 – Spain country report.
[119] Ministry of Health, NAYADE Information System
[120] European Environmental Agency - State of bathing waters in 2020

[121] European Environment Agency – European Bathing Water Quality in 2020, 2022.
[122] European Environment Agency, European Bathing Water Quality in 2017, 2018, 2019, 2020.
[123] Implementation of the Nitrates Directive in the EU.
[124] Last Implementation Report 2016-2019.

it has had a positive impact on drinking water supply and biodiversity, and on the sectors such as fisheries and tourism that depend on them. Nevertheless, excessive fertilisation remains a problem in many parts of the EU.

In Spain, while the nitrogen surplus is below the EU average, there is a quite high phosphorus surplus. There is a well-elaborated network of monitoring stations. A high number of groundwater monitoring stations shows nitrates concentrations above 50 mg/l. A high number of stations also shows an increasing trend. A high number of waters that are eutrophic are outside nitrates vulnerable zones. The Commission recommends that Spain revises and reinforces the nitrates actions programmes to tackle the groundwater pollution in hot spots and revises the nitrates vulverable zones designation to address eutrophication of surface waters where agriculture pressure is significant.

As explained in the 2019 EIR, the Commission launched in 2018 a new horizontal infringement procedure against Spain on the Nitrates Directive. The Commission considers that efforts by the Spanish authorities have to date been unsatisfactory and insufficient, and therefore decided in December 2021 to refer Spain to the Court of Justice of the European Union for failing to take sufficient action on nitrates pollution[125]. It is worth mentioning that this case covers many Autonomous Communities, including the Region of Murcia and the Mar Menor.

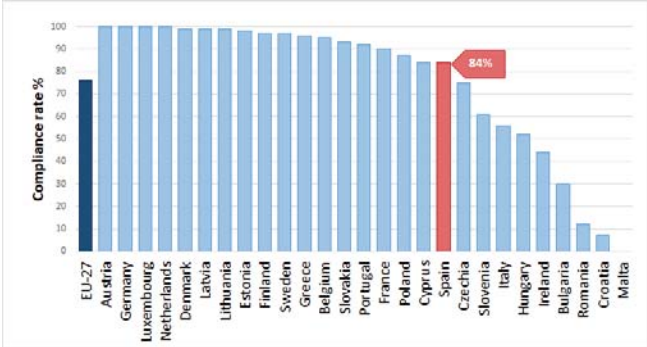
Urban Waste Water Treatment Directive

Spain has, over the years, encountered difficulties implementing the Urban Waste Water Treatment Directive (UWWTD).

According to the last available data[126], the overall compliance rate in Spain is 84%, which is higher than the EU average of 76% in 2018 (Figure 33). Regarding the amount of urban wastewater which still needs to be collected or treated according to the requirements of the UWWTD, further efforts are needed to provide collection (0.4%), biological treatment (9.5%) and biological treatment with nitrogen and/or phosphorus removal (16.1%).

Spain is the main performer in the EU in the field of wastewater reuse, although it is focussed mainly on some Spanish regions and there is room and need for improvement[127].

Figure 33: Proportion of urban waste water that meets all requirements of the UWWTD (collection, biological treatment, biological treatment with nitrogen and/or phosphorus removal) in compliant urban areas of the UWWTD ('compliance rate'), 2018[128]



Despite the improvement in compliance over the years, for which the use of EU funding has been fundamental, the incomplete implementation of the UWWTD has led to several rulings of the Court of Justice of the European Union against Spain.

It should be noted that the deadlines pursuant to the Directive expired long time ago. The Commission has five different infringement procedures currently ongoing against Spain. For the most advanced case (normal areas), the Court of Justice of the European Union issued a second ruling on 25 July 2018, imposing for the first time in the environmental sector pecuniary sanctions to Spain[129].

The 2019 EIR referred to the preparation by the Ministry for the Environment of the Plan DSEAR, which is a water governance tool and include water investments in the entire Spanish territory. This national Plan DSEAR on wastewater, sanitation, water efficiency, saving and reuse, has been finally approved by the Spanish Government in July 2021[130].

For the agglomerations in breach of the Directive, Spain must finalise those projects as soon as possible. It should be noted that, in spite of the progress made in recent years, around 500 Spanish agglomerations do not comply with all the requirement of the UWWTD.

In the 2019 EIR, Spain received six priority actions on water management. Some of them, related to the adoption of the missing RBMPs and FRMPs have been

[125] See IP/21/6265
[126] WISE – Country profiles on urban waste water treatment - Spain.
[127] European Commission – European Semester 2020, Country Report for Spain.

[128] European Commission, WISE Freshwater, 2021.
[129] A lump sum of EUR 12 million, and a penalty payment of almost EUR 11 million per six-month period of delay for the 9 pending agglomerations. At May 2022, Spain has already paid around EUR 72 million in this case, and it is still paying fines for 4 non-compliant agglomerations.
[130] See the Plan DSEAR.

achieved. The absence of the assessment of the third RBMPs prevents to evaluate other possible progress, although a positive trend can be observed as explained above, also with the contribution of the measures (reforms and investments) included in the RRP Spain in relation to the water sector. In any event, the following priority actions are clearly pertinent.

2022 priority actions

- New physical modifications of water bodies should be assessed in line with Article 4(7) of the WFD. In these assessments alternative options and adequate mitigation measures have to be considered.
- Increase efforts to reduce nitrates from agriculture in groundwater and address eutrophication of surface waters where agriculture pressure is significant.
- Efforts should be made to improve the coordinated implementation between water, marine and nature policies.
- Complete implementation of the Urban Waste Water Treatment Directive for all agglomerations, by building up the necessary infrastructure, as well as develop the potential of water reuse.

Chemicals

The EU seeks to ensure that chemicals are produced and used in a way that minimises any significant adverse effects on human health and the environment. In October 2020, the Commission published the Chemicals Strategy for Sustainability / Towards a Toxic-Free environment[131], which led to some systemic changes in EU chemicals legislation. The strategy is part of the EU's zero-pollution ambition – a key commitment of the European Green Deal.

The EU's chemicals legislation[132] provides baseline protection for human health and the environment. It also ensures stability and predictability for businesses operating within the internal market.

Since 2007, the Commission has gathered information on the enforcement of the Regulation on the Registration, Evaluation, Authorisation and Restriction of Chemicals (the REACH Regulation) and the Regulation on Classification, Labelling and Packaging (the CLP Regulation). In December 2020, the Commission assessed the Member States reports on the implementation and enforcement of these Regulations[133], in line with REACH Article 117(1) and CLP Article 46(2). According to the latest available data, national enforcement structures have not changed much. However, it is apparent from this report that there are still many disparities in the REACH-CLP implementation and notably in the area of the law enforcement. The recorded compliance levels seem to be quite stable over time, but with a slight worsening trend likely due to enforcement authorities being more effective in detecting noncompliant products/companies and more non-compliant products being put on the EU market.

In August 2021, the Commission published a measurable assessment of the enforcement[134] of the two main EU Regulations on chemicals using a set of indicators on different aspects of enforcement.

Responsibility for checking compliance with REACH in Spain lies with the 17 regional authorities (*Comunidades Autónomas*)[135].

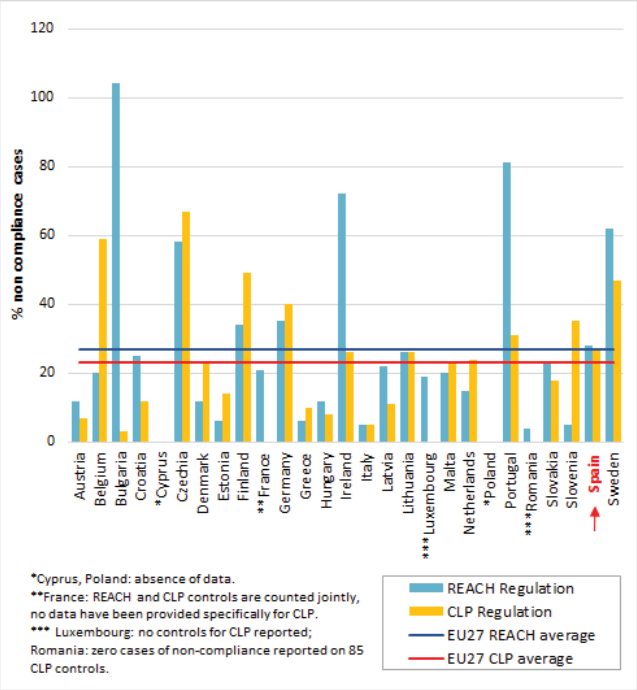
Spain has devised but partially implemented strategies[136] for enforcement of both REACH and CLP Regulations. 12 of the 17 enforcement authorities have developed an individual enforcement strategy for REACH and 13 for CLP. Strategies are focused on raising industry awareness on the obligations under REACH rules, performing enforcement campaigns (including ECHA's inspection projects) and investigating situations of complaints in order to reduce public health risks.

As a rule, all infringements of REACH are classed as serious or very serious environmental administrative offences. If the infringement is sufficiently serious, the competent authority may decide to impose further penalties in addition to a fine. That authority may also, where necessary, order the provisional seizure of assets and documents.

Some authorities in Spain have increased the number of the staff allocated to REACH and CLP enforcement. Accordingly, REACH controls for in the reporting period (2019) stood at 4.089, while CLP controls carried out stood at 3.170 in the same period. Furthermore, proactive inspections remain far below average. Although the actual level of expertise has increased since the last reporting, it is still not sufficient for some specific tasks under REACH, namely in relation to risk management and some specific areas of concern such as nanomaterials and endocrine disruptors. The significant percentage of non-compliance cases out of the total number of REACH and CLP controls, is almost the same as the EU average.

[131] See the Chemicals Strategy, COM(2020) 667 final.
[132] The REACH Regulation – The CLP Regulation.
[133] Final Report on the operation of REACH an CLP. Member States reporting 2020.
[134] European Commission, REACH and CLP enforcement: EU level enforcement indicators
[135] Final report_REACH-CLP MS reporting_2020.pdf (europa.eu), p. 71.
[136] Final report_REACH-CLP MS reporting_2020.pdf (europa.eu), p. 76.

Figure 34: Percentage % of non-compliance cases out of the total number of REACH and CLP controls during 2019 per Member State and compared to the EU average[137]



2022 priority actions

- Upgrade the implementation and enforcement administrative capacities towards a zero tolerance to non-compliances.

[137] European Commission, Final Report, on the operation of REACH and CLP, pp.87-88, 2022.

4. Climate action

In line with the Paris Agreement and as part of the European Green Deal, the European Climate Law sets the EU target of reaching climate neutrality by 2050 and reducing greenhouse gas (GHG) emissions by 55% by 2030 compared to 1990. The law also limits the contribution that carbon removals can make towards emission reductions in 2030 to ensure a sufficient mitigation effort.

The EU and its Member States submitted updated Nationally Determined Contribution (NDC) to the UNFCCC in December 2020.

The EU is working across all sectors and policies to cut GHG emissions and make the transition to a climate-neutral and sustainable economy, as well as addressing the unavoidable consequences of climate change.

EU climate legislation incentivises emissions reductions from power generation, industry, transport, the maritime sector and fluorinated gases (F-gases) used in products.

For road transport, EU legislation requires the GHG intensity of vehicle fuels to be cut by 6% by 2020 compared to 2010[138] and sets binding GHG emission standards for different vehicle categories[139].

