

# Executive Summary

Environmental concerns related to climate change, air pollution, waste and water management compel the Autonomous Region of Andalusia to make use of its extensive legal competences to implement policy measures to mitigate such negative environmental outcomes. The *Environmental Tax Policy Review of Andalusia* supports the government of Andalusia in developing plans for potential reforms to its environmentally relevant tax legal framework, with a view to improving regional environmental outcomes and strengthening the region's contributions to national and global environmental performance. The report is the outcome of the project on "Technical support for an integral reform of the environmental tax legal framework of the Autonomous Region of Andalusia" funded by the European Union (EU) via the Technical Support Instrument, and implemented by the OECD, in cooperation with the European Commission.

The report provides strategic recommendations for environmentally related tax reform in the areas of greenhouse gas (GHG) emissions and air pollution, with a focus on electricity, industry (stationary sources) and road transport; in the area of water usage and pollution; and on waste and circular economy.

The recommendations derive from a thorough review of the legal framework at the regional, national and EU levels, as well as Andalusia's tax competences. The report takes into account the multilevel governance framework of Spain, which is a quasi-federal country within the EU and has three tiers of subnational government benefitting from different levels of constitutionally recognised autonomy. The first tier of the subnational governance structure is composed of 17 autonomous communities, the second tier is made up of 50 provinces, and the third tier comprises 8 131 municipalities and two autonomous cities. Andalusia is an autonomous community that is governed under the common regime and benefits from some tax autonomy (though less than the two regions governed by the foral regime). Andalusia can establish own-source taxes, apply a surcharge on centrally levied taxes (with some limitations), and has some discretion over assigned taxes, which are centrally levied taxes where autonomous communities receive a share of the revenues and have control over some elements of the tax design (e.g. exemptions). As own-source taxes must be based on a taxable event that is not already subject to tax by the central government or the municipalities, to avoid double-taxation, the report also includes a review of existing environmentally related taxes at the different levels of governance in Spain.

The recommendations take into consideration how existing taxes and fees applicable at the Andalusian level align with general principles of sound environmental tax policy. Concrete practical examples support the assessment of specific instruments and their designs. The Andalusian Climate Plan (PAAC) is one example of the pioneering role that Andalusia plays amongst the Spanish autonomous communities in this respect by being the first autonomous community in Spain to develop a regional Climate Change Strategy in 2002. More recently, the region has been seeking to focus on aligning the regional tax framework with its environmental and climate strategies.

Environmental taxes can reflect the external costs of production and consumption activities on the environment. Integrating environmental costs into market prices creates incentives that influence economic agents' decision making and reduce pollution in a cost-effective manner. Aligning taxes more closely with marginal external costs will improve market efficiency and move environmental outcomes towards socially

optimal levels. Analysing the alignment of the Andalusian tax legal framework with this principle of external cost management is an objective of the project.

This report focuses on assessing how current taxes applicable in Andalusia align with external costs and the principles of good environmental tax policy more generally, based on options that have been identified as feasible for the region from a legal perspective. On several occasions, the analysis goes one step further and considers policy objectives beyond the efficient management of external costs, such as revenue raising and the distributional consequences of taxation. In particular, the report considers how environmentally related tax policy in Andalusia may contribute to specific policy goals, such as those set out in the Andalusian Climate Action Plan – with its overall GHG emissions reduction target of 39% by 2030 (relative to 2005) - and the Andalusian Strategy for Air Quality – to support the elaboration of air quality improvement plans by local governments.

Where relevant, the analysis discusses taxation in relation to other market-based or regulatory instruments. Other instruments may better suit specific contexts, e.g. when there is a risk that reactions to prices and taxes will be limited due to limited behavioural responses or because no alternatives are available, or when setting the ‘right’ tax rate would be too complex.

The analysis considers recent policy developments and draws on new analysis of environmental costs. The *Committee of experts to prepare the White Paper on the tax reform*, established by the Spanish Treasury, recently published the “White Book for the reform of the tax system and its adaptation to the reality of the 21st century”. The White Book includes a diagnosis of the Spanish tax system, including in respect of environmental taxation, and provides detailed proposals for tax reform. In addition, the present report draws on a recent European Commission (EC) report on “Green taxation and other economic instruments: Internalising environmental costs to make the polluter pay”, which estimates the cost of various forms of environmental damage, including those covered in the report. The EC report finds that across EU Member States, the external costs generated by the various forms of environmental damage significantly outweigh the revenues raised through tax and other instruments and tax rates are not aligned with the marginal external cost; with 16 out of 27 of Member States having internalisation rates below 50%.

