



How
Free Zones
can contribute to
the European Green
Deal objectives

Proposal for guidelines
with good practices

LEGAL NOTICE

This document has been prepared for the European Commission however it reflects the views only of the authors, and the European Commission is not liable for any consequence stemming from the reuse of this publication. More information on the European Union is available on the Internet (<http://www.europa.eu>).

PDF

ISBN: 978-92-68-07889-1

DOI: 10.2778/601109

KP-03-23-388-EN-N

Manuscript completed in October 2023

The European Commission is not liable for any consequence stemming from the reuse of this publication.

Luxembourg: Publications Office of the European Union, 2023

© European Union, 2023



The reuse policy of European Commission documents is implemented by the Commission Decision 2011/833/EU of 12 December 2011 on the reuse of Commission documents (OJ L 330, 14.12.2011, p. 39). Except otherwise noted, the reuse of this document is authorised under a Creative Commons Attribution 4.0 International (CC-BY 4.0) licence (<https://creativecommons.org/licenses/by/4.0/>). This means that reuse is allowed provided appropriate credit is given and any changes are indicated.

For any use or reproduction of elements that are not owned by the European Union, permission may need to be sought directly from the respective rightsholders.

EUROPEAN COMMISSION Directorate-General for Taxation and Customs Union

Directorate A - Customs

Unit A2 – Customs legislation

Contact: Germán de Melo Ponce

E-mail: german.de-melo-ponce@ec.europa.eu

European

Commission B-1049

Brussels

Table of contents

1 Introduction	04
2 Free zones in the context of the European Green Deal	05
3 Good practices in EU free zones	06
3.1 A clean and circular economy	06
3.2 Supplying clean, affordable, and secure energy	07
3.3 Resource-efficient building and renovating	09
3.4 Sustainable and smart mobility	10
3.5 Zero Pollution	11
3.6 Preservation and restoration of ecosystems and biodiversity	12
3.7 Fostering sustainable investments	13
4 Looking beyond EU free zones	14
Annexe 1 – List of existing reports on sustainability in free zones	17



1 Introduction

The role of free zones has grown rapidly over the past fifty years. There are today more than 5,000 free zones worldwide, which are estimated to account for over 20 per cent of world trade. In the European Union, 17 Member States currently have at least one active free zone with customs procedures,¹ with a total of 67 free zones across the Union's territory², being five of them inactive.

In light of this rapid expansion and at a time when the EU has committed to ambitious targets to achieve carbon neutrality by 2050, the impacts of free zones need to be aligned with the objectives established in the European Green Deal.

This proposal for Guidelines with good practices (hereafter "Guide") was developed as part of an evaluation study on the impact of free zones in the EU conducted for the European Commission (DG TAXUD). It provides free zone authorities with examples of existing good practices undertaken in the EU across seven objectives pursued by the European Green Deal strategy adopted in 2019 as well as those in free zones outside the EU.

The Guide should be read as a proposal for authorities managing free zones in the EU to engage in and encourage activities that contribute to reducing GHG emissions and protecting the environment. It also intends to inform free zone economic operators of some of the existing (and possible future) opportunities offered by free zones to engage in more sustainable activities.

The 30+ good practice examples presented in this Guide illustrate how free zones can provide added value to act as drivers of change in their territories, stimulate the adoption of sustainable technologies and accompany companies in the transition of their business models towards more sustainability. Examples illustrated in this guide cover circular economy innovations, efforts to deploy energy efficiency measures and renewable energy technologies, initiatives to increase sustainable mobility and measures to reduce pollution levels and protect ecosystems and biodiversity. It also showcases possible incentives that free zones authorities can adopt to stimulate sustainable investments.



¹ While there is no commonly accepted definition of free zones, the OECD describes them as "areas providing a regulatory regime for businesses and investors that is distinct from what normally applies in the broader national or subnational economy where they are established". Examples of incentives applied are: tax breaks, duty exemptions, simplified administrative procedures, and other financial incentives.

² List of free zones which are in operation in the customs territory of the Union, as communicated by the Member States to the Commission. As of 17 August 2022. Available here: https://taxation-customs.ec.europa.eu/system/files/2022-08/FZ%20LIST%2017%20August%202022_CLEAN.pdf

2 Free zones in the context of the European Green Deal

The European Green Deal (EGD) was launched by the European Commission at the end of 2019. The Green Deal Communication introduces the strategy as a reset of the Commission's commitment to tackling climate and environmental challenges. It "aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use."