Under the F-gas Regulation, the EU's F-gas emissions will be cut by two thirds by 2030 compared with 2014 levels.

From 2021, emissions and removals of GHGs from LULUCF have been included in the EU emission-reduction efforts.

The EU adaptation policy is an integral part of the European Green Deal. From 2021, Member States are required to report on their national adaptation policies[140], as the EU Climate Law recognises adaptation as a key component of the long-term global response to climate change. Member States will be required to adopt national strategies, and the EU will regularly assess progress as part of its overall governance on climate action. The updated EU adaptation strategy, published in February 2021, sets out how the EU can adapt to the unavoidable impacts of climate change and become climate resilient by 2050.

Key national climate policies and strategies

Spain has an integrated National Energy and Climate Plan (NECP) for 2021-2030, which builds on long-term energy and climate plans and is consistent with the *Long-term Decarbonisation Strategy 2050*. Spain's Climate Law establishes national climate target to reduce greenhouse gas emissions by 23% by 2030 compared to 1990 levels and to achieve carbon neutrality by 2050. Spain has set an ambitious national contribution to the EU 2030 renewables target. The country regards renewable energies, in particular wind and solar, as a key contribution to decarbonisation.

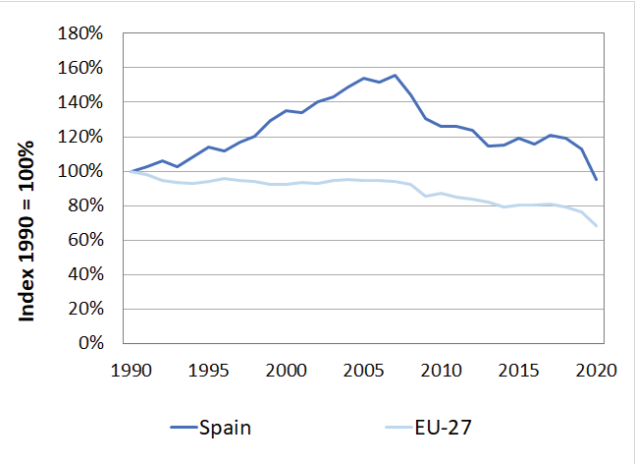
In its RRP, Spain allocates around 40 % of the financial envelope to climate objectives and outlines crucial reforms and investments to further the transition to a more sustainable, low-carbon and climate-resilient economy. Spain plans to support the decarbonisation of industry and achieving its energy objectives, which are important steps towards achieving climate neutrality by 2050. The green transition is supported by reforms and investments promoting urban and long-distance sustainable mobility and increasing the energy efficiency of buildings, reducing energy dependency and deploying new technologies for renewable hydrogen and renewable energy sources (see Chapter 5).

The 2021-2030 National Adaptation Plan identifies climate and climate scenarios as one of the priority areas of work. It is the basic planning instrument to tackle the effects of climate change in Spain. It defines objectives, criteria, areas of work and lines of action to promote adaptation and resilience to climate change.

Between 1990 and 2020, greenhouse gas emissions in Spain decreased by 6%.

[138] The Fuel Quality Directive (Directive 98/70/EC) sets strict quality requirements for fuels used in road transport in the EU to protect human health and the environment, and to make road travel across the EU safer.
[139] Directive 98/70/EC.
[140] Article 29 of Regulation (EU) 2018/1999.

Figure 35: Total greenhouse gas emissions (incl. international aviation) in Spain, 1990-2020



Effort sharing target

For emissions not covered by the EU Emissions Trade Scheme (ETS), Member States have binding national targets under the Effort Sharing legislation[141]. Spain's target under the EU legislation is to reduce emissions not covered by the EU emissions trading system (such as buildings, road transport, agriculture, small industry and waste) by 10% by 2020 and 26% by 2030, compared to 2005. Spain has overachieved its 2020 target. The country's Effort Sharing emissions in 2019 were lower than its 2020 target.

In its National Energy and Climate Plan, Spain intends to achieve more reductions than its current effort sharing target for 2030 of -26%.

Figure 36: Emissions and targets under the Effort Sharing Decision/ Effort Sharing Regulation in Spain, 2020 and 2030 as percentage change from 2005

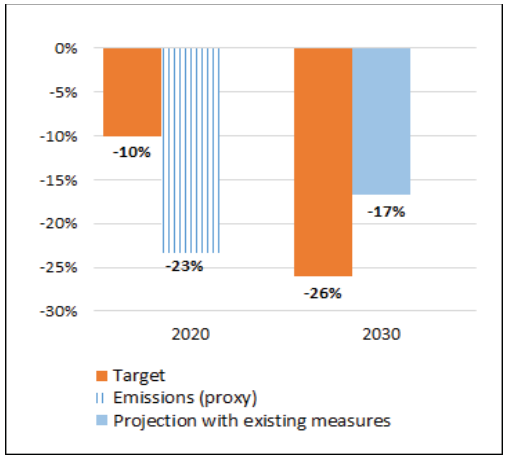
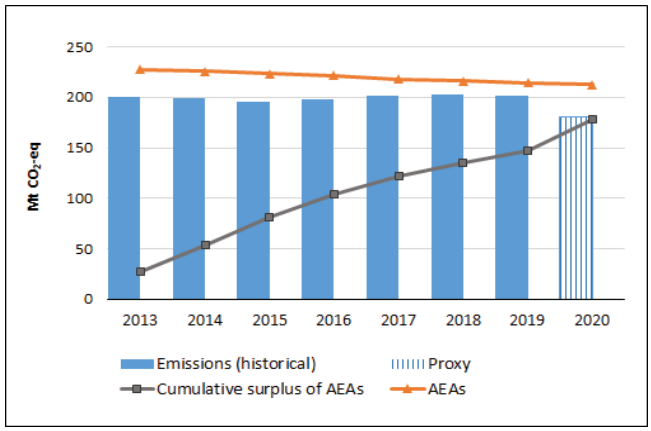


Figure 37: Emissions, annual emission allocations (AEAs) and accumulated surplus/ deficit of AEAs under the Effort Sharing Decision in Spain, 2013-2020



Key sectoral developments

In road transport, the GHG intensity of vehicle fuels in Spain decreased by 3.4% from 2010 to 2019. The country needs to act swiftly to meet the current EU-wide target of reducing 6% by 2020.

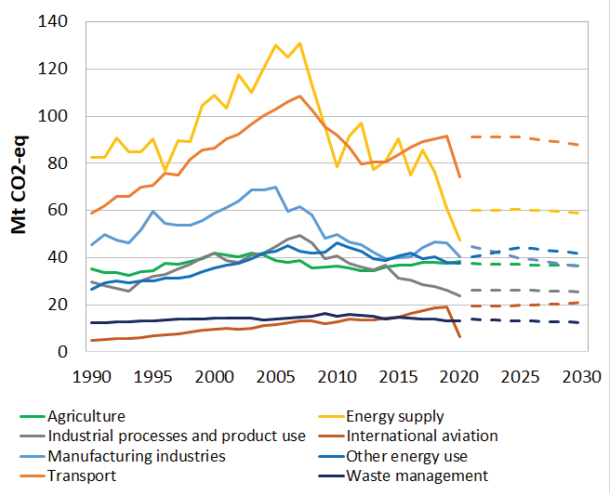
There are several types of action that Member States can take in this regard, for example: (i) further expanding the use of electricity in road transport; (ii) supporting the use of biofuels and advanced biofuels in particular; (iii) incentivising the development and deployment of renewable fuels of non-biological origin; and (iv) reducing upstream emissions before refining processes.

Road transport emissions have fallen by 9% compared to 2005, and represent 27% of the total greenhouse gas emissions in Spain in 2019. The transport sector, and road transport in particular, remains a key challenge

[141] Regulation (EU) 2018/842

and continue to represent a large share of Spain's energy consumption. Additional measures are needed to reduce them. In its National Energy and Climate Plan, Spain intends to reduce these emissions by one third. It is estimated that 35% of passenger-kilometres that are currently travelled in conventional vehicles in urban environments will shift to non-emitting forms of transport by 2030, according to Spain's National Energy and Climate Plan

Figure 38: Greenhouse gas emissions by sector in Spain[142] – historical emissions 1990-2019, projections 2021-2030 [143].

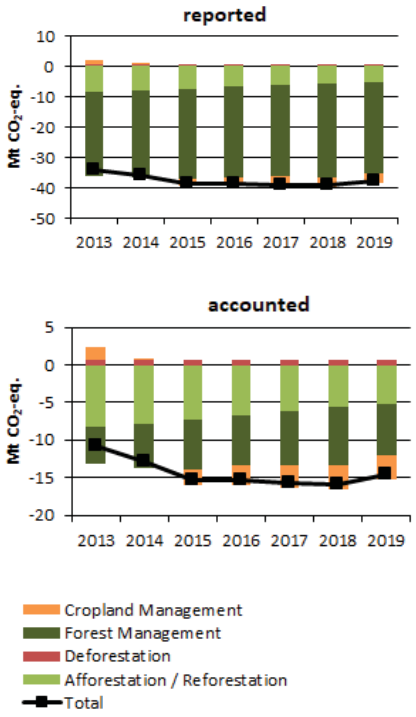


On buildings, Spain has submitted its Long Term Renovation Strategy in May 2020, which provides for, inter alia, the renovation of 1.2 million residential buildings by 2030.

In Spain, emissions from agriculture represent the second large share of effort-sharing sector emissions after those from transport. Spain aims to reduce emissions associated with fertiliser use and manure management.

In the Land Use, Land Use Change and Forestry (LULUCF) sector, projections indicate a slight decrease by 2030. Reported quantities under the Kyoto Protocol for the LULUCF in Spain show net removals of, on average, -37.6 Mt CO_2-eq for the period 2013 to 2019. In this regard, Spain contributes with 10.9% to the annual average sink of -344.9 Mt CO_2-eq of the EU-27. Accounting for the same period depicts net credits of, on average, -14.4 Mt CO_2-eq, which corresponds to 12.5% of the EU-27 accounted sink of -115.0 Mt CO_2-eq. Reported net removals show an increase from 2013 to 2015 which levels off after 2015 and slightly decrease in 2019. This pattern is more accentuated for accounted net credits. Spain elected to report and account for Cropland Management as one of six EU Member States.

Figure 39: Reported and accounted emissions and removals from LULUCF in Spain (Mt CO2-eq.) [144]



Use of revenues from the auctioning of EU ETS allowances

The total revenues from the auctioning of emission allowances under the EU ETS over the years 2012-2021 stood almost EUR 8,4 billion. In Spain, revenues are earmarked for energy and climate projects ahead of each year (up to a cap, which was EUR 500 million up to 2018 and EUR 1100 million thereafter). The remainder goes to the general budget, part of which also funds climate projects. National spending on climate and energy is >100% of auctioning revenues. Only a part of actual spending has been reported, in some years covering specific projects, in the years up to 100% of

[142] The sectors in the figure correspond to the following IPCC sectors: Energy supply: 1A1, 1B and 1C. Energy use in manufacturing industries: 1A2. Industrial processes and product use: 2. Transport: 1A3. Other energy use: 1A4, 1A5 and 6. Agriculture: 3. Waste: 5. International aviation: 1.D.1.a.

[143] European Environmental Agency, Total GHG trends and projections.

