Eco-Innovation Observatory

The Eco-Innovation Observatory functions as a platform for the structured collection and analysis of an extensive range of eco-innovation and circular economy information, gathered from across the European Union and key economic regions around the globe, providing a much-needed integrated information source on eco-innovation for companies and innovation service providers, as well as providing a solid decision-making basis for policy development.

The Observatory approaches eco-innovation as a persuasive phenomenon present in all economic sectors and therefore relevant for all types of innovation, defining eco-innovation as:

“Eco-innovation is any innovation that reduces the use of natural resources and decreases the release of harmful substances across the whole life-cycle”.

To find out more, visit www.eco-innovation.eu and ec.europa.eu/environment/ecoap

Any views or opinions expressed in this report are solely those of the authors and do not necessarily reflect the position of the European Commission.
Eco-Innovation Observatory

Country Profile 2018-2019: Greece

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A note to Readers

Any views or opinions expressed in this report are solely those of the authors and do not necessarily reflect the position of the European Union. A number of companies are presented as illustrative examples of eco-innovation in this report. The EIO does not endorse these companies and is not an exhaustive source of information on innovation at the company level.

This brief is available for download from

https://ec.europa.eu/environment/ecoap/country_profiles_en
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Summary

Climate change and intensive ecosystems pollution is likely to have strong impact on the Greek environment due to its island nature. For this reason, acting for eco-innovation has a significant importance. Environmental policy in Greece focuses on the promotion of renewable energies and energy efficiency measures that can promote eco-innovation. The country benefits from its significant natural capital in renewable energies (solar, wind, tidal), growth in green and alternative tourism and innovation in agriculture and the food industry. Despite the economic crisis, by the end of 2019, the installed capacity of photovoltaics reached 2,828 MWp which covered 7.1% of the electricity consumption. Nevertheless, the uptake of renewable energy has stagnated in recent years.

In terms of eco-innovation performance, in 2018 Greece continues to rank low among the EU28 countries with a score of 75 (on an EU average of 100). However, Greece is getting closer to the EU average in terms of eco-innovation performance as it is only seven positions behind the EU average.

The funding of research activities in the country depends heavily on EU funds. The Operational Programme on Competitiveness, Entrepreneurship and Innovation under the new National Strategic Reference Framework (2004-2020) allocates EUR 28.8 million on the promotion of innovative technologies for environmental protection and resource efficiency in the areas of waste management, water management, soil contamination and air pollution.

The poor performance on technological innovation is also demonstrated by the low number of patent applications. In addition, the small size of Greek companies acts as a deterrent to further developing and commercialising innovations. However, it is noted that Greek startups, due to high availability of funding from abroad, tend to apply for European or international patents. The applications of these companies may not be recorded as “Greek companies’ applications”.

The policy framework to support innovation is expected to improve significantly through the Action Plan for the Implementation of the National Strategy for Research, Technological Development and Innovation for the period 2015-2021, which includes the promotion of specific activities in relation to eco-innovation. An integrated policy framework to promote circular economy does not exist. The first circular economy dialogue forum took place in April 2019 to gather businesses, SMEs, researchers, social entrepreneurs, etc. to promote circular business models and innovation. This indicates that the country has initiated an implementation of circular economy in a more holistic manner.

With reference to digitalisation, as an enabler of eco-innovation, Greece has a very poor performance amongst the EU countries as it ranks 27th out of the 28 EU Member States (including the UK) in the European Commission Digital Economy and society Index (DESI) 2020 (European Commission, 2020). Nevertheless, the government has set digitalisation as one of its strategic priorities, as a new Ministry of Digital Governance was established in 2019. The COVID-19 pandemic triggered several digital initiatives to address the challenges and barriers of this health crisis and this has accelerated the pace of digital transformation.
Introduction