Andalusia is a pioneer in establishing strategies to reduce GHG emissions and air pollution, though improvements could be made to its main emissions pricing tool. Andalusia was one of the first autonomous regions to introduce a tax on greenhouse gas and air pollutant emissions when it introduced the Tax on the Emission of Gases into the Atmosphere (IEGA) in 2003. The IEGA covers CO<sub>2</sub> emissions and two important air pollutants, nitrogen oxide (NO<sub>x</sub>) and sulphur oxide (SO<sub>x</sub>). It currently exempts other pollutants as well as emissions from landfill, the combustion of biomass and biofuel, and facilities for the intensive rearing of animals.

Andalusia could reform the IEGA to strengthen the price signal and cover emissions that are currently excluded from the taxable base. The IEGA currently bundles all pollutants into a single tax base, which hinders its ability to send clear price signals. In addition, the tax does not cover some important pollutants (e.g. PM emissions, NH<sub>3</sub>) and sectors (e.g. agriculture). To strengthen the price signal, taxes could apply separately to each type of emission and could act as a price floor to the EU ETS for CO<sub>2</sub> emissions, given the significant overlap between facilities covered by the IEGA and the EU ETS. Andalusia could also consider broadening the scope of the tax to address the harmful effects of emissions not currently covered, for example by extending the taxable base to other pollutants, such as fine particular matter (PM) emissions, and other sectors, such as waste management and the agriculture sector. The analysis also finds that distributional considerations could be addressed through complementary policy instruments, including revenue recycling in the form of direct support to firms for the adoption of abatement technologies.

In the area of road transport, no specific tax instrument applicable in Andalusia incorporates air pollution and congestion costs, despite their significance at the subnational level. The local and regional governance levels are well-equipped to implement congestion charges in urban areas where benefits are likely most important. Implementing congestion pricing at the regional or local level will help manage local congestion

problems and improve local air quality. In addition, Andalusia could consider introducing a regional tax on vehicle emissions or a feebate (i.e. that penalises higher emissions vehicles and subsidises zero-emissions vehicles) that accounts for both GHG emissions (of which 99% were CO<sub>2</sub> emissions in 2019) and other air pollutants arising from road transport. To avoid supporting efficient internal combustion engines that still emit CO<sub>2</sub> and air pollution, favourable tax treatment should be targeted to zero-carbon emissions vehicles only. As aligning vehicle tax rates with external cost estimates of emissions is administratively complex, an alternative could be to vary tax rates according to environmental indicators such as the Euro emissions standards for vehicles and to increase their stringency over time. Caution should be exercised when implementing a tax on vehicle emissions at the regional level as it would increase the compliance burden for vehicle owners, who are already subject to a vehicle registration tax at the national level and a vehicle circulation tax at the municipal level.

To contribute to the targets of climate neutrality and reducing mobility-related GHG emissions, reform efforts to decarbonise road transport could be prioritised by focussing on substantially increasing the share of zero-carbon vehicles. In the context of national and EU targets for climate neutrality by 2050 and the Andalusian goal to reduce mobility-related emissions by 30-43% in 2030 (compared to 2005), tax and non-tax policy tools can play an important role. Pioneering countries, like Norway, have been successful in advancing the decarbonisation of their fleet by setting clear targets of zero-emissions vehicles and using additional steering instruments, including taxation. Andalusia could set a clear target indicating the share of electric vehicles in total future car sales to provide a tangible milestone and certainty to economic actors. Taxation could also play an important role in the decarbonisation process, for example through consistent fuel excise and carbon pricing, favourable taxation of zero-emissions vehicles and carefully designed tax incentives to purchase zero-emissions vehicles. This would need to be accompanied by complementary tools such as emissions regulations, investment in charging infrastructure and clean electricity generation and good communication. Co-ordination between the regional, national and EU-level is important to ensure the effectiveness of such policies.

Risks linked to climate change call for a focus on demand-side instruments to address water scarcity. Water scarcity has traditionally been addressed in Spain through supply-side infrastructure (e.g. dams, wells, inter-basin water transfers), but climate change is placing renewed focus on demand-side instruments (e.g. levies, regulation). A water abstraction levy, which would reflect the environmental costs arising from the process of extracting water from a natural source, is one option to address water scarcity and the environmental externalities arising from water use. Non-price tools such as water allocation regimes could also be considered if water users are generally unresponsive to pricing.