[144] The differences between reported and accounted emissions from LULUCF under the Kyoto Protocol are described in the '*explanatory note on LULUCF – accounted and reported quantities under the Kyoto Protocol*'.

revenues, even though this funding cannot be directly linked to the auctioning revenues.

2022 priority actions

- Promote sustainable transport
- Uptake renewables, in particular wind and solar
- Ensure sustainable use of biomass
- Support building renovation and developing renewable energy, especially in heating and cooling.

Part II: Enabling framework: Implementation tools

5. Financing

Environmental investment needs in the EU

Financing environmental measures is essential for their success. Although most financing comes from national sources, various EU funds contribute significantly, helping to close the financing gaps. Post-2020, environmental implementation will also be supported by the EU's COVID-19 recovery fund (via the RRF) and the 'do no significant harm' principle which runs across the EU budget. The renewed commitments made at COP26 (Glasgow, October-November 2021) and the Biodiversity Convention (April-May 2022)[145] will also be reflected in the EU budget.

Overall environmental investment gaps (EU-27)

The EU's investment needs for the green transition cover a range of interlinked areas. The additional investment needs over the baselines (i.e. the gap between what is needed and what is forecast to be invested if no additional action is taken) for climate, energy and transport were estimated in 2021 at EUR 390 billion per annum (EU27)[146] with a further EUR 130 billion a year to deliver the EU's core environmental objectives[147]. Climate adaptation costs can also be significant, reaching a total of EUR 35-62 billion (narrower scope) or EUR 158-518 billion (wider scope) per year[148]. Those investment needs reflect the implementation objectives to 2020 and to 2030 (except for climate adaptation, the cost of which costs are expected to last over a longer time horizon).

A preliminary update of the EU's core environmental investment gap is provided in Table 1 [149]. Almost 40% of the environmental investment gap relate to dealing with pollution, which accounts for nearly two-thirds of the total gap if combined with water management. The investment gap in circular economy and waste is estimated between EUR 13-28 billion a year, depending on the levels of circularity implemented. The annual biodiversity financing gap is estimated at around EUR 20 billion.

Table 1: Estimated breakdown of the EU's environmental investment gaps, by environmental objective (2021-2030, per annum)[150]

Environmental objective	Estimated investment gap (EU-27, p.a.)	
	EUR billion	%
Pollution prevention & control	42.8	39%
Water management & industries	26.6	24%
Circular economy & waste	13.0	12%
Biodiversity & ecosystems [151]	21.5	20%
R & D & I and other	6.2	6%
Total	**110.1**	**100%**

Environmental investment needs in Spain

During the last decades, the support of the EU funding has significantly contributed to improve the implementation of the EU environmental law and policy in Spain. Nevertheless, Spain still faces considerable challenges and investment needs in the areas of water and waste management, air quality and nature protection.

[145] The Convention on Biological Diversity (cbd.int); Post-2020 Global Biodiversity Framework | IUCN.

[146] SWD(2021) 621, accompanying proposal COM(2021)557 to amend the REDII Directive (EU) 2018/2001.

[147] Identifying Europe's recovery needs. SWD(2020) 98 final/2

[148] Impact assessment of the new LIFE Regulation. SWD(2018)292

[149] With decreases due to Brexit and some reconciliation among the objectives. DG ENV "Study supporting EU green investment needs analysis" (ongoing, 2021-2023) and DG ENV internal analysis "Environmental Investment needs and financing in the EU's green transition", July 2020.

[150] European Commission, DG Environment, "Study supporting EU green investment needs analysis" (ongoing, 2021-2023) and DG Environment internal analysis "Environmental Investment needs and financing in the EU's green transition", July 2020.

[151] To meet the needs of the EU Biodiversity Strategy for 2030 (Natura 2000, green infrastructure), at least EUR 20 billion a year should be unlocked for nature, while to fully cover the strategy (including restoration) EUR 30-35 billion may be needed, indicating a gap of EUR 10-20 billion a year compared to current baseline expenditure.

In this sense, the following environmental needs have been identifed by sector:

Pollution prevention & control

The EU's first Clean Air Outlook[152] under the clean air programme estimated that the total air pollution control costs for Spain to reach the NECD emission reduction requirements (ERRs)[153] by 2030 amount to a total need of EUR 5.9 billion per year, including EUR 3.8 million for capital investment (assuming the achievement the 2030 climate and energy targets).

As the second EU's Clean Air Outlook[154] suggests, implementing all relevant legislation adopted up to 2018, the 2030 climate/energy measures and the NAPCP should largely facilitate to reach the 2030 climate and 2018 energy targets. Furthermore, implementing the measures announced in the Member States in their NACPs, the EU would largely achieve the reductions of air pollutant emissions that correspond to the obligations under the NEC Directive for 2030, except for 15 Member States for ammonia (NH_3), including Spain[155].

Water management

Despite the progress that Spain has made in recent years, challenges remain in water management, especially in the areas of water governance, water body rehabilitation and water efficiency. Further infrastructure investment are needed to improve water management[156], such as in wastewater collection and treatment, reduction of leaks in the networks and general water supply, improving monitoring (quality and quantity), as well as nature-based solutions, floods prevention and river restoration. Moreover, Spain should take further advantage of the potential of water reuse. Further measures are also needed to face water scarcity and droughts.

A study conducted under the cooperation agreement between the European Commission and the Organisation for Economic Cooperation and Development (OECD) estimated investment needs and financing capacities for water-related investment in EU Member States[157]. There are also country factsheets for all Member States and OECD recommendations for some of them, including Spain[158]. Up to 2030, the cumulative additional capital investment need for Spain was estimated at EUR 13.2 billion over baselines (around 1.3 billion per year), with over 90% of that relating to wastewater. Moreover, the recent 6th Water Framework Directive and Floods Directive Implementation Report[159] and the financial - economic study[160] accompanying it, are also a relevant source of information in this domain.

Waste & circular economy

According to a Commission study[161], the capital investments need in the waste sector in Spain are estimated at an additional EUR 1.160 million during 2021-2027 (and EUR 2.187 million in 2021-2035) over baselines, with corresponding annual investment needs between EUR 150-160 million a year on average - which latter can further increase by EUR 18-38 million per annum if biowaste treatment facility replacement costs are added. These investments are necessary in collection, biowaste treatment, recycling reprocessors, waste sorting facilities and waste registry digitalisation while it does not include investment necessary in other key waste streams (plastics, textiles, furniture) and to unlock a higher uptake of circularity and waste prevention across the economy.

Biodiversity & ecosystems

Prioritised action frameworks (PAFs) adopted by the Member States according to Article 8 of the Habitats Directive present the conservation priorities for the Natura 2000 network and its supporting green infrastructure, their costs and planned funding sources for the period corresponding to the current MFF (2021-2027). For Spain, the total identified needs amount to EUR 1 408.4 million a year, including EUR 269 million on annual one-off costs[162]. This excludes additional costs to implement the Biodiversity Strategy to 2030, including on increased protection and restoration.

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[152] International Institute for Applied Systems Analysis (IIASA), Progress towards the achievement of the EU's air quality and emissions objectives, 2018.

[153] Covering the reductions of and the emission ceilings for 5 atmospheric pollutants, SOx, NOx, PM2.5, NH3 and VOC by 2030, compared to 2005. Source: Progress towards the achievement of the EU's air quality and emissions objectives, IIASA 2018. (page 29). Requirements are based on Directive (EU) 2016/2284.

[154] COM(2021) 3 Final and Report Annex.

[155] Nevertheless, the NECD also foresees deliveries by 2020 and 2025. Communication Second Clean Air Outlook.

[156] The 43th Seminar of the Spanish Network of Environmental Authorities, held in Logroño in October 2019, was devoted to "The "sustainable management of water resources and the EU funding".

[157] See the outcomes of the cooperation agreement between European Commission and OECD.

[158] See country fiche for Spain.

[159] WFD and FD Implementation Reports – DG Environment – European Commission.

[160] European Commission, Directorate-General for Environment, Economic data related to the implementation of the WFD and the FD and the financing of measures, Final report. Publications Office, 2021.

[161] European Commission: Study on investment needs in the waste sector and on the financing of municipal waste management in Member States, 2019.

[162] The N2K Group, Strengthening investments in Natura 2000 and improving synergies with EU funding instruments report to the European Commission, 2021.

EU environmental funding 2014-2020

The multiannual financial framework (MFF) 2014-2020 allocated EUR 960 billion (in commitments, 2011 prices) for the EU[163]. The commitment to green transition included a 20% climate spending target and funding opportunities for the environment; in particular, under the European Structural and Investment (ESI) Funds[164]. The 2014-2020 budget was subsequently topped up with over EUR 50 billion (current prices) from REACT-EU for cohesion policy action to support the recovery from the COVID-19 [165].

Spain received EUR 52.4 billion from the ESI Funds over 2014-2020 to invest in job creation and a sustainable and healthy European economy and environment. The planned direct environmental investment amounted to EUR 2.7 billion with further EUR 2.1 billion identified as indirect environmental investment value, totalling to EUR 4.8 billion. Next figure shows an overview of (planned) individual ESI Funds earmarked for Spain (EU amounts, without national amounts).

Figure 40: ESI Funds allocated to Spain, including environmental investments, 2014-2020[166]

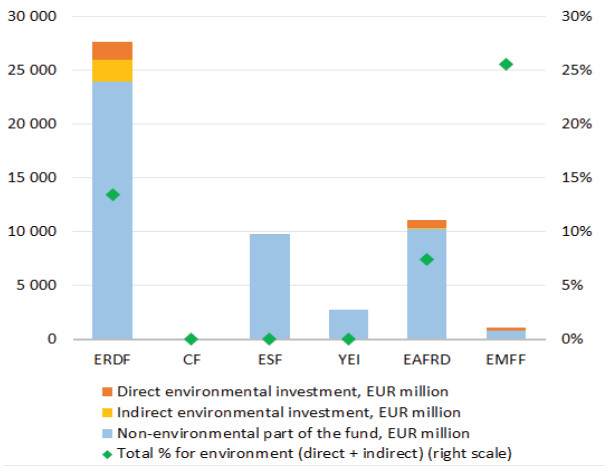


Table 2: Direct and indirect environmental investments under the ESI Funds in Spain, 2014-2020[167]

Instrument	Allocations for the environment (EUR million)
Under Cohesion Policy (ERDF)	**3 711.1**
Direct environmental investments	1 671.8
water	998.3
waste	89.1
air quality	14.6
biodiversity and nature	161.5
land rehabilitation	263.3
climate and risk management	145.0
Indirect environmental investments	2 039.3
renewable energy	256.3
energy efficiency	502.8
other energy[168]	0.4
sustainable transport	1 125.2
sustainable tourism	51.8
business development, R&I	102.8
Under EAFRD/rural development	**821.3**
Direct environmental investments	777.2
water	326.5
climate and risk management	450.8
Indirect environmental investments	44.1
renewable energy	21.6
energy efficiency	22.5
Under EMFF	**277.6**
Direct environmental investments	272.1
environment protection & resource efficiency	272.1
Indirect environmental investments	5.4
business development, R&I	5.4
Under ESI Funds total	**4 809.9**
Direct environmental investments	2 721.2
Indirect environmental investments	2 088.8

As can been seen, the main financing source for the environment is the ERDF[169], which in Spain is currently organised in a large national Operational Programme (POPE) and 19 regional Operational Programmes. In

[163] Council Regulation (EU, Euratom) No 1311/2013.