The Environmental Performance Index (EPI) 2020 ranks Greece as a strong performer, 25\textsuperscript{th} overall in its global rankings (EPI, 2020). According to the EPI, the country has an average performance in the areas of air quality, fish stocks and GHG emissions intensity. Major challenges, such as air emissions from transport and electricity power stations, overexploitation of its water resources, degradation of its coastal zones, loss of biodiversity in terrestrial and marine ecosystems (MINERV 2018). The overexploitation of groundwater resources occurs mainly in the region of Thessaly. In that region there is a high intensity of energy and water use for agricultural irrigation. In addition, many groundwater irrigation systems operate illegally and thus, they are not recorded. The status of surface water is good, both in terms of quantity and quality. The quality of the vast majority of bathing waters in the country was assessed as excellent (95.7\%) (EEA 2019).

The GHG emissions continue a decreasing trend that started in 2008. Specifically, the emissions decreased from 134.63 Mt CO2eq in 2008 to 98.69 Mt CO2eq in 2015 (EEA, 2017). Nonetheless, these were mainly due to the effects of the economic crisis and not the result of ambitious climate policies. The country's carbon intensity level is still high compared to other Member States (European Commission, 2019). According to Eurostat, the share of renewable energy of the country's gross final consumption has stabilised at around 15\%. Biomass and renewable wastes account for the largest part of this consumption (44\% of renewables). Greece needs to increase its efforts to reach the target of 20\% of energy from renewable sources by 2020 as stipulated by European Commission’s Directive on Renewable Energy. With this in mind, Greece continues to be one of the most successful countries worldwide in the use of solar thermal energy (mostly water heaters). In addition, currently the Greek government is preparing a Master Plan for the gradual closure of lignite-burning energy plants in the area of Megalopolis and the region of Western Macedonia where such plants are located.

As a result of the Waste Management Plan the pressures from generation and treatment of waste have been reduced. Nevertheless, the closure of illegal landfills – as well as illegal metal foundries – remains a key challenge for the country (European Commission, 2017) even if the operation of such illegal sites is gradually reducing. In addition, there is a lack of adequate facilities to effectively manage all the hazardous waste the country produces. Some progress has been achieved on waste recycling, mainly through the expansion of the extended producer’s responsibility schemes (European Commission, 2019). Nevertheless, Greece is at risk of not meeting the 2020 municipal waste recycling target of 50\%.

At the same time, the recent economic crisis did not allow significant amelioration of environmental protection, and it put heavy pressure on the resources devoted to R&D. Malpractices by local authorities, limited enforcement of laws by national authorities and public unawareness of benefits from innovation have deteriorated due to the crisis. In the past two years, the economy started to show a significant improvement, but it is unknown if this will continue, due to the Covid-19 pandemic.

The Greek economy is dominated by the tertiary sector. Services are dominated by tourism, shipping and the public sector. Compared to the EU average, trade and agriculture are less knowledge intensive (Dianeosis, 2016). In addition, the Greek economy is characterised by the prevalence of SMEs.

The innovativeness of the Greek economy depends largely on imported technology and know-how. Its strengths lie more with organisational and marketing innovations and less with
technical improvements. At the same time, new firms – especially SMEs – find it difficult to have access to capital due to the reluctance of financial institutions to shoulder the risk. Presently, actions to foster research and innovation capacity depend heavily on the ability to absorb EU Structural Funds and EU research funding.
1  |  Eco-innovation performance

The analysis in this section is based on the EU 28 Eco-innovation Index (EcoI Index) for the year 2019. The Eco-innovation index demonstrates the eco-innovation performance of a country compared with the EU average and with the EU top performers. EcoI Index is a composite index that is based on 16 indicators which are aggregated into five components: eco-innovation inputs, eco-innovation activities and eco-innovation outputs as well as environmental outcomes and socio-economic outcomes.

Figure 1 EU28 Eco-innovation Index 2019, composite index

As illustrated in Figure 1, with a score of 75 (on an EU28 average of 100), Greece is getting closer to the EU average in terms of eco-innovation performance. This places Greece only seven positions behind the EU average.