Currently, water pricing relates to supply cost recovery and does not capture the environmental externality costs that arise in the context of water use, including harm to ecosystems and reduced potential for carbon sequestration. A water abstraction charge has the potential to encourage sustainable use of water and to price environmental externalities. However, there are political economy and practical barriers to the introduction of such a levy, particularly given the special status of water as a human right and lack of information about water demand responsiveness. Alternatives to a water abstraction levy include water use regulation and water allocation regimes; the latter can be more effective in the case of water use, given the generally low responsiveness of water users to prices. Other non-pricing tools to reduce environmental harm arising from water abstraction include mechanisms at the water user association level to monitor the informal extraction of water (i.e. through wells), which covers a non-negligible share of agricultural water use. Finally, ensuring policy coherence as well as setting clear policy goals and priorities is key for achieving water use sustainability and fairness without prejudice to other policy areas. In particular, it is important to pay careful attention to coherence between agricultural policies and water use concerns.

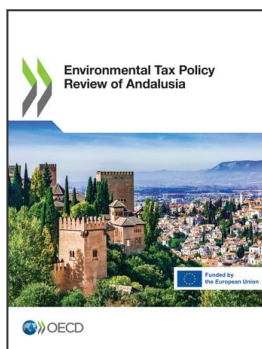
There are a number of tools available to help address externalities arising from water pollution, which causes damage to health and ecosystems and increases water treatment costs. Andalusia currently levies a pollution control fee for urban and industrial use. However, this fee does not cover pollution arising from the agricultural sector, which is the main sector responsible for aquifer pollution. Unlike water pollution

arising from point sources, where the pollution levels can be determined by a regular measurement of discharges, most water pollution in the agricultural sector arises from diffuse sources and is difficult to measure. As an alternative to the pollution levy, a tax on polluting inputs could be a means to capture the environmental and economic impact of this source of pollution. Levying a tax on pesticides and fertilisers, which are responsible for a significant share of water pollution in the agricultural sector, would allow the region to address the related environmental and economic externalities.

Tax instruments may be more efficient than the current limits that apply to fertiliser and pesticide use, but complementary policies may be needed given evidence of low responsiveness of farmers to input taxes and political barriers. As the tax base for input taxes is likely highly mobile, whereby farmers could source their inputs from a neighbouring region with lower tax rates, coordination with other Autonomous Communities would be key and could increase responsiveness levels. Political economy barriers may be addressed through the use of revenues to support the best performers and through careful tax design, as evidence shows that aligning the tax liability with the environmental damage increases the chances of the tax being perceived as fair.

Pricing instruments can also help reduce waste generation, avoid incentivising waste imports and increase circularity of materials. The disposal tax on hazardous waste introduced at the national level in 2022 (which is currently being implemented and would replace regional-level taxes) applies lower tax rates to landfill of hazardous waste than those that currently apply in Andalusia. Given Andalusia is already managing more hazardous waste than it generates, allowing the effective taxation of landfill to decrease could lead to a surge of hazardous waste imports into the region. Andalusia could apply a surcharge to the national tax rate for hazardous waste so the combined regional and national rates match the existing level of taxation in Andalusia. Additionally, the proposed regional increase of the national tax rate on Construction and Demolition Waste (CDW) disposal, together with an aggregates extraction tax (see following paragraph), could increase the circularity of the building sector, which is one of the sectors with greatest material use and low material recovery rates.

As Andalusia is a significant producer of raw mining materials, there is scope to encourage materials recycling and reduce the extraction of raw materials. Forty percent of the Spanish mining production value comes from Andalusia. A tax on virgin aggregates is one option to reduce the consumption of raw materials in favour of more material recycling and thereby reduce environmental impacts related to extraction. To avoid imports of raw materials from bordering regions that apply no taxes on raw materials extraction, this regional tax should not exceed EUR 3 per tonne. Given the lack of information on differentiated environmental impacts by type of material extracted, which prevents the implementation of a detailed Pigouvian tax, two alternative approaches could be considered: an *ad valorem* tax on the value of the raw materials extracted and an *ad quantum* tax on the quantity of raw materials extracted. An *ad quantum* tax would be more straightforward, as it better reflects the environmental impact, is simpler to administer, and has more predictable tax revenues. As an *ad quantum* flat tax rate applied to all raw materials would have a greater relative impact on cheaper materials, materials could be grouped by market price and a tax schedule with three tax brackets applied to the different groups (i.e. lower tax rate for cheaper materials). More analysis is needed to understand the effects of such a tax on competition.



**From:**  
**Environmental Tax Policy Review of Andalusia**

**Access the complete publication at:**  
<https://doi.org/10.1787/fe6d8b45-en>

**Please cite this chapter as:**

OECD (2023), "Executive Summary", in *Environmental Tax Policy Review of Andalusia*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/435d8908-en>

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <http://www.oecd.org/termsandconditions>.