[164] The European Structural and Investment (ESI) Funds include the European Regional Development Fund (ERDF), the Cohesion Fund (CF), the European Social Fund (ESF) with the Youth Employment Initiative (YEI), the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF).

[165] Regulation (EU) 2020/2221.

[166] European Commission, DG Environment analysis based on ESI Funds Open Data Portal Integration of environmental concerns in Cohesion Policy Funds (COWI, 2017), Regulation (EU) No 1303/2013, Regulation (EU) 2021/1060 and Implementing Regulation (EU) No 215/2014. Cut-off date for data: December 2021. Environmental investments here are captured via the combined use of intervention fields and coefficients under the Regulation (EU) No 1303/2013 and Regulation (EU) 2021/1060 allowing for a more precise identification and valuation of relevant environmental investments. N.B. Indirect environmental investments are valued using the Annex I environmental coefficients of Regulation (EU) 2021/1060 (as opposed to full value).

[167] European Commission, DG Environment - Data analysis. The values of environmental investments identified here in the specific environmental areas may differ from the tracking values at cohesiondata.ec.europa.eu, e.g. for clean air or biodiversity due to two factors: the set of environmental coefficients used and the range of funds assessed. DG Environment's analysis here covered the full range of ESI Funds. See also a previous footnote.

[168] Intelligent energy distribution systems (smart grids) and high efficiency co-generation and district heating, based on intervention field 53 and 54 respectively (with 40% environmental coefficients) of Regulation (EU) 2021/1060, Annex I.

[169] The last period in which Spain received the Cohesion Fund was 2007-2013.

practice, the implementation of the programming period 2014-2020 lasts until end-2023 (rule N+3).

Spain also participates in various operational programmes of territorial cooperation (transnational and cross-border cooperation) under the ERDF where the environmental investments carry considerable weight.

The environmental integration has been ensured in the Partnership Agreement 2014-2020 and the different Operational Programmes for the four ESI Funds through the application of the Strategic Environmental Assessment (SEA) Directive and by other means.

The Spanish Network of Environmental Authorities, with the participation of the Commission services, plays an important role to foster environmental integration into the EU funding in Spain[170].

Funding for the environment from the ESI Funds has been also supplemented by other EU funding programmes available to all Member States, such as the LIFE programme, the Horizon 2020 or loans from the European Investment Bank (EIB), that add up to an estimated total of EUR 6.1 billion of EU environmental financing for Spain in 2014-2020.

The LIFE programme[171] is entirely dedicated to environmental and climate objectives. It finances demonstration and best practice actions for green solutions to be deployed. In the 2014-2020 period, Spain has received EU support for 185 LIFE projects (for nature and environment) with EUR 260.5 million from the LIFE programme (out of 1 028 EU27 LIFE projects with the total EU contribution of EUR 1.74 billion)[172]. It is the highest number of LIFE projects among Member States and the second largest EU LIFE contribution (after Italy).

The 2017 EIR highlighted as a point of excellence the long experience and excellent performance of Spain in preparing and managing projects co-financed by the LIFE programme. Spain has always been one of the countries with the highest number of proposals submitted to the LIFE programme, and Spanish projects have traditionally been successful in achieving their objectives. Spanish LIFE projects have, for example, managed to increase significantly the marine areas protected in Spain. The LIFE projects have also improved the status of the most endangered feline worldwide, the Iberian lynx, from critically endangered' to 'endangered', and they have substantially raised awareness in Spain of the socioeconomic advantages of the Natura 2000 sites and sustainable resource management[173].

Among the projects selected in 2021, it can be for instance highlighted the LIFE REUSING POSIDONIA[174], which used dried Posidonia oceanica seagrass as an effective and inexpensive thermal insulation in 14 social housing units for poor and disadvantaged people on the Balearic island of Formentera (Spain). This local, traditional and environmentally friendly construction method reduced emissions by 60%, cut energy use by 75%, and water by another 60%.

In 2014-2020, the Horizon 2020 allocated about EUR 265.5 million for Spain, in particular, for circular economy, including raw materials, climate action, nature and resources, research and innovation, water and earth observation, which is about 4.1% of Spain's total allocation[175].

From the European Fund for Strategic Investments (EFSI), Spain received EUR 160.0 million for direct environmental investments and EUR 24.0 for indirect environmental investments (totalling to EUR 184.0 million) out of its total allocation (EUR 9.1 billion) [176].

From the European Investment Bank (EIB), Spain received EUR 716.2 million for direct environmental investments (specifically, for water and sewerage and waste) out of the total EIB loans for Spain (EUR 66.9 billion) [177]. The country ranks second in size in total EIB lending.

In 2020, the EIB provided EUR 24.2 billion to fight climate change at EU level, 37% of its total financing and EUR 1.8 billion (3% of its financing) for the environment [178].

EU environmental funding 2021-2027

The 2020 European Green Deal investment plan (EGDIP) calls upon EUR 1 trillion green investments (public and private) by 2030. The multiannual financial framework (MFF) 2021-2027 and the NextGenerationEU will mobilise EUR 2.018 trillion (in current prices) to support the COVID-19 recovery and the EU's long-term priorities,

[170] The Spanish Network of Environmental Authorities, a technical forum created in 1997 with a successful path, was highlighted as a good practice in the 2017 EIR (country report and general Communication).
[171] European Commission, LIFE Programme.
[172] Source: CINEA.
[173] To get detail and updated information of the LIFE project in Spain, please consult European Commission LIFE overview Spain.
[174] LIFE12 ENV/ES/000079. See in the LIFE Awards 2021.
[175] Source: EASME, https://sc5.easme-web.eu/, accessed: 15-12-2021.
[176] Approved and signed EFSI financing - EIB, 2015-2020: Source: https://www.eib.org/en/products/mandates-partnerships/efsi/index.htm.
[177] EIB loans in EU countries in 2014-2020. Source: EIB Open Data Portal: https://www.eib.org/en/infocentre/eib-open-data.htm
[178] EIB 2020 Activity Report. The EIB Group jointly works with the European Commission in implementing several programs that finance environmental implementation: InvestEU, the successor of EFSI, Pillar II and III of the Just Transition Mechanism. The EIB Group stands as a key implementing partner for InvestEU with responsibility for managing 75% of the overall budgetary capacity of the mandate.

including environmental protection.[179] Following the European Green Deal's[180] 'do no harm' pledge and the Interinstitutional Agreement on the 2021-2027 MFF[181], 30% of the EU budget will support climate efforts and 7.5% (as of 2024) and 10% (as of 2026) biodiversity. This requires increased programming of financial resources for biodiversity, specifically under the 2021-2027 Cohesion policy and the 2023-2027 CAP to reach those targets.

Sustainable finance significantly increases transparency on environmental sustainability (a goal promoted by the EU Taxonomy)[182], strengthens non-financial reporting requirements, facilitates green bond issuance (by the EU green bond standard[183]). Reinforced by the Renewed Sustainable Finance Strategy (2020)[184] it will increase investment flows to climate and environment. In support of financing climate adaptation, the new EU Strategy on adaptation to climate change[185] can facilitate to close the insurance protection gap from non-insured climate-related events[186]. The EIB will align 50% of its lending with climate and environment by 2025[187] with EUR 250 billion contribution to the Green Deal investment plan by 2027.

Table 3 makes an overview of the EU funds earmarked specifically to Spain for the 2021-2027 period. These funds are also supplemented by other EU funding programmes available to all Member States.

Table 3: Key EU funds allocated to Spain (current prices), 2021-2027

Instrument	Country funding allocation (million EUR)
Cohesion policy	**Total: 36.256.8[188]**
ERDF	23 539.9
ESF+	11 153.5
ETC (ERDF)	694.7[189]
Just Transition Fund	868.7[190]
EAFRD/rural development under CAP Strategic Plans 2023-2027[191]	**5 401.9[192]**
European Maritime, Fisheries and Aquaculture Fund (EMFAF)	**1 120.4[193]**
Recovery and Resilience Facility (RRF) 2021 – 2026[194]	**69 512.6[195] (grants)**

In 2021-2027, EU Cohesion Policy will support long-term development objectives in Spain by investing EUR 36.26 billion, including EUR 868.7 million from the new Just Transition Fund directed to alleviate the socioeconomic impacts of the green transition in the most vulnerable regions.

The Partnership Agreement with Spain is still under negotiation. The main source of financing will be again the ERDF and it is likely that a relevant share will be devoted to environmental investment for a wide range of objectives, taking also into account the thematic concentration. Furthermore, other EU Funds will also contribute to support environmental projects in Spain, such as the EAFRD, EMFAF, LIFE and Horizon Europe.

It is worth to recall that the implementation of the ERDF 2021-2027 is linked to the fulfillment of the enabling conditions, including the three environmental ones. Spain has already met the nature enabling condition, although further efforts are needed to comply with the waste and water enabling conditions.

Under NextGenerationEU, Spain is due to receive EUR 69.5 billion (in grants) from the Recovery and Resilience Facility (RRF), being the second main beneficiary in absolute terms, after Italy.

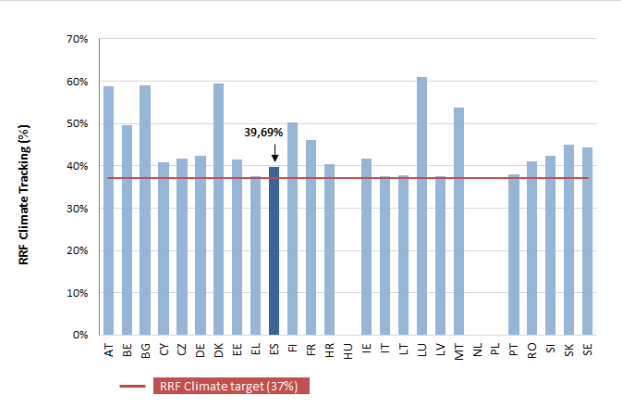
[179] European Commission, 2021-2027 long-term EU budget & NextGenerationEU.
[180] COM/2019/640 final.
[181] Interinstitutional Agreement, OJ L 433I.
[182] See EU Taxonomy for sustainable activities.
[183] EU Green Bond Standard - 2021/0191 (COD).
[184] COM (2021) 390 Final - European Commission, Strategy for Financing the Transition to a Sustainable Economy.
[185] COM(2021) 82 final.
[186] The strategy would support improved insurance gap coverage including through the natural catastrophe markets as reflected with the EIOPA (the Association for European Insurance and Occupational Pension Authorities) dashboard on insurance protection gap for natural catastrophes. See: The pilot dashboard on insurance protection gap for natural catastrophes | Eiopa (europa.eu).
[187] EIB Climate Bank Roadmap 2021-2025, November 2020
[188] European Commission, 2021-2027 Cohesion policy EU budget allocations.
[189] Interreg initial allocations per MS including ETC transnational, ETC cross-border co-operation and ETC outermost.
[190] European Commission, 2021-2027 Cohesion policy EU budget allocations.
[191] European Commission, CAP strategic plans.
[192] Regulation (EU) 2021/2115, Annex XI.
[193] Regulation (EU) 2021/1139, Annex V.
[194] The actual reforms and investments under the RRF have to be implemented until 31 December 2026.
[195] Council Implementing Decision, FIN 513.

The Spanish Recovery and Resilience Plan (RRP) comprises 30 components along four main axes (green and digital transitions; social and territorial cohesion; and gender equality). It includes 109 investments and 102 reforms, articulated in 416 milestones and targets to be met during the period 2021-2026[196].