The performance of Greece in each of the five components of the Eco-IS composite index is presented in Figure 2 below. The areas where the country is behind the EU28 average are the eco-innovation inputs, on resource efficiency and on socio-economic outputs. Its performance on eco-innovation activities is close to the EU average. Nevertheless, the eco-innovation outputs are higher than the EU average.

The paragraphs below provide a concise overview of the performance in each of the five components.
Figure 2 Five components of the Eco-innovation index for Greece, 2019

Source: EIO, 2019

Figure 3 All indicators of the Eco-innovation index for Greece, 2019

Source: EIO, 2019
• **Eco-innovation input**

The eco-innovation input index is based on the national indicators of the government’s environmental and energy R&D appropriations and outlays, R&D personnel, and green investment. In this component, Greece scored only 79 with the EU average being 100 in 2018. Compared to 2016, the country increased its performance considerably as in that year Greece’s performance was only slightly higher (57).

More precisely, R&D personnel and researchers employed in Greece in 2018 amounted to 1.37%, showing an increasing of 0.15 percentage points since 2016. The vast majority of R&D personnel and researchers in Greece work in the public sector, either in universities or public research centres. The austerity measures have taken its toll on the public sector, and the overall investments in the private sector have stagnated. Given the austerity measures, in the most optimistic scenario, the labour force involved in R&D is likely to remain the same in the near future, unless there is an improvement in performance in EU research Framework Programmes and a higher allocation of EU Structural Funds on R&D activities.

• **Eco-innovation activities**

In the eco-innovation activities index of the Eco-IS, Greece scores below the EU28 average, with an index of 63 in 2018. In 2017, 18% of small and medium enterprises implemented sustainable products, when the EU average is 25%.

In addition, in 2016, 1,415 firms were ISO 14001 certified in Greece (from 1,324 firms in 2016). This corresponds to 132 firms per million population when the EU average is 172.

• **Eco-innovation outputs**

Greece continues to perform well in terms of eco-innovation outputs with a significant improvement compared to the 2016 assessment. On this component it scores 147 (compared to 142 in 2016). The country however is a weak performer in eco-innovation-related patents, with only 4.68 per million inhabitants in 2016 (17.31 is the EU average). On the other hand, Greece continues to perform above the EU average in eco-innovation-related publications but decreased its performance with 6.89 publications per million inhabitants in 2018 (from 27.45 in 2016).

In addition, in 2018 the country continued to be one of Europe’s leaders in eco-innovation-related media coverage. With 9,086 hits, Greece’s score was 0.99 (EU index 0.35).

• **Resource-efficiency outcomes**

The environmental outcome component is based on combined national statistics on domestic material productivity, domestic water productivity, inland energy productivity, and GHG emissions intensity. With an overall score of 53 (EU index 100). It has increased its score compared to the 2016 assessment, when the country’s score was 50.

In 2018, Material productivity (GDP/DMC) reached 1.88 €/kg (from 1.60 €/kg in 2013) when the EU average was 2.28 €/kg. Water productivity, measured as GDP generated by domestic water consumption, was 19 €/m³ in 2016 (the EU average was 70 €/m³). Greece’s water footprint in the same year was approximately 11.24 million m³/year.

As regards the energy productivity, GDP generated by domestic energy use, Greece performs close to the EU average, with a score of 0.45 (EU average 0.43). In 2018, the country’s productivity reached 10.01 €/tonne of oil equivalent (from 9.20 €/tonne of oil equivalent in 2016). The GHG emissions intensity (amounts of GHG emissions generated per unit of GDP) was at 0.44 kg of CO₂ equivalent/GDP in 2017 (from 0.45 kg of CO₂ equivalent/GDP in 2015), significantly above the EU28 average for the same year (0.28 kgCO₂e/€).
Socio-economic outcomes