While the original main purpose of a free zone is to provide economic incentives, the climate and environmental objectives of the EGD are not naturally built into their operating principles. However, in light of the recent policy development and the environmental crisis, free zones now need to consider aligning with the EGD objectives and can become vehicles of changes in this regard. With the EGD also aiming to make the green transition economically beneficial for the participating operators, being an early adopter may become a competitive advantage.

Free zones in the European Union apply the same environmental legislation and standards as the EU regions in which they are hosted. Nevertheless, free zones have a number of unique specific features that can contribute to increasing the environmental and climate ambition both in their regional as well as national and international contexts.

The first added value of free zones lies in **their experience with providing financial or tax incentives to achieve specific objectives**. While most of these incentives are currently designed to promote economic development and the creation of new jobs,

they can also be redirected to pursue environmental objectives. For example, Madeira's Industrial Free Trade Zone (IFTZ) already provides incentives to foster sustainable investments in its territories, granting companies a 50% deduction on their corporate income tax if they contribute to the improvement of the environment.

A second added value of free zones lies in the **unique combination of features they may offer**. Such features are notably the geographic proximity to key transport hubs, the provision of relevant business infrastructure and services such as catalyst tools to develop green innovations (e.g. the IncubAzul High-Tech Incubator in the Free Zone of Cadiz), the experience in building and facilitating public-private partnerships (e.g., to attract renewable-energy companies in the free zone of Seville) These contextual incentives, when combined, can attract international investments and therefore stimulate sustainable investments within these territories. Furthermore, they can support the development of new supply chains like in the case of offshore wind farms (e.g., the Cádiz free zone aims to create synergies and conditions to develop an industrial hub for offshore wind energy).

Additionally, the strategic position of free zones authorities, which often act as **a link between private and public actors** can facilitate the decision-making and implementation of environmental projects within these areas. Through their experience with local and national stakeholders, they can act as promoters of change and facilitators across the stakeholder groups they interact with. Finally, free zones can also be drivers of changes and **lead by example** through the adoption of more sustainable practices within their managing organisations and operational activities.

This Guide highlights a number of good practice examples identified in EU free zones which contribute specifically to the following seven EGD objectives:

- ▶ **A clean and circular economy:** Due to their strategic position in the value chains, free zones have a great potential to influence and encourage the transformation of industry value chains to support circular design and production processes.
- ▶ **Supplying clean, affordable, and secure energy:** Concentrating a large number of activities, which therefore requires a high energy demand, free zones can further decarbonise their energy systems in line with the climate objectives of 2030 and 2050. Prioritising energy efficiency, developing renewable sources, and phasing out polluting fossil fuels serve as many levers of action.
- ▶ **Resource-efficient building and renovating:** Free zones host a high number of building infrastructures (e.g., warehouses, offices, port infrastructure, etc.). Increasing resource efficiency in construction processes, performing energy-efficiency renovations and encouraging the use of more sustainable designs for new buildings are opportunities for free zones to reduce their impact.
- ▶ **Sustainable and smart mobility:** Often acting as multimodal platforms, free zones can encourage the reduction of transport emissions and significantly reduce air pollution and the overall environmental footprint of transport activities.
- ▶ **Zero pollution:** Because free zones gather a large number of (industrial) activities, and therefore potential sources of pollution, they should actively engage in preventing and tackling air, water and soil pollution to ensure a safe and toxic-free environment.
- ▶ **Preservation and restoration of ecosystems and biodiversity:** Highly linked to the zero-pollution objective, free zones can engage in the restoration of degraded ecosystems and contribute to the preservation of ecosystems both at land and sea.
- ▶ **Fostering sustainable investments:** Free zone authorities can provide incentives to foster sustainable investments through direct investments in new technologies, equipment or processes or more indirect supporting measures such as tax rebates or rewarding schemes for activities demonstrating a positive environmental impact.

In addition, the Guide presents a set of good practice examples from free zones located outside the EU. These good practices highlight cases where climate and environmental protection are being integrated at the core of the free zone's strategy and development. The examples identified can provide additional inspiration on the use of tax incentives towards environmental sustainability and pave the ways for the development of future actions within EU free zones.

The following chapter of this Guide presents a list of good practice examples across free zones in the EU for each of the seven objectives, which is complemented by a list of good practices identified outside the EU. They provide ideas of actions conducted by the free zone authorities themselves as well as measures to encourage sustainable activities in the zone. Given the cross-cutting dimension of the European Green Deal, these examples should be read as a whole rather than in silos, as strong synergies exist between the different objectives.