Spain submitted officially its RRP on 30 April 2021. The Commission's positive assessment was adopted on 16 June 2021 and the Council's approval took place on 13 July 2021.

As explained in Chapter 4, the RRP Spain devotes 39.7% of its budget to the climate change objectives, and it can be said that around one half is addressed to support the green transition, as the next figure shows.

Figure 41: Climate expenditure in RRP (2021-2026)[197]



In the RRP of Spain, there are some components with a genuine and ambitious environmental dimension, covering a wide range of environmental sectors. In particular:

- Component 4 "Conservation and restoration of ecosystems and their biodiversity", with a budget of EUR 1.642 million.
- Component 5 "Preservation of the coastline and water resources", EUR 2.091 million.
- Component 3 "Environmental and digital transformation of the agri-food and fisheries sectors", EUR 1.051 million.
- Component 12 "Industrial policy" has a relevant part on waste management and circular economy, EUR 850 million. Moreover, circular economy is mainstreamed throughout the RRP.

There are also other components relevant for the environment and with a considerable budget. For instance, components 1 and 6, on sustainable urban mobility and sustainable transport (important to reduce air pollution). This is also the case of the other green components, more focussed on energy topics: 2 (building renovation), 7 (renewable energies), 8 (energy infrastructure), 9 (Hydrogen) and 10 (Just Transition Strategy). The component 14 (tourism) is very focussed on the green transition. The component 28 (taxation) has a relevant section to improve environmental taxation.

The implementation of the RRP Spain is advanced and underway.

Spain should take advantage of the European Structural and Investment Funds and the Recovery and Resilience Facility to improve compliance with EU environmental law and policy and to use the potential of the green economy for competitiveness and job creation.

Under NextGenerationEU, the Commission will issue up to EUR 250 billion of EU green bonds (one third of the NGEU total) until 2026 that will comply with the general spirit of the DNSH principle, but will not be subject to the currently developed delegated acts related to the EU Taxonomy and will not fully align with the proposed EU green bond standard.

In addition to EU funds earmarked specifically for Spain in the 2021-2027 period, there are also funding programmes that can been accessed at the EU level and which are open to all Member States. These include, among others, the LIFE programme[198] (EUR 5.4 billion), Horizon Europe[199] (EUR 95.5 billion), the Connecting Europe Facility[200] (EUR 33.7 billion)[201] or the funds to be mobilised via the InvestEU[202]. They will also support the green transition, including research and innovation activities for environmental protection (Horizon Europe)[203], clean transport and energy (the Connecting Europe Facility)[204] or sustainable infrastructure (InvestEU)[205].

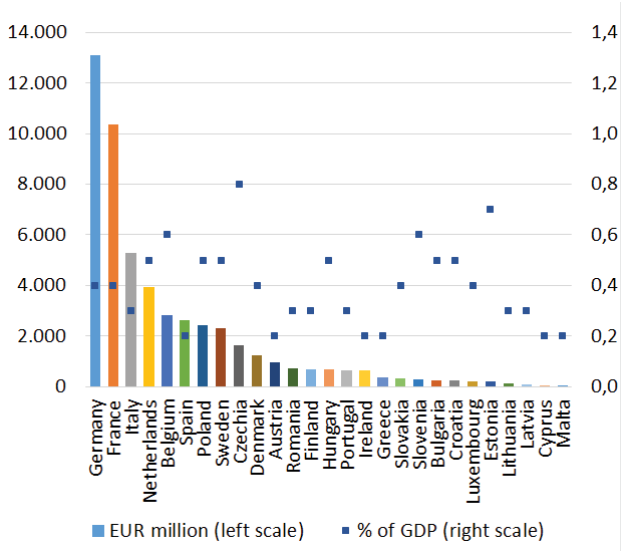
[196] European Commission, Spain's recovery and resilience plan.
[197] European Commission. The contributions to climate objectives have been calculated using Annex VI of the RRF Regulation (EU) 2021/241.
[198] European Commission, LIFE Programme.
[199] European Commission, Multiannual financial framework 2021-2027 (in commitments) - Current prices.
[200] The CEF (Transport) includes also EUR 11.3 billion transferred from the Cohesion Fund. 30 % of the transferred amount will be made available, on a competitive basis, to all Member States eligible for the Cohesion Fund. The remaining 70% will respect the national envelopes until 31 December 2023. Any unspent amount, by that date, under national envelopes will support all Cohesion Fund's Member States.
[201] Regulation (EU) 2021/1153.
[202] The InvestEU Fund is foreseen to mobilise over EUR 372 billion of investment through an EU budget guarantee of EUR 26.2 billion to back the investment of financial partners such as the European Investment Bank (EIB) Group and others.
[203] European Commission, Horizon Europe.
[204] European Commission, Connecting Europe Facility.
[205] European Union, InvestEU

National environmental protection expenditure

Total national environmental protection expenditure (including all relevant current and capital expenditure)[206] in the EU-27 was EUR 272.6 billion in 2020, representing 2% of the common GDP being quite stable over time. While absolute expenditure is concentrated in a few countries, as a share of GDP, most countries spend between 1-2%, including Spain (1.6%).

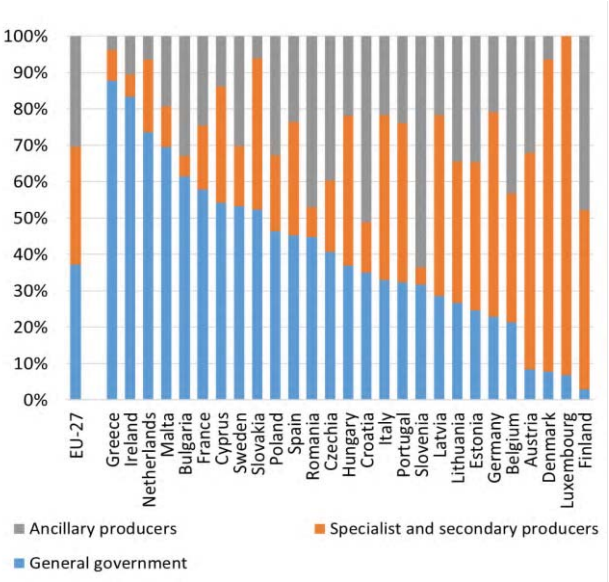
Of the above total, the EU-27's capital expenditure (Capex) on environmental protection (i.e. investment) amounted to EUR 56.3 billion in 2018, lowering to EUR 54.5 billion in 2020, representing around 0.4% of GDP. Most Member States invested 0.2-0.5% of their GDP in environmental protection, Spain dedicated 0.2%. During 2014-2020, this totalled to around EUR 376 billion of environmental investment in the EU-27, and to EUR 17 billion for Spain.

Figure 42: Direct and indirect environmental protection investments in the EU-27 (EUR million and % of GDP), 2018[207]



By institutional sector, around 45% of Spain's environmental protection investments (capital expenditure) came from the general government, further 31% from specialist producers (of environmental protection services, e.g. waste and water companies) and 24% from the classical industry (or business) sector that normally pursues environmental activities as ancillary to their main activities. At EU level, 37% comes from governments, 33% from specialist producers and 30% from industry (business).

Figure 43: EU-27 Member States' environmental protection investments (Capex) by institutional sectors (Total economy = 100%), 2018[208]



Breakdown of investment by environmental topic is partially available, at the level of institutional sectors only (rather than at economy level), due to different reporting patterns[209]. At Spain's general government level, 26% of environmental protection investments went to wastewater, 23% to biodiversity, 19% to waste management and 4% to pollution in 2018. In case of the country's specialist producers, waste management dominated with 88%, followed by wastewater (11%). As regards industry (businesses), 61% of investments went to the protection of air, 13% to wastewater and 10% to waste management to name the most significant items.

The total annual European green bond issuance[210] in 2020 was USD 156 billion (EUR 137 billion[211]), growing

[206] At economy level, including final consumption, intermediate consumption and capital expenditure of households, corporations and governments related to environmental protection goods and services. It excludes EU funds, while may include some international expenditure beyond domestic. Data source: Environmental Protection Expenditure Accounts (EPEA), Eurostat. EPEA accounts are based on the CEPA 2000 classification, excluding climate, energy and circular economy.

[207] Eurostat, Environmental Protection Expenditure Account, 2021.

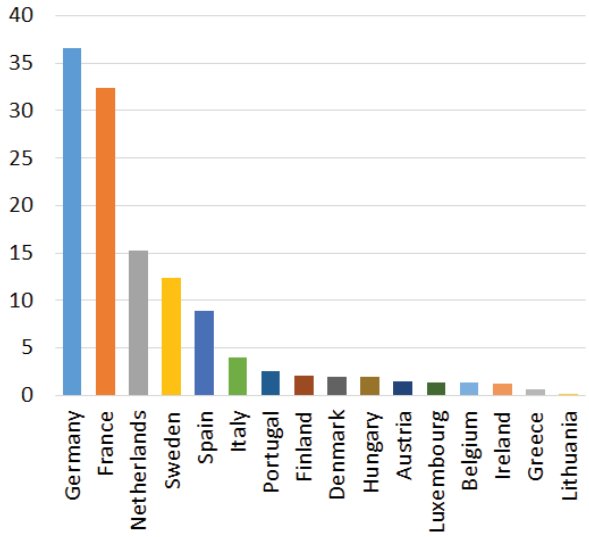
[208] Eurostat, Environmental Protection Expenditure Accounts (env_epe).

[209] Data reporting differs for the 3 institutional sectors, leading to aggregation difficulties. Specialist companies provide comprehensive data across all environmental areas (CEPA 1-9), while this is less the case for general government and industry that often report (the non-obligatory) data in merged categories only (with difficulty to split) or not at all.

[210] Green bonds were created to fund projects that have positive environmental and/or climate benefits. The majority of green bonds issued are green "use of proceeds" or asset-linked bonds. The very first green bond was issued in 2007 with the AAA-rated issuance from

from USD 117 billion (EUR 105 billion) in 2019, also including some non-EU European countries. By EU-27 Member States only, the 2020 annual green bond issuance was EUR 124 billion. 83% of the green bonds issued by European countries served energy, buildings or transport objectives between 2014-2020, 8% supported water and waste, with further 6% supporting land use – with links to ecosystem conservation & restoration, based on the Climate Bonds Taxonomy being broadly similar to the EU Taxonomy[212]. To the 2020 green bond issuance by EU countries, Spain contributed by an issuance worth EUR 8.86 billion.

Figure 44: Annual EU green bond issuance in 2020 (EUR billion)



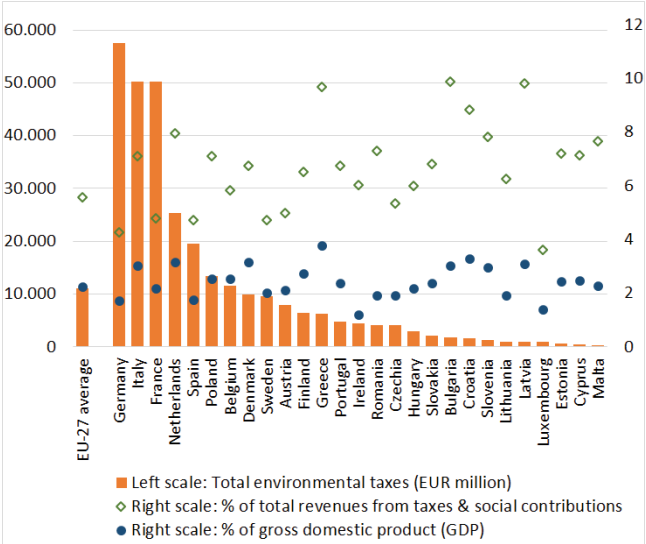
Green budget tools

Green taxation and tax reform

Environmental taxes in Spain are clearly below the EU average. Thus, Spain's revenues from total environmental taxes slightly decreased from 1.93% of GDP in 2015 to 1.77% in 2019. They came to about 1.75% of GDP in 2020, compared with an EU average of about 2.24% of GDP. The distribution of environmental tax revenues broadly follows the EU average pattern. They are also relatively low when measured as a share of tax revenues – 4.74% (EU average 5.57%).