Greece continues to have one of the lowest performances in socio-economic outcomes. Eco-industry exports reached only EUR 56 million in 2016 and were 0.17% of all exports (EU average of 0.70%). The performance of the country improved from 2016 when the exports amounted to EUR 32 million (0.73% of all exports). In 2018, employment in environmental protection and resource management activities was 1.29% of total employment across all companies (with an EU average of 1.40%), indicating a decrease since 2016 (2.34%). Finally, in 2018 the size of the eco-industry has decrease, with its revenue being 1.32% of total revenue across all companies (EU average 1.74%). In 2016, the size was significantly higher (2.53%).
2 | Selected circular economy and eco-innovation areas and new trends

Although Greece shows potential in certain eco-innovation sectors, these areas cannot be characterised as fully developed.

The efforts to introduce eco-innovations in the construction sector were slowed down. Due to the economic crisis, companies have sought to explore opportunities afforded by eco-innovations in terms of costs but also in order to cater to clients’ needs focusing (amongst other things) on transparent solar cells which can be used in windows, nanotechnology products to improve indoor air quality and smart meters for energy efficiency.

The integration of such technologies has for the most part been supported by governmental policies such as the building energy efficiency and the energy savings at home programme. Nevertheless, the size of the sector was reduced further due to the economic crisis. The share of the sector dropped from 5% of GDP in 2008 to 2.3% of GDP in 2017 and, as a result, the uptake of eco-innovation also decreased.

Greece has also shown progress in solar energy, mostly as a result of the expansion of photovoltaic installations. By the end of 2019, the installed capacity of photovoltaics, reached 2,828 MWp which covered 7.1% of the electricity consumption and brought the country to the second position in the world, in terms of contribution on electricity generation (HELAPCO, 2019).

The development of photovoltaics experienced a vast increase in previous years. Greece has installed 2.6 GWp of PV with feed-in-tariffs, investing EUR 5 billion, despite the economic crisis (HELAPCO, 2019). As a result, 7% of electricity demand in Greece is covered by PV, bringing Greece to the fourth place worldwide with regard to PV contribution to electricity needs and fifth with regard to installed PV capacity per capita.

In addition, several energy-related research programmes are carried out in universities, in the fields of electricity, renewable energy sources, energy efficiency, energy policy and law, energy and environmental economics, smart networks, environmental management, technologies for energy production, urban and land planning and public health, as well as an increasing number of circular economy EU-funded projects with cutting-edge aspects such as LCA, bio-waste energy utilisation, decentralised water recovery systems in the urban environment and information systems for industrial symbiosis (MINERV, 2016).

The Operational Programme on Competitiveness, Entrepreneurship and Innovation under the new National Strategic Reference Framework (2004-2020) has allocated EUR 28.8 million in the promotion of innovative technologies for environmental protection and resource efficiency in the areas of waste management, water management, soil contamination and air pollution. Innovation in general accounts for 6.1% of the total funds of the National Strategic Reference Forum.

The support includes R&D activities in businesses for the development and uptake of antipollution technologies and monitoring mechanisms.

Another EUR 28.3 million will be allocated to support green growth and eco-innovation both in the private and public sectors. The supported activities include actions to increase the technological know-how on environmental protection and the eco-design of products.

Greece also actively promotes dialogue among stakeholders to bring about change on the ground. The first circular economy dialogue forum took place in April 2019 to gather
businesses, SMEs, researchers, social entrepreneurs, etc. to promote circular business models and innovation (European Commission, 2019).

With reference to digitalisation, Greece has a very poor performance amongst the EU countries as it ranks 27th out of the 28 EU Member States (including the UK) in the European Commission Digital Economy and society Index (DESI) 2020 (European Commission, 2020). The country has demonstrated a limited improvement compared to previous years. Improvements have been achieved in the area of human capital as for the first time the percentage of individuals with at least basic digital skills is over 50%. Nevertheless, the government has set digitalisation as one of its strategic priorities, as a new Ministry of Digital Governance was established in 2019. The objective of the ministry is to transform Greece into ‘digital by default’ by 2023. The COVID-19 pandemic triggered several digital initiatives to address the challenges and barriers of the hygiene crisis and has accelerated the pace of digital transformation.