3 Good practices in EU free zones

3.1 A clean and circular economy

Free zones can adopt and encourage operating companies to engage in circular processes within their activities. Initiatives highlighted show efforts made to monitor and increase waste collection via dedicated management plans and facilitate the implementation of R&D companies developing sustainable processes. Free zones with a high concentration of industrial activities can also act as promoters and facilitators to scale up their circular economy efforts. Authorities from the Free Zone of Barcelona have, for example, actively contributed to the creation of new internal circular value chains by connecting and engaging its tenants to develop an industrial symbiosis project.



Focus on industrial symbiosis The EcoCircularZF project

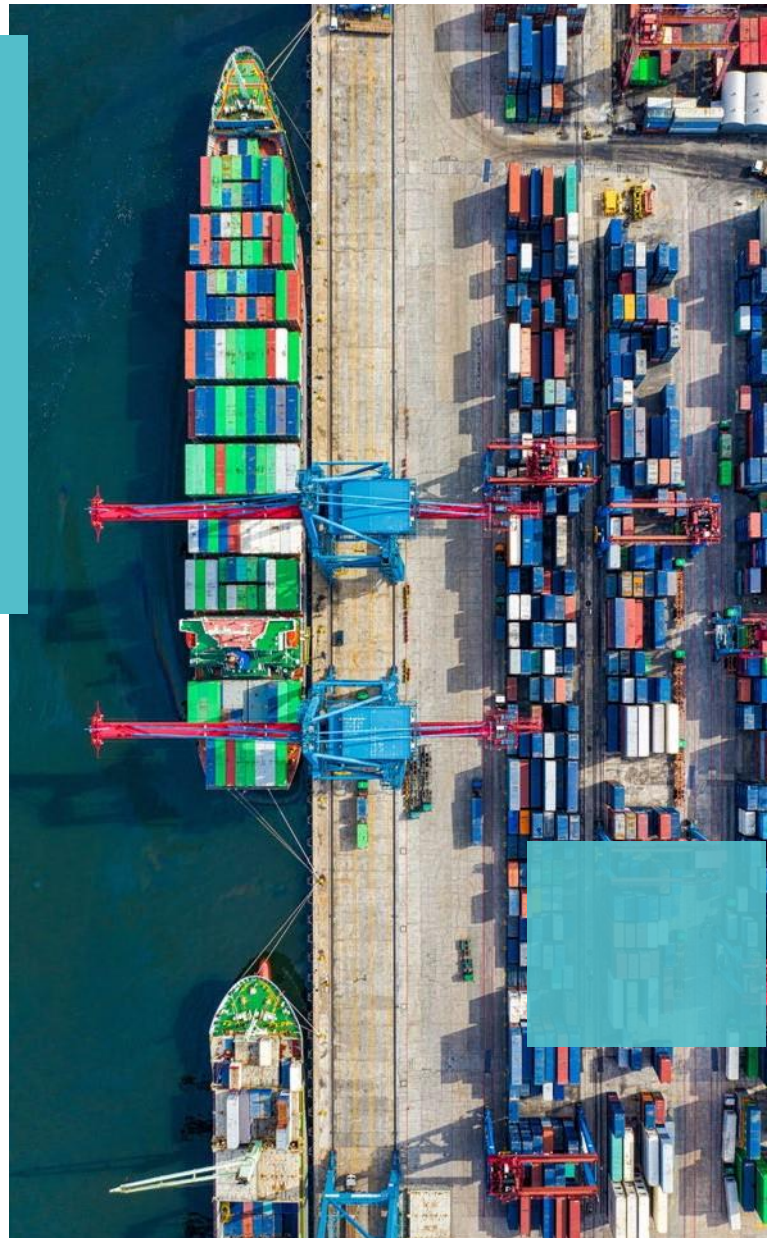
Industrial symbiosis refers to a local partnership where partners provide, share and reuse resources to create value, while minimising leakage and waste. In the Barcelona Zona Franca, the EcoCircularZF project guides and facilitates the companies operating in the free zone to embrace this approach, e.g. through identifying the opportunities available, promoting contact between the companies, and assessing synergies and their viability. This allows for the reduction of waste management costs, profit from underused resources, and the lowering of production costs, energy consumption and water consumption.

Research and development to valorise natural resources in the Free Zone of Madeira

The Free Zone of Madeira has been hosting since 2013 the MadeBiotech company's facilities. The R&D company focuses on biotechnology and process engineering to develop sustainable processes for the valorisation of natural resources. MadeBiotech is notably collaborating with the University of Madeira on a scientific research project – MarineBlueRefine – which aims to valorise the waste from the fish industry.

Integrated waste management plan in the Free Port of Thessaloniki

The Thessaloniki Free Port has established a Waste Management Plan coupled with a Digital Waste Register to ensure the effective collection and channeling of recyclable materials to processing facilities. The Free Zone also applies an integrated plan to receive and manage waste and residues from ships operating a licensed shore waste oil storage facility in the port.