During the last years, the Spanish Government sometimes announced that it was working in this respect. However, the reality is that Spain remains as one of the Member States in the EU with the lowest rate of environmental taxes, as the next figure shows.

Figure 45: Environmental taxes in the EU-27, 2020[213]



The 2019 European Green Deal underlines that well-designed tax reforms can boost economic growth and resilience, foster a fairer society and a just transition, by sending the right price signals and incentives to economic actors. The Green Deal creates the context for broad-based tax reforms, fossil fuel subsidies removal, shifting the tax burden from labour to pollution, also accounting for social considerations[214]. The application of the 'polluter pays principle' (PPP)[215] stipulating that polluters should bear the cost of measures to prevent, control and remedy pollution; is facilitated by the EU Commission's TSI flagship[216] on greening taxes.

It is worth recalling that "Increasing environmental taxation, as well as reducing environmentally harmful subsidies" was identified as one of the three main environmental challenges facing Spain in the 2017 and 2019 EIRs (a deeper assessment can be found in those reports). This issue has also been repeatedly stressed in

multilateral institutions, the European Investment Bank (EIB) and the World Bank.

[211] At Eurostat's annual average EUR/USD exchange rates.

[212] Interactive Data Platform at www.climatebonds.net. Further information on Climate Bonds Taxonomy: https://www.climatebonds.net/standard/taxonomy

[213] Eurostat, Environmental taxes accounts (env_eta).

214 COM (2019/640 final), p.17.

215 Article 191(2) of the Treaty on the Functioning of the European Union: "Union policy on the environment (…) shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay".

216 European Commission, Greening taxes- applying polluter pays principle in practice, green budgeting TSI participation.

European Semester country reports. Shifting taxation away from labour towards taxes less harmful to growth was even included several years in the Country Specific Recommendations (CSRs) to Spain, but with very limited progress on this matter.

However, it should be noted that some progress can be finally observed on environmental taxation. Thus, as part of the reforms included under the RRP, new taxes will be introduced on single-use plastics and waste management (landfill, incineration and coincineration), and reforming the tax on fluorinated gases. The RRP also provides for adopting further measures in the field of green taxation, if agreed in the context of the wider tax reform. In this respect, a Committee of Experts has been created in the context of the RRP to study the reform of the Spanish tax system, including the improvement of environmental taxation[217].

Environmentally-harmful subsidies

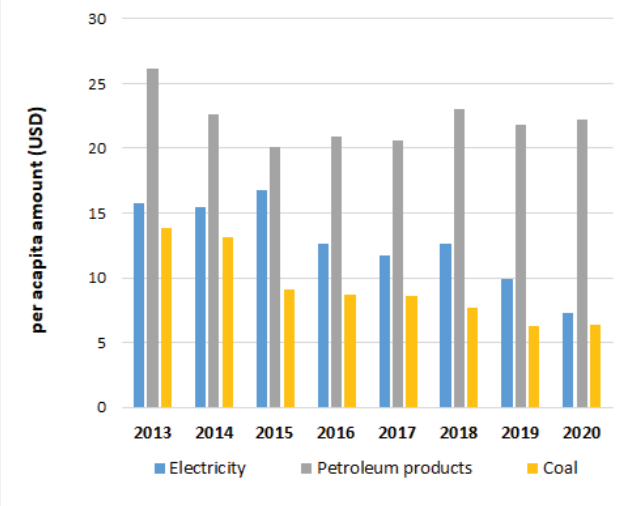
Addressing and removing environmentally-harmful subsidies (EHS) is a further step towards wider fiscal reforms[218].

Fossil fuel subsidies are costly for public budgets and adversely impact the achievement of the Green Deal objectives. In many cases they also go against incentives for green investments, not contributing to levelling the playing field. Fossil fuel subsidies varied around EUR 55 billion in the EU since 2015. They rose by 4% between 2015 and 2019, however some countries, such as Latvia, Lithuania Sweden, Greece or Ireland, managed to decrease them. In the EU, subsidies on petroleum products, in sectors such as transport and agriculture, kept on growing over the period, while subsidies on coal and lignite decreased, due to the diminishing role of solid fuels in electricity generation. As a share of GDP, fossil fuel subsidies ranged from 1.2% in Hungary to less than 0.1% in Malta in 2019 (being 0.4% on EU average). In Spain, the fossil fuel subsidies amounted to EUR 5.6 billion, reaching 0.45% of GDP.

In 2020, the EU27's total fossil fuel subsidies decreased to EUR 52 billion (due to falling consumption trends amid the COVID-19-related restrictions) which, without Member State actions, are likely to rebound as economic activity picks up from 2020[219].

Regarding environmental harmful subsidies in Spain, a summarised assessment can be found in the 2019 EIR. Although it is fair to recognise that fossil fuel subsidies have been cut in Spain in the past decade, as figure 46 shows, there is still clear room for improvement. It is expected that the next tax reform could progress in this respect.

Figure 46: Trends in electricity, petroleum products and coal subsidies in Spain[220]



% GDP	2013	2014	2015	2016	2017	2018	2019	2020
Electricity	0,001	0,001	0,001	0,000	0,000	0,000	0,000	0,000
Petroleum	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001
Coal	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Current green budgeting practices

Green budgeting encompasses various climate and environmental tagging and tracking practices in budgets and some EU Member states already use green budgeting elements[221]. Green budgeting helps identify and track green expenditure and green revenues to increase transparency on the environmental implications of budgetary policies, improving policy coherence and supporting green policies (including climate end environmental objectives)[222].

EU climate proofing and sustainability proofing guidance have also been developed, as tools to assess project eligibility and compliance with environmental legislation

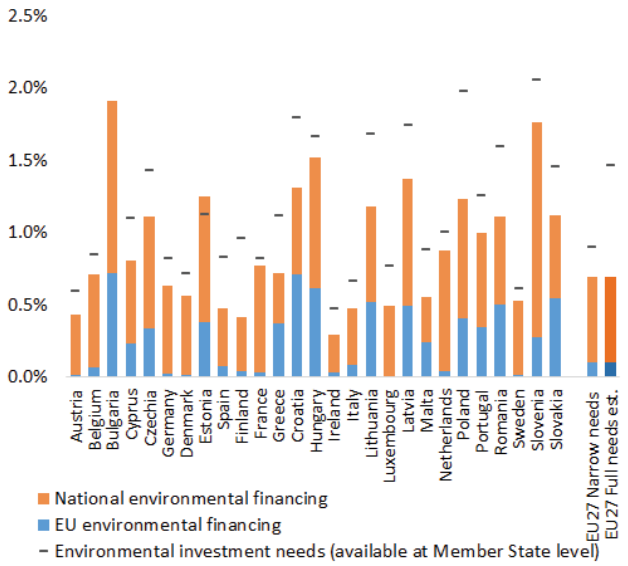
[217] The Report or White Paper on the Reform of the Spanish Tax System has been issued by the Committee of Experts in March 2022.
[218] European Commission, Study on assessing the environmental fiscal reform potential for the EU28. January 2016.
[219] State of the Energy Union report, COM(2021) 950 and Annex.
[220] OECD, Fossil Fuel Subsidy Tracker.
[221] European Commission, Green Budgeting Practices in the EU: A First Review, 2021, Green Budgeting in the EU Key insights from the 2021 Commission survey and OECD, Public Governance Directorate, Climate Change and Long-term Fiscal Sustainability, Working Paper, February 2021. Climate Change and Long-term Fiscal Sustainability (oecd.org)
[222] OECD Paris Collaborative on Green Budgeting initiative, 2017.

and criteria[223]. The European Commission established a green budgeting reference framework[224] and launched a technical support flagship (TSI) on green budgeting in 2021 to assist Member States in developing or further developing national green budgeting frameworks to reap the benefits for policy coherence and for the green transition. Spain participated in the EU Commission's green budgeting TSI started in 2021.

Overall financing compared to the needs

The overall environmental financing for investments is estimated to have been 0.6-0.7% of GDP in the 2014-2020 period in the European Union, taking into account major EU funds and national financing. This ranged from 0.7% (Ireland) to 1.91% (Bulgaria), linked to the level of individual environmental challenges in Member States. The overall EU environmental investment needs in the 2021-2027 period are estimated to range between 0.9-1.5% of the projected common GDP (2021-2027), suggesting an additional financing need (gap) of 0.6-0.8% of the EU GDP over past-period financing baselines, for environmental implementation in the 2021-2027 programming period[225].

Figure 47: Total environmental financing baseline (2014-2020) and estimated needs (2020-2030) in the EU27 (% of GDP) [226]



Spain's environmental financing for investments came to an estimated 0.48% of its GDP (EU average: 0.7%) in 2014-2020, in over 80% based on national sources. The country's environmental investment needs in 2021-2027 are estimated to reach over 0.83% of GDP (covering needs available in country breakdown), suggesting a financing gap of 0.35% of GDP or likely over, when also accounting for needs estimated currently at EU-level only (e.g. water protection, higher circularity, biodiversity strategy etc.).

2022 priority actions

- Adopt and implement the envisaged measures on environmental taxation and explore further ones in the context of the upcoming tax reform, including the reduction of environmentally harmful subsidies.

[223] European Commission, Technical guidance on sustainability proofing for the InvestEU Fund.

[224] European Commission, Green Budgeting Reference Framework, based on the review of the OECD Paris Collaborative on Green Budgeting initiative, 2017.

[225] Source: DG Environment data analysis. EU financing sources covered: ESI Funds (ERDF, CF, ESF, YEI, EAFRD, EMFF), Horizon 2020, LIFE, EFSI (EU amount), EIB loans. National financing: total national environmental protection capital expenditure (investments) - source: Eurostat EPEA dataset. Cut-off date for data: end 2021. N.B. The total financing may be higher, in particular through further indirect investments, requiring further analysis in the future.

[226] European Commission, ESI Funds Open Data, 2021.

6. Environmental Governance

Information, public participation and access to justice

Citizens can more effectively protect the environment if they can rely on the three 'pillars' of the Aarhus Convention:
(i) access to information;
(ii) public participation in decision making;
(iii) access to justice in environmental matters.

It is of crucial importance to public authorities, the public and businesses that environmental information is shared efficiently and effectively[227]. Public participation allows authorities to make decisions that take public concerns into account. Access to justice is a set of guarantees that allows citizens and NGOs to use national courts to protect the environment[228]. It includes the right to bring legal challenges ('legal standing')[229].

Environmental information

This section focuses on Spain's implementation of the INSPIRE Directive.