**KAFIREAS – Greece’s energy transition**

Kafireas is one of Enel Green Power (EGP) investing for sustainable energy in Greece (solar parks and wind farms) to foster the green transition. In 2018, Kafiras received a green light from the Greek government to start the construction of the largest wind facility in Greece.

Composed of seven wind farms on the island of Evia, the facility has a total installed capacity of over 154 MW and will be able to generate approximately 480 GWh per year. Enel’s investment in the project amounted to around EUR 300 million. With Kafireas, Enel’s installed capacity in Greece will reach more than 460 MW, of which approximately 354 MW comes from wind, around 90 MW from solar and about 20 MW from hydro.

The most important technical challenge was about linking Evia – an island – with the mainland in Attica. This called for Kafireas to feature 500 Km of high- and medium-voltage cables – 45 Km underwater and 23 Km on pylons – alongside 67 wind turbines and 2 high-voltage substations. A remotely operated submarine supported the underwater operations while aerial operations were carried out through extensive use of drones.

Consisting of seven wind farms, Kafireas will help the country achieve full decarbonisation by 2028, generating around 480 GWh per year and able to power more than 130,000 households and reduce CO₂ emissions into the atmosphere by 315,000 tonnes per year, equal to that emitted by nearly 67,000 cars.

**Key words:** Wind energy, green transition

**Source:** https://www.enelgreenpower.com/media/press/d/2019/10/enel-inaugurates-kafireas-the-largest-wind-facility-in-greece

**Contact:** info_egphellas@enel.com
Costa Nostrum, Sustainable Beaches

Costa Nostrum provides a Certification Standard for sustainable management and development of Mediterranean beaches. It is a “tool” that can objectively guarantee the sustainable development of Mediterranean beaches, primarily by defending the environment, contributing to the financial development of the region around sustainable Costa Nostrum® beaches and by ensuring social cohesion and prosperity of the citizens of the region.

The innovation of the certification standard Costa Nostrum – Sustainable Beaches rests on the fact that it is based on a sum of indexes: criteria which ensure the actual, all-aspect (economic, social and environmental) sustainable development of beaches.

This certification ensures that there is good environmental waste management, protection of local marine and terrestrial biodiversity, and protection of natural resources.

In order to digitalise the call for action, Costa Nostrum has developed a mobile application to follow the clean-up of beaches.

**Key words:** Environmental protection of oceans, waste management, biodiversity conservation, digitalisation

3 | Barriers and drivers to circular economy and eco-innovation in Greece

3.1. Barriers to eco-innovation

There are several barriers related to political, institutional, cultural, social and economic aspects that prevent the development of eco-innovation in the country.

Greece continues to lack a clear and cohesive framework for the support of eco-innovation and eco-industries despite the improvement through the Action Plan for the Implementation of the National Strategy for Research, Technological Development and Innovation for the period 2015-2021, which promotes specific activities in relation to eco-innovation. Under the Action Plan, efforts are directed towards:

- industrial waste management,
- anti-pollution technologies and industrial symbiosis,
- climate change mitigation,
- access to environmental information and mitigation of natural disasters.

The long-lasting deterioration of the economy imposed difficulties in funding systematically eco-innovation. Austerity policies have had a major impact on public funding leading to stagnation in terms of R&D expenses and delays in payments. Meanwhile, venture capital for eco-innovation is not easily available, with most funding coming from EU Structural Funds.

In terms of competitiveness, the trade balance of high- and medium-tech products is negative, and this prevents by default all types of technological innovation. The poor performance on technological innovation is also demonstrated by the low number of patent applications.