Examples of free zone authorities that have established a waste management plan

Country	Free zone	Key target
DE	Bremerhaven	Reduction of the illegal disposal of ship-generated waste and cargo residues at sea and thus counteract marine pollution with garbage and plastic.
SI	Koper	The waste collection target value for 2021 was set at 91% and exceeded.
DE	Cuxhaven	Increase of waste separation rate by 10% by 2025, compared to 2018.

3.2 Supplying clean, affordable, and secure energy

Free zones have various tools they can use to improve energy efficiency and consequently reduce operating costs. Measures such as solar panel installations and LED light fittings (see good practice examples) are available to all types of free zones. Free zones that focus on industrial activities can also play a role in developing new solutions, by supporting relevant research projects, both financially and by providing the necessary infrastructure, tools, environment and contacts. Additionally, free zones can also contribute to fostering the energy transition of logistic chains and shifting the industrial fabric towards sustainable activities.

Solar energy investments in the Free Port of Riga

The Free Port of Riga provides hot water in the summer and additional preheating of the heating system through solar collectors installed on the roofs of the buildings of the freeport authority. 85% of the project was funded by the Climate Change Financial Instrument (CCFI), and 15% by the Freeport of Riga Authority. Before the instalment, the total investment was expected to pay off within 7 to 8 years. The Freeport further envisions building a solar panel park in the Spilve fields, with a planned power output of at least 100 MW and a minimum of 100,000 MWh of electricity annually.

Renewable energy working group in the Free Zone of Barcelona

The Barcelona Free Zone has set up a working group gathering around 30 companies operating in the zone to promote the use of renewable energy and foster the installation of photovoltaic panels. In parallel, the Free Zone signed in 2021 an agreement with the Barcelona City Council to encourage the installation of photovoltaic panels on industrial roofs.

Light retrofitting in the Free Port of Trieste

The New Free Port within the Port of Trieste has managed to significantly increase the level of lighting, from 33.12 kW in 2011 to 109 kW in 2018, with practically the same energy efficiency level, by retrofitting its lighting with LED lights. It is estimated that a complete switch to LED lights could result in CO₂ emission savings of 65,80 tCO₂ by 2030.

Increased cooperation to attract renewable-energy companies in the Free Zone of Seville

The Free Zone of Seville is reinforcing its strategy to attract renewable energy companies through greater cooperation with local authorities and considerations to expand the free zone area. Several energy-related companies expressed their interest in locating their activities in the zone. These notably include a project from Armonia Green Sevilla SL to create a green ammonia processing plant from hydrogen, as well as from Alener Solar to deploy a €4.4 million commercial hydrogen plant. Their interest in the Free Zone was notably motivated by the multimodality features the area provides as well as the perspective to establish an energy community within the territory.



Hydrogen investment project in the Free Zone of Katowice

The Katowice Special Economic Zone supports investment projects in hydrogen technologies in the Silesian-Maopolska Hydrogen Valley, established in 2022. The site aims to develop hydrogen solutions across a wide range of applications, including power generation, heating, industry and transport.

Green hydrogen hub around the Free Port of Venice

Authorities of the Free Port of Venice are collaborating with the Sapio Group and Hydrogen Park to develop hydrogen production and distribution in the area. The partnership aims to attract investments by facilitating the access of local companies to funds (e.g., Italy's National Recovery and Resilience Plan) and enhance the role of the port as an attractive cluster for energy production and incubator of technological innovation. The cooperation agreement aims to contribute to creating a Hydrogen Valley in Venice's metropolitan area.

Hydrogen Valley project in the Free Zone of Vigo

The Vigo Free Zone consortium presented a €10 million project – €4 million of which is financed by the free zone authority – to implement a green hydrogen production plant to generate and supply green hydrogen from solar energy thanks to photovoltaic installations on the roofs of the buildings. The project could contribute to the employment of 500 direct and indirect jobs and is part of the free zone's ambition to develop a hydrogen valley in the area of Bouzas.



3.3 Resource-efficient building and renovating

Free zones' built environment offers opportunities to achieve environmental sustainability. Free zones can reduce the environmental footprint of their building infrastructure by selecting construction projects following circularity principles, developing renewable energy self-consumption infrastructure on the roofs of their buildings, investing in energy-efficiency building renovations or covering their building with vegetation.

Energy efficiency investments in the Piraeus Free Zone's administrative building

The Free Zone of Piraeus implements measures to make its administrative building more energy efficient. Investments consisted of improving the thermal isolation of the Container Terminal administrative building to reduce energy demand for heating in the winter and for cooling in the summer. These investments were coupled with the construction of a green roof on the Container Terminal. In addition, to capturing CO₂ emissions, the green roof also brings aesthetic value, which can benefit the residents in the upper Perama area.