The INSPIRE Directive aims at establishing a European spatial data infrastructure for sharing environmental spatial information between public authorities across Europe, assisting in policy-making across boundaries and facilitating public access to this information. Geographic information is needed for good governance at all levels and should be readily and transparently available.

Spain's performance is good. It has been reviewed based on the 2021 country fiche[230]. Data identification and documentation have made good progress, and implementation levels are good.

Table 4: Country dashboard on the implementation of the INSPIRE Directive (2016-2020)[231]

	2016	2020
Effective coordination and data sharing		
Ensure effective coordination	■	■
Data sharing without obstacle	■	■
INSPIRE performance indicators		
i. Conformity of metadata	■	■
ii. Conformity of spatial data sets[232]	■	■
iii. Accessibility of spatial data sets through view and download services	■	■
iv. Conformity of network services	■	■

Legend

- ■ Implementation of this provision is well advanced or (nearly) completed. Outstanding issues are minor and can be addressed easily. Percentage: >89%
- ■ Implementation of this provision has started and made some or substantial progress but is still not close to be complete. Percentage: 31–89%
- ■ Implementation of this provision is falling significantly behind. Serious efforts are necessary to close implementation gap. Percentage: <31%

Public Participation

In Spain, access to participation in environmental matters is ensured with the Law 27/2006[233], as national legislation incorporating the three pillars of the Aarhus Convention into the Spanish legal system.

Moreover, there are different tools to foster this public participation. Thus, the Ministry for the Ecological Transition and the Demographic Challenge (MITECO) published in 2021 an online guide on public information and consultation procedures in environmental impact assessments[234]. This guide provides useful information on

[227] The Aarhus Convention, the Access to Environmental Information Directive (Directive 2003/4/EC) and the INSPIRE Directive (Directive 2007/2/EC) together create a legal foundation for the sharing of environmental information between public authorities and with the public. This EIR focuses on the INSPIRE Directive's implementation.
[228] These guarantees are explained in the Commission Notice on access to justice in environmental matters, OJL 275, 18.8.2017 and a related Citizen's Guide.
[229] This EIR focuses on the means implemented by Member States to guarantee rights of access to justice, legal standing and to overcome other major barriers to bringing cases on nature and air pollution.
[230] INSPIRE in your country – Spain
[231] INSPIRE Knowledge base, 2021.
[232] The deadlines for implementation of the spatial data interoperability were in 2016 still in the future: 23/11/2017 for Annex I data and 21/10/2020 for Annex II and III data. It must be also considered that this conformity indicator will in many cases never reach 100% conformity as majority of the countries provide as-is-data sets in addition to the INSPIRE harmonised data sets.
[233] Law 27/2006, of 18 July, regulating the rights of access to information, public participation and access to justice in environmental matters (transposing Directives 2003/4/EC and 2003/35/EC).
[234] MITECO, "Guía para la realización de trámites de información pública y consultas en las evaluaciones de impacto ambiental".

the procedure for public participation and each of the different steps, how to participate in national and cross-border consultations and what outcome can be expected from them.

The Ministry has also developed SABIA, a portal that aims to improve the management of environmental assessments and public participation by pulling together in one place all links of all strategic environmental assessments (SEA) and environmental impact assessments (EIA) procedures. It provides a tool to check the status of plans, programmes and projects undergoing environmental assessment, dealt with by the national administration[235]. Many Autonomous Communities have also developed similar tools.

However, overall information published on public information on environmental matters is not disaggregated and it is not possible to determine which requests for information refer to impact assessments. There is a lack of available statistical data on public participation regarding the EIA and SEA Directive. Thus, it is not possible to determine whether public participation is increasing or decreasing.

Furthermore, public participation in decision making is ensured through the functioning of the 'Environment Advisory Council' (CAMA) where civil society groups such as the G5 (the Group of the five biggest environmental NGO's) or the Spanish Green Growth Group are represented.

Access to justice

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 judge or a court. It is a tool for decentralised implementation of EU environmental law.

In addition to the general provisions on legal standing, Spain has adopted specific legislation on access to justice with regard to the Aarhus Convention through the abovementioned Law 27/2006. Therefore, the Spanish legal system grants overall the public the possibility to bring environmental cases to the courts.

Associations and groups which may be affected by the challenged administrative act or regulation or are legally entitled to defend collective rights and legitimate interests have legal standing. Thus, legal recognition is required in order to have legal standing. There is a system of regular and substantive supervision of regulatory legally binding acts and it is accessible for the members of the public and NGOs.

Depending on the case, judges or courts can review the procedural and substantive legality of plans and also acts of a regulatory nature based on the petitions lodged by the plaintiff and the defendant in the lawsuit and the counter arguments to the lawsuit respectively. Judges and courts can only review what the plaintiff and the defendant ask for in their lawsuit and counter arguments. The court can rule that the regulatory act is contrary to Law, and it can annul in full or in part the challenged regulatory act and can order to amend it.

However, in case of omissions and inactivity on behalf of the public administration, the public seems to have difficulties in obtaining legal standing to challenge the situation. Moreover, bringing administrative cases to the courts seems to be expensive in some cases and the expected cost may prevent the public to take legal action. Furthermore, the long duration of the cases though the different judicial instances, poses sometimes a problem to get an effective solution for the environment if interim measures are not decided.

The MITECO website contains a section on the Aarhus Convention with information on applicable laws, although it is not regularly updated[236]. Moreover, it is too short and does not provide clear and precise information on access to justice rights. The situation in the Autonomous Communities is very diverse.

The Commission has developed the e-Justice portal[237], which includes a section on access to justice in environmental matters, including also country specific information for each Member State[238].

The 2019 EIR included a priority action to improve the access to spatial data and services through the INSPIRE Directive for which some progress has been achieved. However, for the other priority action, only limited progress has been made on accessibility of information on access to justice rights.

2022 priority actions

- Provide up to date and disaggregated information on access to information and public participation both at the national and regional level.

[235] MITECO, the SABIA project.

[236] MITECO, Información ambiental. Convenio de Arhus.

[237] See the Commission eJustice portal.

[238] See Access to justice in environmental matters in Spain.

- Better inform the public, e.g. using the relevant Commission eJustice fact sheets, about their rights on access to justice in environmental matters.
- Ensure that the outcomes of judicial cases on environmental matter are effective in practice.

Compliance assurance

Environmental compliance assurance covers all the work undertaken by public authorities to ensure that industries, farmers and others fulfil their obligations to protect water, air and nature, and manage waste[239].
It includes support measures provided by the authorities such as:
(i) compliance promotion[240];
(ii) inspections and other checks that they carry out, i.e. compliance monitoring[241];
(iii)the steps that they take to stop breaches, impose sanctions and require damage to be remedied, i.e. enforcement[242].

Citizen science and complaints enable authorities to focus their efforts better. Environmental liability[243] ensures that the polluter pays to remedy any damage.

Compliance promotion and monitoring

Since the publication of the 2019 EIR, the Ministry for the Ecological Transition and the Demographic Challenge (MITECO) has published several reports that provide information on the implementation of the Birds and Habitats Directives. These reports are easily accessible, user friendly and they provide a lot of useful information on what has been done, what is to be done and what is planned for the future. However, there is still very little online information available to the farmers on how to comply with the obligations on nitrates or to the public about the implementation of the Nitrates Directive at national and regional level. This was pointed out by the report on the implementation of the Nitrates Directive published in 2020 by the European Commission which highlighted the difficulties in obtaining information from Spain[244]. Some trainings courses on nitrate pollution were held in 2019 and 2021[245].

The 2019 EIR examined two particular Autonomous Communities on this matter: Murcia and Castilla-La Mancha. A follow-up has been done. For Murcia, according to the 2019 report on Access to Environmental Information, there is no information available on the administrative follow up to detect non-compliance on nitrates and nature[246]. It has an online calculator that allows to make a balance of the nitrogen levels[247]. Although in the case of Castilla-La Mancha there is more information available on environmental protection and statistics (i.e. number of requests for environmental information)[248], no information was identified on follow up of administrative proceedings or non-compliance. Moreover, there is no clear and easily accessible information on the Nitrates Directive for farmers.

Information identified reflects an improvement from the situation stated in the 2019 EIR, which recommended Spain to provide more up-to-date information online on inspection plans and reports. At national level, information on industrial emissions is available at the State Register of Emissions and Pollutant Sources[249], which makes available to the public information on emissions, including the competent authority for inspections in the relevant Autonomous Community.

We have focused now on the three Autonomous Communities with more industries subject to emissions Regulations: Cataluña, Aragón and Castilla y León. In the case of Cataluña, all inspection reports from industrial sites are public, easily accessible[250] and include data on previous inspections, outcome of the inspection, including non-compliance with environmental standards or legislation. However, no information is available on measures adopted, corrective measures or sanctions taken further to the inspection. There is no general statistics on carried out inspections. Aragón publishes all

[239] The concept is explained in detail in the Communication on EU actions to improve environmental compliance and governance COM(2018)10 and the related Commission staff working document, SWD(2018)10.
[240] This EIR focuses on the help given to farmers to comply with nature and nitrates legislation.
[241] This EIR focuses on inspections of major industrial installations.
[242] This EIR focuses on the availability of enforcement data and co-ordination between authorities to tackle environmental crime.
[243] The Environmental Liability Directive, 2004/35/EC, creates the framework.
[244] Agriculture and Environment Research Unit School of Life and Medical Sciences, University of Hertfordshire, UK. (2020). Identification of approaches and measures in action programmes under Directive 91/676/EEC. P, 81 "Spain: The information collated for all the regions in Spain was difficult to obtain and difficult to translate in some instances". Available here.
[245] Ministry for Agriculture, Fisheries and Food. Training Plan for technicians of the rural environment, 2021.
[246] MITECO. Secretaría General Técnica, Vicesecretaría General Técnica Oficina de Información Ambiental, (2020) Informe Estadístico 2019 sobre Acceso a la Información Ambiental. Available here.
[247] Region of Murcia. Calculadora de nitrógeno.
[248] Castilla-La Mancha. Diffusion of environmental information.
[249] MITECO, the Spanish Register of Emissions and Pollutant Sources – PRTR España.
[250] Cataluña. Information on integrated environmental inspections.

inspection reports and an annual report with the planned inspections[251]. However, they are not easily accessible as to access them it is necessary to have the name and tax number of the company (CIF). In Castilla y León inspection reports of industrial sites are also available online. They can be searched by dates and province within the Community[252]. This tool can be highlighted as a good practice. It provides information on the inspections, outcome, sanctions and measures adopted and prescribed including non-compliance. There is no information on corrective measures taken further to the inspection because they are taken through disciplinary proceedings that are not published. Additionally, the annual reports on planned inspections and inspections performed are published.

Complaint handling and citizen science

The MITECO provides a form -in paper and online- to file claims and suggestions on the functioning of the public services within the Ministry and its dependent bodies[253]. To file the online form, it is necessary to count with electronic ID or an online accreditation. That is common for many administrative formalities but is not very user friendly. There is also a phone number and an email available to citizens. However, there is no other information or FAQs on the right to file complaints. In any case, this cannot be considered as a system of complaint handling on environmental matters.

The environmental NGOs are well organised in Spain and have a long history supporting the conservation of the environment. NGOs and civil society in general play a key role lodging queries and complaints before the competent administrative and judicial authorities.

The Commission has traditionally received a very high number of environmental complaints regarding Spain. Overall, the Spanish authorities cooperate closely with the Commission services to resolve the pending issues concerning the implementation of environmental law and in the framework of the infringement procedures.