The economic downturn, together with structural problems and bureaucratic obstacles has forced companies to prefer investments with low risks and short-term return over knowledge-based activities whereby default the risks are higher and the return period longer. The small size of Greek companies also acts as a deterrent to further developing and commercialising innovations. Small companies may be more flexible and adapt at seizing innovation opportunities but ultimately a sustainable national framework requires synergies and economies of some scale. Nevertheless, as highlighted in section Error! Reference source not found. only 3.5% of enterprises plan to perform investments.

Education has been significantly affected by the austerity measures (Dianeosis, 2016). The performance of high schools is rather weak, whereas in general the education system is considered as inadequate to generate a competitive working force. The number of doctoral graduates per 1,000 inhabitants (aged 25-34) is also low. Moreover, the research institutes and universities focus their activity on basic research. In addition, the cooperation between public research and businesses is weak. This indicates the absence of networks that are required to boost innovation as well as a lack of large innovative enterprises.

On the administrative side, it is a frequent complaint that Greece’s complex bureaucratic stipulations (despite the progress achieved in the last years) dissuade actors and investors from developing eco-innovations. Moreover, the regulatory framework changes frequently, thus limiting the ability of involved actors to plan and organise investments.

Research in Greece relies to a large extent on external funding, namely, the EU structural Funds and EU research funds (e.g. Horizon 2020). The dependence of Greece on external funds
indicates the difficulty for the country to finance research (either through public funding or private sector investment) due to the deterioration of the economy.

Finally, there remain social barriers towards eco-innovation mostly related to public attitudes and **unawareness of the benefits of innovation** (especially in the area of energy efficiency in the built environment). These sometimes translate into outright distrust of change, especially in the current economic and political climate.

### 3.2. Drivers to eco-innovation

On the other hand, Greece benefits from its significant **natural capital in renewable energies** (solar, wind and tidal), growth in green and alternative tourism, and innovation in agriculture and the food industry. The country has a small number of **leading research institutions** that can contribute in developing an innovation-driven economy (Dianeosis, 2016). A significant number of small and medium ICT and high-tech companies and startups can also help in supporting R&D. In addition, many Greek researchers have migrated to third countries. This diaspora could provide a vital human capital in the future. In addition, significant improvements have been achieved towards the digitalisation of the economy that was initiated by the government elected in 2019 and was further triggered by the COVID-19 pandemic.
4 | Policy landscape in Greece

4.1 Strategic policy framework

The Greek parliament approved on 5 May 2020 a comprehensive environmental bill, which was published in the Official Government Gazette (Issue A 92/07.05.2020) as Law no. 4685/2020 and aims at the protection of the natural environment ensuring sustainable development and terminating the energy dependency of Greece on coal. The Law reforms the existing legal framework, harmonising it with EU Law and “Green Deal” and covers a broad range of environmental issues, some of which are the following:

- Simplification of Environmental Licensing
- Maximisation of Renewable Energy projects
- The update of the Forest Charter
- The valorisation of environmentally protected areas
- Funding for the construction of sewerage network.

Greece continues to focus its policies on the promotion of renewable energies, energy efficiency measures and the new policy on waste management, which can also promote eco-innovations. The aim of the country is to derive 20% of final energy consumption from RES by 2020 as well as to develop new waste management techniques promoted in the New Waste Management Plan (NWMP). Greece does not have any integrated policy framework to promote circular economy.

The National Strategic Reference Framework (NSRF) has allocated approximately EUR 5.18 billion for the period 2014-2020 on activities relating to the environment and another EUR 1.2 billion is allocated on the objective ‘Strengthening Research, Technological Development and Innovation’. Research is expected to be supported directly through the funding of actions supporting innovations in businesses. In addition, as mentioned, the Operational Programme on Competitiveness, Entrepreneurship and Innovation will allocate at least EUR 55 million to support eco-innovation.