Circular building design in the Free Zone of Cádiz

The Free Zone of Cádiz selected an innovative and sustainable building design to host the IncubAzul High-tech Incubator. Following circular and environmental sustainability principles, the building is designed to optimise energy and material use and will be constructed using recycled sea containers. The building was designed to provide flexibility and allow the transformation and adaptation of spaces according to the needs of users over time. In addition to this project, the Free Zone plans to install 7,000 solar panels on the roofs of industrial equipment with an expected production of 7,169,480 KW.



3.4 Sustainable and smart mobility

Free zones can implement a number of actions to foster sustainable and smart mobility. Measures to electrify the existing fleet of vehicles can help to reduce CO₂ emissions if coupled with investments in renewable energy. Investments in public transport and soft mobility infrastructures such as rail and bike lanes can stimulate the uptake of more sustainable means of transportation. Free zones hosted in ports can also encourage sustainable practices by electrifying their infrastructures and providing tax incentives to ship companies demonstrating more sustainable performances.

Electric mobility investments in the Free Port of Trieste

The Port Network Authority of the Eastern Adriatic Sea managing the Free Port of Trieste is investing in electric mobility. With the support of EU projects funded under Horizon 2020 and the Interreg Programmes, the port authority will invest €150,000 by the end of 2022 to replace all its vehicles with battery electric vehicles and install charging stations in the ports of Trieste and Monfalcone. The measure will allow savings of 19.7 tCO₂eq every year.



Harbour fee discounts for sustainable ships in the Free port of Cuxhaven

The Free port of Cuxhaven offers incentives for ships calling the port that demonstrate better environmental performance. Ships that can demonstrate their performance in avoiding air-polluting emissions such as NO_x and SO_x can apply for the Environmental Ship Index (ESI) rebate and benefit from a 5 to 10% discount on harbour fees. In 2019, 198 ships calling the port benefitted from such a rebate. Port authorities introduced in 2018 another incentive to encourage ships to switch to cleaner fuels. Ships that are propelled by LNG, methanol or ethanol can apply for an eco-fuel rebate and benefit from a 20% discount on the harbour fees.

Annual Number of Ships' calls receiving an ESI rebate in the Niedersachsen ports (includes the Cuxhaven port) between 2016 and 2019

2016	2017	2018	2019
67	99	90	198

Source: Niedersachsen Ports – Sustainability report

Soft and electric mobility investments in the Free Zone of Barcelona

The Barcelona Free Zone is working to provide emission-free transport to and within the Free Zone, by providing connection by metro, electric cars for intra-zone transport, as well as charging stations and bike lanes. Additionally, it provides access to its infrastructure as part of the service of the Strategic Project for the Recovery and Economic Transformation (PERTE) of electric and connected vehicles. The project aims to create the necessary ecosystem in Spain for the development and production of electric and grid-connected vehicles, converting the country into a hub for electromobility. PERTE plans to mobilise €24 billion, of which €4.3 is from the public sector, and to create up to 140,000 jobs.

3.5 Zero Pollution

Free zones can limit and reduce air, water, soil and noise pollution levels in multiple ways. They can install measuring and monitoring equipment to better control pollution levels, facilitate the enforcement of environmental regulations and help avoid pollution. The use of digital and smart technologies has great potential in this regard. Additionally, free zones can invest in new equipment or specific infrastructure to mitigate the nuisance generated for the surrounding ecosystem and populations.

Retrofitting and new investments in equipment to reduce noise and light pollution in the Free Port of Malta

The Free Port of Malta invests in new equipment to limit noise and light pollution generated by the port infrastructure. It acquired 15 new rubber tyred gantry cranes (RTGs) equipped with quieter safety alarm systems, retrofitted 50 RTGs to reduce the noise generated by this equipment and invested in quieter trailers. The free port also strives to limit light pollution by optimising the lighting of its light towers and in the operational area.

AI technology to monitor water pollution in the Free Port of Riga

The Free Port of Riga is implementing a set of measures to monitor and reduce pollution in the zone. The free port conducted a remediation project of historically polluted areas in the Sarkandaugava territory between 2011 and 2017 and has implemented a groundwater monitoring network including 300 wells. In cooperation with telecommunications company Latvijas Mobilais Telefons, the free port is launching a pilot project to use AI technologies (AI-powered drone) to detect pollution in water. The port authorities are also committed to reducing other types of pollution. They notably constructed an anti-noise wall to reduce noise disturbance in the residential area of Kundzinsala and installed four dust and three volatile organic compounds monitoring stations to monitor air pollution in the port's territory.

