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Priority to Nature: An assessment of the implementation

An assessment of the implementation of Greece's National Biodiversity Strategy

Priority to Nature

Assessment of the implementation of Greece's National Biodiversity Strategy

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The project "Priority to nature" is being implemented under the Active citizens fund in Greece by the Green Tank.

The Active citizens fund in Greece is supported through a € 12m grant from Iceland, Liechtenstein and Norway as part of the EEA Grants 2014 – 2021. The program aims to develop the sustainability and capacity of the civil society sector in Greece, and to strengthen its role in promoting and safeguarding democratic procedures, active citizenship and human rights. The Fund Operator for the Active citizens fund in Greece is Bodossaki Foundation in consortium with SolidarityNow.

For more information: www.activecitizensfund.gr

About the EEA Grants:

The EEA Grants are jointly financed by Iceland, Liechtenstein and Norway. The EEA Grants are available to the 13 EU member countries that joined the EU and the European Economic Area (EEA) in 2004, 2007 and 2013 as well as Greece and Portugal. The decision-making body of the EEA Grants is the Financial Mechanism Committee, which is composed of representatives of the Foreign Ministries of Iceland, Liechtenstein and Norway.

The Fund Operator for the Active citizens fund programme in Greece is Bodossaki Foundation in consortium with SolidarityNow.

About Bodossaki:

The Bodossaki Foundation is one of the most respected privately-owned public benefit organizations in Greece. The Foundation is the culminating point of its founder's brilliant course in life and remains the carrying vessel of the values and ideas that he faithfully served throughout his eventful life.

The Foundation was established in 1972 by Prodromos – Bodossakis Athanassiades who decided to donate his entire fortune to support health care, equal opportunities, quality in education, scientific progress and environmental protection. The Foundation has a deep knowledge of social needs in Greece and has administered so far more than €450m supporting its causes.

The Bodossaki Foundation also supports NGOs working with socially vulnerable groups and has lately set the strengthening of civil society as one of its primary objectives. Since 2013 it administers the regranting facilities of the EEA Grants for civil society in Greece.

For more information: www.bodossaki.gr

About SolidarityNow:

SolidarityNow (SN) is a non-governmental organization established in 2013 to respond to the needs, and advocate for the rights of the most vulnerable and marginalized groups, indiscriminately. SN's Headquarters are in Athens, with large operations in Thessaloniki and activities across the country. The organization's vision is to improve people's lives and to empower them to create a just and inclusive society. SN's actions fall under three main strategic priorities: a) Promoting safety and protection; b) Catalyzing livelihoods opportunities; c) Strengthening the independence of civil society and defending open society values. SN has supported 300,000 people to date, both through direct project implementation and through regranting programmes. Through its regranting initiatives, SN has supported 73 different programs and provided a total funding of $\mathbf{\epsilon}$ 14.4M to support Greek civil society organizations.

For more information: https://www.solidaritynow.org/

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Executive Summary

Scientific data on the state of biodiversity at global, European and national levels show that nature is under threat and so is human health and well-being (Chapter I). The COVID-19 pandemic, tragically, has shown how strong and at the same time how vulnerable the relationship between humans and nature is. It is encouraging, however, that in the same reports that the scientific community presents the dramatic state of nature, recommendations for the required response are also identified. If the necessary measures are taken for the conservation, sustainable management and restoration of nature, scientists claim, nature can recover.

2020 had been marked as the year of biodiversity, as it was expected that the global community, under the UN Convention on Biological Diversity, would agree on a new framework of biodiversity policies and measures. However, due to the spread of the COVID-19 pandemic, the relevant negotiations were delayed. An overview of developments in nature conservation policy reveals, on the one hand, that the scientifically substantiated ecological crisis is being recognized at the political level and, on the other, that it is becoming increasingly clear that radical change is needed to address it (Chapter II). Nonetheless, challenges still remain particularly in relation to the response time and the degree of implementation of the commitments made.

In this framework, this report assesses Greece's biodiversity conservation action, starting from the approval of the country's first National Biodiversity Strategy in 2014 until 2020. In particular, the report assesses the implementation progress assess implementation progress for each one of the actions foreseen in the country's first Action Plan under each general or specific target of the National Biodiversity Strategy (Chapter III and Annex of the full report). The results of the assessment per specific target are presented in the following Table.