The Action Plan for the Implementation of the National Strategy for Research, Technological Development and Innovation for the period 2015-2021 (Action Plan) set the framework for the support of the Greek Government on research and innovation, and the promotion and strengthening the competitiveness of businesses through innovation (MERA). In relation to the environment, the Action Plan promotes innovation in the areas of

- industrial and municipal waste management
- antipollution technologies and industrial symbiosis
- utilisation of the marine environment’s wealth
- and the participation of businesses in efforts to increase resource efficiency and biodiversity.

To this end, the Action Plan aims at the mobilisation of private and EU funds through the new NSRF.
A new programme for Greek innovative enterprises was launched 27 March 2019. ‘Business Innovation Greece’ is specifically designed for the Greek business sector, for enterprises engaged in green industry innovation, blue growth, shipping and ICT. The programme is implemented by Innovation Norway, the Norwegian Government’s most important instrument for innovation and development. The Programme is part of the EEA and Norway Grants 2014-2021.

With funds of EUR 21.5 million, ‘Business Innovation Greece’ will focus on innovation, which is a key component for increasing business efficiency and competitiveness. The programme can fund a wide range of business practices that will improve the economic performance of Greek enterprises and their environmental footprint, in addition to having a positive social impact through the creation of new jobs.

The Business Innovation Greece Programme will seek to stimulate and develop long-term business cooperation between Iceland, Liechtenstein and Norway on one hand, and Norway on the other, based on business development and innovation. The aim is to allocate 75% of the funding to small and medium-size enterprises. Priority will be given to bilateral partnership projects offering added value.

Of this, 40% of the funding will be allocated to Green Industry Innovation, 40% to Blue Growth and 20% to ICT. One of the goals of the programme is the exchange of expertise and best business practices between enterprises from Greece and their partners from the donor countries.

Key words: Circular economy, ICT, environmental information system

Website: https://www.ekt.gr/en/news/22989
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The “Great Walk of Athens”

This initiative was launched in the context of the Covid19 pandemic, to reduce vehicle circulation for a larger pedestrian space. As one of the largest urban initiatives ever held in the capital, the project was approved by the Athens Municipal Council in May 2020.

As such, the authorities will implement more space for bicycles and pedestrians, and new means of public and electrical transports. The initiative will commence on a “pilot basis” at the end of June, with traffic regulations being implemented immediately. The traffic effects of the imposed changes were based on detailed studies taken by the...
National Technical University of Athens.

The vital project – totalling 6.8 km – begins immediately, with the majority of its implementation completed by 2022. The historical areas of Plaka and the streets of Herodes Atticus, Mitropoleos, Ermou and Athens will be converted into areas free from private cars. The Great Walk of Athens will be visible and open to citizens from the first day it starts to be implemented.

The pilot implementation of the project will initially be done with gentle road configurations through signage and colouring of the roads, as well as the installation of plants and urban equipment such as benches.

In the second phase the implementation of the permanent projects will begin. This way, residents and visitors of Athens will be able to see the benefits of this urban initiative and evaluate the implementations and arrangements.

Website: https://greekcitytimes.com/2020/05/12/the-great-walk-of-athens/
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## Annex: Policy strategies and instruments