Pollution reduction targets in the Free Port of Koper

The Free Port of Koper has set two key environmental targets to reduce pollution in the port in 2022. The port aims to reduce total dust emissions at all ten port locations to 200 mg/m³ per day and maintain PM10 concentrations across the area below 30 µg/m³ for both dust emissions and particulate matter. In parallel, the free port establishes every year a noise reduction improvement programme which includes measurements, monitoring, investment in noise reduction equipment and communication activities with shipping companies in cases of detected excessive ship noise. The port authority dedicated €1.9 million in 2021 for such activities.



3.6 Preservation and restoration of ecosystems and biodiversity

Free zones can limit their environmental footprint within and around their territories by limiting the levels of pollution generated within their areas. Measures aiming to reduce air, water and noise pollution can directly contribute to the preservation of ecosystems. Additionally, free zones can engage in cooperation programmes with local organisations and communities to preserve and revitalise their natural habitats and surrounding ecosystems.

Protection and conservation of natural reserve areas in the Free Port of Riga

The Free Port of Koper authority signed a cooperation agreement with BirdLife Slovenia (DOPPS) to preserve and manage ecosystems located in the port area. The free port notably commits to reducing pressures affecting ecosystems negatively, strengthening ecosystem services arising from nature, including an integrated management approach involving local communities and support actors with resources and tools to ensure effective ecosystem conservation.

Cooperation agreement to preserve ecosystems in the Free Port of Koper

The Free Port of Riga contributes to the protection and preservation of the Kremeri natural reserve and Milestibas Isle which occupy 75 ha of the port's area. Collaborating with the Nature Conservation Agency, the free port monitors and works to improve nesting conditions for waterfowl in the protected territories. Authorities transformed the vegetation of the Kremeri nature reserve to adapt it to the specific nesting needs of waterfowl, contributing to the conservation of biodiversity in the protected area.

Clean-up of the Liepaja Free Zone's contaminated areas

The Special Economic Zone of Liepaja launched a project to restore ecosystems and eliminate pollution in the contaminated areas in the Karosta Canal. The first phase of the clean-up project of the Karosta Canal contributed to removing around 50,000 m³ of historically oil and heavy metal-polluted sediments in the water between 2014 and 2015. The second phase of the project was launched in 2022 and will mobilise €5 million to remove 200,000 m³ of polluted sediments.

3.7 Fostering sustainable investments

Free zones can drive investments towards more sustainable activities. Building on their experience, they can provide tax incentives to attract new sustainable business models and stimulate investments in renewable energy, reward companies' efforts to reduce their environmental impacts and invest in their own infrastructure to make it more sustainable. Free zones can also act as drivers of change and facilitate the development of sustainable innovations and research projects by providing the necessary infrastructure and services to scale-up technologies.



Tax deduction and environmental award in the Free Zone of Madeira

Madeira's Industrial Free Trade Zone (IFTZ) provides two types of incentives to foster sustainable investments in its territories. The IFTZ grants companies a 50% deduction on their corporate income tax provided that they contribute to the improvement of the environment and plans to offer additional incentives for the service sector and shipping activities. Since 2010, the free zone also implemented an annual environmental award - ranging from €1,500 to €5,000 - for companies demonstrating strong commitments to prevent and reduce their environmental impacts. The award criteria include criteria such as the share of environmental investments, the company's environmental certification and the planned actions to reduce environmental impacts.

Reporting of EU-Taxonomy-aligned activities in the Free Port of Koper

The authority of the Free Port of Koper reports every year indicators on its level of environmentally sustainable economic activities and investments. The free port notably reports the amount and share of its EU Taxonomy-aligned activities as well as the level of investments in fixed assets related to EU Taxonomy-aligned activities. Such activities encompass actions undertaken on energy use and energy efficiency, marine protection, emissions from services, waste management, marine sediment management, and biodiversity conservation. In 2021, the share of investments in fixed assets related to Taxonomy-aligned economic activities amounted to 3.5% (€1.8 million).

A new sustainable industrial model in the Free Zone of Cádiz

As part of its new sustainable industrial model, the Free Zone of Cádiz invested €1.5 million to develop the use of renewable energy, modernise its infrastructure and switch to sustainable mobility. The free zone intends to drive change with the IncubAzul High-Tech Incubator, a project aiming to promote innovation and technology transfer to SMEs in the blue economy sector. The call for business projects to be supported by the incubator encompasses offshore wind energy, ocean renewable energy and coastal protection projects, and explicitly excludes activities that may harm the environment. In parallel, the free zone partnered with the Spanish state-owned shipbuilding company Navantia to create synergies and conditions to develop an industrial hub for offshore wind energy in the zone.