A major issue for concern observed is the lack of an effective enforcement system that ensures that all administrative or judicial decisions are readily put into force. This occasionally results in extremely long delays in the correct implementation of EU environmental legislation and requires the intervention of the Commission in individual cases that could be more appropriately addressed at the national level.

[251] Aragón. Annual Plan for environmental inspections.
[252] Castilla y León. Search of environmental inspection reports.
[253] MITERD. The form is available here.

Enforcement

It is worth recalling that the 2019 EIR highlighted a good practice by Spain in the field of environmental compliance assurance. Thus, recognising the need for professional specialisation to effectively tackle environmental crime, Spain has created a police unit (SEPRONA – Guardia Civil) to combat environmental crime and a specialised Environmental Prosecution Authority. Both have been successful in investigating and prosecuting organised environmental crime.

On the 2019 EIR recommendation to publish information on the result of administrative enforcement actions in particular, on breaches on nitrates and nature, it can be highlighted that the National Prosecution Service of Spain publishes annual reports on investigations for environmental crimes[254]. They provide information on the prosecuted crime, the outcome of the investigation/prosecution (number of convictions or acquittals) and the evolution of those crimes over recent years[255].

The specialist environmental police force (SEPRONA) also gathers information on the number of investigations carried out[256]. That information is available in the annual statistics reports published by the Ministry of Interior[257]. These reports divide data by outcome and general types of crimes, such as against nature (incl. CITES). The types of crimes are quite generic and no reference to nitrates or cross compliance is included. They also provide statistical information on administrative and criminal sanctions imposed. Furthermore, the Spanish National Statistics Institute publishes information on convictions from all crimes, including environmental crimes[258].

The Spanish Evaluation report on the eighth round of mutual evaluations focused on "The practical implementation and operation of European policies on preventing and combating environmental crime"[259] shows a structural cooperation framework between Spanish administrations in dealing with combating environmental crime. However, fragmentation between

[254] Fiscalía General del Estado – Fiscalía de Medio Ambiente y Urbanismo.
[255] See the 2020 annual report: Memoria 2020, Medio Ambiente, Urbanismo.
[256] A press release published by the Ministry of Interior with the information from 2020 can be found here.
[257] See the 2020 annual report: Anuario Estadístico del Ministerio del Interior 2020.
[258] INE. Information on convictions from 2013 to 2020 is available here.
[259] Council of the European Union, Evaluation report on the eighth round of mutual evaluations "The practical implementation and operation of European policies on preventing and combating environmental crime" Report on Spain, 26 March 2019.

different levels is still an issue that prevents effective cooperation:

- CITCO (Intelligence Centre against Terrorism and Organised Crime) coordinates investigations related with organised crime and terrorism.
- Members of the National Police, the Guardia Civil, forestry officers, local police and MITECO staff are assigned to the environmental units of the Office of the Prosecutor Genera[260]l.
- Delegated provincial public prosecutors on environmental and town planning coordinate with MITECO authorities and, where appropriate, with customs, port and airport authorities.
- SEPRONA is supported by other services for investigations, including the Traffic unit for road checks, the Maritime Service and the Fiscal Department for actions in ports and airports.
- REDIA (Environmental inspection network)[261] gathers the heads of environmental inspectorates of the Autonomous Communities and the National State Administration.
- The Waste Coordination Committee[262] ensures technical cooperation between competent public administrations in the field of waste.

Environmental Liability Directive

The Environmental Liability Directive (ELD)[263] establishes a framework based on the 'polluter pays' principle to prevent and remedy environmental damage. The previous EIR have focussed on various specific aspect of its implementation.

In Spain, there is a registry on the environmental liability cases processed from April 2007 to December 2019. The registry was published in 2019 and was last updated in 2020 in .xml format - suggested by the European Commission- and in .xlsx format[264].

Article 26 of Law 26/2007 on Environmental Liability provides for three types of financial security: an insurance policy; a bank guarantee or an "ad hoc" fund backed by the public sector. Financial security can consist of a combination of any of them.

The environmental insurance market in Spain is well developed. Approximately eight insurers with bases in Spain underwrite environmental insurance policies and 17 insurers subscribe to policies offered by the Environmental Risks Pool[265].

In 2020, MITECO developed an online application called ARM that complements the existing MORA and IDM applications, which facilitates the development of environmental risk analysis[266].

2022 priority actions

- Increase online information on the Nitrates Directive and develop promotion tools to help farmers comply with it.
- Better inform the public and farmers about compliance with the Nature Directive.
- Publish information on the outcome of enforcement action and on the follow-up to detected breaches on nitrates and nature.
- Further improve the cooperation among the public authorities responsible for combating environmental crime.
- Raise awareness amongst citizens about tools to alert the authorities about cases of environmental damage, or breaches of environmental law.

Effectiveness of environmental administrations

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

Administrative capacity and quality

The Spanish Constitution (1978) provides for the exclusive competence of the State (national Parliament and Government) to approve basic legislation for environmental protection without detriment to the competence of the Autonomous Communities to establish additional protection measures and to develop the basis legislation.

Spain's public administration is highly decentralised. This

[260] This is established in the last paragraph of Article 22(2) of the organisational statute of the Public Prosecutor's Office.
[261] MITECO. Red de Inspección Ambiental: REDIA.
[262] MITECO. Comisión de Coordinación en materia de residuos.
[263] Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage.
[264] MITECO. Reports on the implementation of Law 26/2007 on Environmental Liability (transposing the ELD into the Spanish legal system).
[265] See 2020 Study for the European Commission on Improving financial security in the context of the Environmental Liability Directive. Annex on Spain.
[266] The ARM-IDM-MORA app is also available in English and can be found on the MITECO Website.

is illustrated by the proportion of spending managed by regional and local governments. This is even more accentuated in the field of the environment.

Most of the environmental implementation competences belong to the regions, although the central administration has still important powers in fields like water management in rivers flowing through different regions and coastal protection. The local authorities also play an important role in fields like waste management, air quality or sustainable urban development.

From the point of view of the enforcement carried out by the European Commission, it should be noted that Spain is among the top-three Member States with highest number of infringement procedures open in relation to the implementation of EU environmental law.

Over recent years, there has been some progress in Spain to streamline and improve the efficiency of the different public administrations. At the same time, during the previous economic crisis the public sector suffered large cuts in resources, which affected the environmental sector as well. The various public administrations involved in implementing environmental law have different levels of financial and human resources at their disposal to undertake their tasks.

The Recovery and Resilience Plan (RRP) for Spain includes a wide range of measures, chiefly under component 11, to improve the performance of the public administration and boost its digital transition. This also entails an environmental dimension. Relevant and outstanding measures on digital transition can be found for example in the green reforms and investments of the RRP Spain related to biodiversity, water, circular economy and waste management, as well as agriculture and fisheries. Overall, the administrative capacity of the services in the Spanish public administrations dealing with the EU funding and the RRP has also been reinforced and improved, being one of the main challenges on this matter.

Coordination and integration

As mentioned in the previous EIRs, the transposition of the revised EIA Directive[267] provides an opportunity for countries to streamline their regulatory framework on environmental assessments. Spain was delayed in this transposition[268], but finally notified the transposing national measures in December 2018[269]. It should be noted that an horizontal infringement procedure on the EIA Directive is currently ongoing against Spain, at reasoned opinion stage, due to some pending conformity issues of the Spanish transposition, such as the thresholds set up for certain categories of projects of Annex II of the EIA Directive.

The Commission encourages the streamlining of environmental assessments to reduce duplication and avoid overlaps in environmental assessments applicable to projects. Streamlining helps to reduce unnecessary administrative burden. It also accelerates decision-making provided it is done without compromising the quality of the environmental assessment procedure[270]. Spain has already introduced the streamlining of environmental assessments under the EIA and Habitats Directives.

Spain's highly decentralised administration creates coordination challenges, namely in policy areas such as the environment. The Spanish legal system provides for some mechanisms of political and technical cooperation and coordination, mainly between the State Administration and the Autonomous Communities. This is the case of the Sectoral Conference on Environment and some technical and participatory commissions, like the National Council on Water and the Environment Advisory Council.

Spain has also created some coordination technical committees on various environmental matters, for instance: on climate, waste, environmental quality, environmental damage, genetically modified organisms, biosafety, natural heritage and biodiversity, etc.

However, there is clear room to improve the efficiency and strengthen these cooperative actions. Some progress has been made in recent years, for instance to prepare the Spanish strategy on the circular economy. The implementation of the RRP has also implied the need to make use of these cooperation tools.

2022 priority actions

- Spain should further address regional and local fragmentation by developing better environmental coordination mechanisms.

[267] Directive 2014/52/EC of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.

[268] The deadline expired on 16 May 2017. The Commission had to launch an infringement procedure against Spain.

[269] Law 9/2018 of 5 December, published in the State Official Journal of 6 December 2018.

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

- Spain can further improve its overall environmental governance, such as transparency, citizen engagement, compliance and enforcement, as well as administrative capacity and coordination.

Reforms through the Commission's Technical Support Instrument (TSI)

The Commission supports environmental implementation and the green transition, not only through the EU financing programmes, but also granting technical assistance such as the Technical Support Instrument (TSI).

The TSI supported several environment-related projects in Spain during the reporting period.

Under the TSI 2019, three projects were supported on: (i) the strategy for the coastal protection of the Balearic Islands considering the effects of climate change; (ii) rethinking the role of the private sector in the provision of public services, with a view to enhancing the sustainability of Spain's public sector budget; and (iii) the development of the sustainability strategic goal of the Spanish National Promotional Institution (ICO).

Under the TSI 2021, new projects with environmental dimension were selected: "Spending review on climate change policies and assessment of the economic impact of climate change-related risks", "Support for the development of a legal framework and a practical basis for issuing sustainable debt", and "Technical support for an integral reform of the environmental tax legal framework in Andalucia".

In TSI 2021, it can be highlighted an important project to support the implementation and monitoring of the Recovery and Resilience Facility for the green transition, focussed on three aspects of the RRP Spain: 1) improving waste management at local level; 2) restoration of coastal wetlands; and 3) amendments to the regulatory framework for energy storage and renewable energy.

TAIEX EIR peer to peer Projects

The Commission launched the TAIEX EIR peer to peer tool in 2017 to facilitating peer-to-peer learning between environmental authorities[271]. The EIR-P2P can support various types of peer exchange: expert missions, study visits and workshops in a very wide range of sectors covered by the EIR. This initiative has been welcomed by the Member States, at national, regional and local level.

During the last years, the EIR-P2P events have been logically affected by the pandemic, although they have continued in other formats. New activities are ongoing and the Commission will continue supporting this successful tool.

Spain has been active with this tool and has already benefited from the EIR-P2P in the fields of waste, air quality, biodiversity, forests and sustainable urban development.

In particular, from 2019 these EIR-P2P events have counted with the participation of Spain:

- Multi-country workshop on sustainable urban development that took place in Belgium (2019).
- Multi-country Workshop on Ammonia reducing technology and measures: how to include the reduction effect in the national emission inventory and projections. This event was virtually organised by the Commission (2021).
- Multicountry TAIEX EIR Flagship Workshop: Towards Zero Pollution for Air, Water and Soil. This event was virtually organised by the Commission (2022).

[271] The TAIEX-EIR Peer-to-Peer (EIR-P2P).