### Table A1: National Policy strategies

<table>
<thead>
<tr>
<th>Name of the policy document (strategy, action plan, roadmap)</th>
<th>Relevance for eco-innovation among other objectives</th>
<th>Relevance for Circular Economy</th>
<th>Relevance for the innovation chain</th>
<th>Input and process targets</th>
<th>Outcome and impact targets</th>
<th>Relevant implementation or governance system</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Law no. 4685/2020</td>
<td>Eco-innovation among other objectives</td>
<td>The Law reforms the existing legal framework harmonizing it with EU Law and “Green Deal” and covers a broad range of environmental issues</td>
<td>Simplification of Environmental Licensing, Maximisation of Renewable Energy projects, The update of the Forest Charter, The valorisation of environmentally protected areas, Funding for the construction of sewerage network</td>
<td></td>
<td></td>
<td>Greek parliament</td>
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<tr>
<td>2. New Waste Management Plan</td>
<td>Eco-innovation among other objectives</td>
<td>Promotion of renewable energies, energy efficiency measure</td>
<td></td>
<td>The aim of the country is to derive 20% of final energy consumption from RES by 2020 as well as to develop new waste management techniques</td>
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<tr>
<td>3. National Strategic Reference Framework (NSRF)</td>
<td>Eco-innovation among other objectives</td>
<td>Funding of actions supporting innovations in businesses</td>
<td>Allocate approximately €5.18 billion for the period 2014-2020 on activities relating to the environment and another €1.2 billion is expected to be allocated on the objective ‘Strengthening Research, Technological Development and Innovation’</td>
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<tr>
<td>Category</td>
<td>Name of instrument</td>
<td>Overall relevance for eco-innovation</td>
<td>Relevance for CE</td>
<td>Relevance for the innovation chain</td>
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<tr>
<td>Direct financial support for eco-innovation</td>
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<tr>
<td>Grant funding</td>
<td>National Strategic Reference Framework</td>
<td>€1.2 billion is expected to be allocated on the objective ‘Strengthening Research, Technological Development and Innovation’</td>
<td>Approximately €5.18 billion for the period 2014-2020 on activities relating to the environment</td>
<td>Cross-cutting</td>
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<td>Innovation vouchers</td>
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<td>Loans and credits</td>
<td>National Fund for Entrepreneurship and Development</td>
<td>Supports enterprises, particularly small, medium, and innovative enterprises.</td>
<td>The fund aims to support business in the fields of sustainability, energy efficiency (especially in the built environment) and renewable energies</td>
<td>Cross-cutting</td>
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<td>Publicly co-funded venture capital funds (e.g. start-ups)</td>
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<td>Fellowships and postgraduate loans and scholarships</td>
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<td>Equity financing from public banks</td>
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<tr>
<td>Other (indicate)</td>
<td>Business Innovation Greece</td>
<td>Fostering innovation, business efficiency</td>
<td>Green industry innovation, blue growth, shipping and ICT (information and communication technologies)</td>
<td>Cross-cutting</td>
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<td>Indirect support for eco-innovation</td>
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<tr>
<td>Tax incentives/relieves for eco-innovation (businesses, R&amp;D activity)</td>
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<tr>
<td>Category</td>
<td>Name of Instrument</td>
<td>Overall relevance for eco-innovation</td>
<td>Relevance for CE</td>
<td>Relevance for the innovation chain</td>
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<tr>
<td>Tax relief for consumers adopting/purchasing green technology/products</td>
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<td>Taxation of environmentally harmful technologies</td>
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<td>Regulations, targets</td>
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<td>Green public procurement</td>
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<td>Demand subsidies (e.g. eco-vouchers/subsidies for green products)</td>
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<td>Labeling, certification, standards</td>
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<td>Debt guarantees and risk sharing schemes</td>
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<td>Training, advisory, information support, awareness raising</td>
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<td>Technology transfer and business advisory services</td>
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<td>Business incubation/accelerations</td>
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<td>Eco-innovation challenges, prizes, awards</td>
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<td>Training for companies, consumers,</td>
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<td>Public awareness campaigns, platforms, and outreach activities</td>
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<td>other</td>
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<td>Collaborative platforms and infrastructure</td>
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<td>Clusters, networks, platforms (e.g. industrial symbiosis platforms)</td>
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<td>Dedicated support to new research infrastructure (piloting facilities)</td>
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<td>other</td>
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About the Eco-Innovation Observatory (EIO)

The Eco-Innovation Observatory (EIO) is the initiative financed by the European Commission’s Directorate-General for the Environment. The Observatory is developing an integrated information source and a series of analyses on eco-innovation trends and markets, targeting business, innovation service providers, policy makers as well as researchers and analysts.

Visit EIO and DG ENV EcoAP website and register to get access to more information and to access all EIO reports, briefs and databases.

www.eco-innovation.eu

ec.europa.eu/environment/ecoap