Real estate tax break to incentivise solar energy in the Free Zone of Barcelona

The City Council of Barcelona has promoted a tax bonus for companies and industries that install photovoltaic panels. Designed in particular for large companies located in the free zone of Barcelona, this measure is part of a joint agreement between the city and the free zone to install 2 million square meters of photovoltaic panels on companies' roofs. This bonus reduces by 30% the real estate tax during three tax periods for companies installing solar panels.

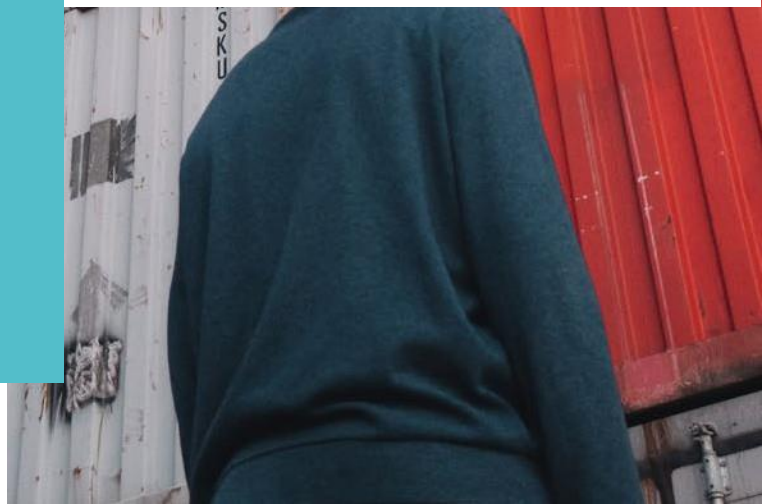
4 Looking beyond EU free zones

Some free zones located outside the EU have placed a strong focus on the environmental sustainability of their activities and the investments they wish to attract. While the green transition areas addressed and the levels of commitment differ, many free zones are using tax incentives as a key instrument to attract, develop and encourage the implementation of sustainable business activities.

Good practice examples identified outside the EU particularly demonstrate a strong focus on the development of renewable energy projects, clean mobility and technologies, as well as circular-economy applications. More specifically, good practice examples identified showcase how free zones can:

- ▶ Contribute to increasing the industrial specialisation and competitiveness of a region in alternative sources of energy such as hydrogen (see Ulsan Free Economic Zone);
- ▶ Contribute to attracting large -scale renewable energy investment projects such as offshore wind and green hydrogen and contribute to a country's clean energy transition (see Green Freeports);
- ▶ Contribute to revitalising and renewing the attractiveness of a region, focusing on green technologies (see Atlantis Special Economic Zone);
- ▶ Contribute to developing and increasing clean energy and environmental technology investments (see Energy and Environment Park);
- ▶ Integrate environmental sustainability from its design to daily operation and become a reference for others (see the Greenpark Free Zone).

The examples of good practices presented below can serve as an inspiration for EU free zones and provide pathways for development to better align their activities and incentives with the objectives set in the European Green Deal.





Hydrogen energy hub in the Ulsan Free Economic Zone (Korea)

The Ulsan Free Economic Zone (UFEZ) participated in the development of an energy hub near the city of Ulsan, which is centered around hydrogen industry innovation. Organised across three districts (Hydrogen Industry Base, Electrogen Auto Valley and R&D Business Valley), the zone aims to establish a Hydrogen Industry Ecosystem and infrastructure as well as the foundation for hydrogen R&D service businesses. UFEZ offers developed infrastructure (hydrogen pipeline, hydrogen charging stations) and incentives conducive to the development of hydrogen in the region. The zone notably provides tax incentives to both domestic and foreign investment companies wishing to settle in the area. These include 15-year exemptions from city tax, 7 to 15 years exemptions from property tax as well as exemptions from customs duties. These tax/customs incentives are coupled with subsidies which are notably provided to businesses contributing to large-scale employment in the region and/or hiring new employees within five years after registration. UFEZ's industrial ecosystem currently provides half of the by-product hydrogen produced in Korea and has established battery industry innovation clusters to produce hydrogen-powered cars at a large-scale.

Relevance to European Green Deal objectives: supplying clean, affordable and secure energy, sustainable and smart mobility, and fostering sustainable investments.

Development of large-scale offshore wind manufacturing in Green Freeports (United- Kingdom)

In the United- Kingdom, the Green Freeport status has been granted to two Scottish Ports (the Forth Green Freeport and the Inverness and Cromarty Firth Green Freeport). Benefitting from a support of £52 million from the government and special tax reliefs, the Green Freeports' activities will aim to attract investments in and develop offshore wind manufacturing, alternative fuels such as green hydrogen, and carbon capture utilisation and storage technologies. Freeport tax incentives will include stamp duty land tax reliefs, 5-year business rates reliefs, employer national insurance contributions reliefs, and enhanced capital allowance for investments in plant and machinery, structures and buildings. Additionally, businesses located in the Green Freeports will also benefit from deferrals and exemptions from duty (tariff, non-tariff and VAT benefits). The UK government is considering expanding the number of Freeports to at least eight other locations in the UK.

Relevance to European Green Deal objectives: supplying clean, affordable and secure energy, and fostering sustainable investments.



Attracting green technologies in the Atlantis Special Economic Zone (South Africa)

The Atlantis Special Economic Zone (ASEZ) started to prioritise the installation of 'green' industries in 2012 by adopting the Atlantis Revitalisation Framework. Since then, the ASEZ has worked to develop a sustainable green manufacturing hub and establish and maintain a conducive business environment for the green economy. The zone specifically targets investors developing and applying green technologies: renewable energy generation, energy storage, resource efficiency, transports, water and wastewater, recycling and waste, advanced materials and packaging. It provides a wide range of investment incentives. These notably include quality built, transport and IT infrastructure and existing public-private partnerships. The ASEZ provides tax incentives such as a preferential corporate income tax of 15% (against 28%) and employment tax incentives for low-salaried employees. With its Living Lab, the zone also incentivises the adoption of resource efficiency practices (e.g., industrial symbiosis) for businesses located in its areas.

Relevance to European Green Deal objectives: supplying clean, affordable and secure energy, a clean and circular economy, sustainable and smart mobility, zero pollution, and fostering sustainable investments.



Attracting clean energy and environment investments in the Energy and Environment Park (United Arab Emirates)

Energy and Environment Park (ENPARK) is a free zone located in Dubai focusing on clean energy and environmental technology investments. ENPARK is a founding member of the Green Economic Partnership. The free zone explicitly targets companies operating in the fields of renewable energy, energy efficiency equipment, transport, green buildings, organic products, recycling and solid waste sectors, water and waste water. It notably provides tax incentives, including 50 years of personal income and corporate tax exemptions, as well as full exemptions on customs duties for goods and services. The free zone also applies environmental criteria for the operation of its activities, such as the Leadership in Energy and Environmental Design (LEED) certifications for its buildings and the use of renewable energy.

Relevance to European Green Deal objectives: resource-efficient building and renovating, supplying clean, affordable and secure energy, sustainable and smart mobility, zero pollution, and fostering sustainable investments.

Designing eco-friendly free zones: the Greenpark Free Zone (Costa Rica)

The Greenpark Free Zone has been developed and constructed taking account of environmental sustainability criteria from its original design to its daily operations. In addition to corporate social responsibility programs, the free zone designed its buildings following the Leadership in Energy and Environmental Design (LEED) and built eco-friendly infrastructure. The Greenpark makes use of renewable energy and applies both energy and water efficiency principles. The free zone also integrated 19,000 square meters of green areas to maintain local biodiversity. Investors locating their activities in the area can benefit from import duties, excise exemptions, temporary income, and local sales tax exemptions.

Relevance to European Green Deal objectives: resource-efficient building and renovating, supplying clean, affordable and secure energy, a clean and circular economy, and preservation of ecosystems and biodiversity.



Annexe 1 List of existing reports on sustainability in free zones

Free zone	Document title
Sustainability guides for free zones	
Madeira (PT)	Environmental Good Practice Guide
World Free Zone Organisation	Green Free Zone Certification Programme Procedures – Guidance on Programme Criteria & Evidence Package Assessment
Sustainability reports/strategies of free zone authorities	
Bremerhaven (DE)	Environmental Report 2022 – Ports of Bremen/Bremerhaven
Cuxhaven (DE)	Niedersachsen Ports – Sustainability Report 2021
Cádiz (ES)	Sustainability Report 2020
Barcelona (ES)	CZFB Sustainability report 2020
Piraeus (GR)	2020 Corporate Responsibility and Sustainable Development Report
Thessaloniki (GR)	Sustainability Report 2019 – ThPA S.A. Port of Thessaloniki
Trieste (IT)	Action Plan for a Sustainable and Low carbon Port of Trieste
Koper (SI)	Annual report 2021 –Luka Koper Port of Koper
Cape Town (ZA)	Annual report 2021-2022 – Atlantis Special Economic Zone



Publications Office
of the European Union