General and specific targets of the National Biodiversity Strategy	Assessment	
General Target 1 Increasing knowledge about the assessment of biodiversity status		
Specific Target1.1 Facilitate access to scientific knowledge (regarding Greek flora and fauna) and filling the gaps in scientific data		
Specific Target1.2 Facilitating access to information on actions for biodiversity conservation and monitoring, as well as implementing the national strategy		
General Target 2 Conservation of national natural capital and ecosystem restoration		
Specific Target 2.1 Conservation of species and habitat types in Greek terrestrial and marine ecosystems, to promote the goal of sustainability		
Specific Target 2.2. Restoration of important species and habitat types		
General Target 3 Organisation and operations of a National System of Protected Areas and enhancement of the benefits from their management		
Specific Target 3.1 Effective organisation of the administration and management of protected areas and implementing preventive measures in protected areas		
Specific Target 3.2 Application of exemplary and innovative practices in the productive sectors and tourism based on the areas management plans for biodiversity conservation and management		
Specific Target 3.3 Design, and possible integration, of ecological corridors of special designation status and their effective management.		
General Target 4 Conservation of the genetic resources of Greece-Facilitating access to genetic resources-Fair and equitable sharing of the benefits arising from their utilisation		
Specific Target 4.1 Ensuring access to scientific records of genetic resources and filling gaps in scientific data		

Specific Target 4.2. In situ and / or ex situ conservation of Greek genetic resources	
Specific Target 4.3 Facilitating access to genetic resources and the fair and equitable sharing of benefits arising from the utilisation of genetic resources	
Specific Target 4.4 Study, prevention and reduction of the impact of Genetically Modified Organisms on biodiversity	
General Target 5 Enhancing the synergies among the main sectoral policies for the cobiodiversity -Establishing incentives	nservation of
Specific Target 5.1 Effective integration of biodiversity conservation at all levels of spatial planning	
Specific Target 5.2 Minimise impacts of large infrastructure projects	
Specific Target 5.3 Ensure the compatibility of residential and industrial development activities (including conventional energy production) with biodiversity conservation	
Specific Target 5.4 Ensure the compatibility of tourist activities with biodiversity conservation	
Specific Target 5.5 Ensure the compatibility of agricultural, fisheries, and forestry activities with biodiversity conservation	
Specific Target 5.6 Ensure the compatibility of energy production activities and infrastructure (including renewable energy) with biodiversity conservation	
Specific Target 5.7 Ensure the compatibility of mining activities with biodiversity conservation	
Specific Target 5.8 Ensure the compatibility of other activities (like hunting, collection of plants or animals) with biodiversity conservation	
General Target 6 Conservation of landscape diversity	
Specific Target 6.1 Completion of integration of conservation landscape diversity policy into all sectoral policies	
Specific Target 6.2 Maintaining the diversity of the landscape both inside and outside of protected areas	
Specific Target 6.3 Conservation of unique landscapes	
General Target 7 Prevention and minimisation of the impacts of climate change on bi	odiversity
Specific Target 7.1 Maintaining the diversity of the landscape both inside and outside of protected areas	
Specific Target 7.2 Take action so that the components of biodiversity will be able to adapt to climate change	
Specific Target 7.3 Reduce the impacts of actions established to address climate change on biodiversity	
Specific Target 7.4 Enhance the role of forests in mitigating the effects of climate change	
General Target 8 Protection of biodiversity from invasive alien species	
Specific Target 8.1 Prevention, early detection, and controlling the introduction and spread of invasive species.	
Specific Target 8.2 Taking action to restore the impacts of invasive alien species on biodiversity	
General Target 9 Enhancing international cooperation for biodiversity conservation	
Specific Target 9.1 Substantially enhancing the effectiveness of international, regional and transnational cooperation for the conservation of biodiversity and ecosystem services	
Specific Target 9.2 Enhancing transboundary cooperation for biodiversity conservation	
General Target 10 Uprgading the quality and efficiency of public administration on be conservation	iodiversity
Specific Target 10.1 Improving public administration in organisational issues, scientific issues and decision-making processes for the effective implementation of policies,	

measures and legislation on biodiversity		
· · · · · · · · · · · · · · · · · · ·		
Specific Target 10.2 Ensuring adequate funding for biodiversity conservation.		
General Target 11 Intergration of biodiversity conservation into the value system of society		
Specific Target 11.1 Integrating biodiversity issues in formal and non-formal education and the promotion of the value of biodiversity		
Specific Target 11.2 Promoting environmental awareness in biodiversity conservation		
General Target 12 Citizen participation in biodiversity conservation		
Specific Target 12.1 Establishment of cooperation among citizens, scientists and public administration in the decision making process and monitoring of its implementation		
Specific Target 12.2 Promoting the accountability of companies in the context of biodiversity conservation		
General Target 13 Appreciation of ecosystem services and the promotion of the value of Greek biodiversity		
Specific Target 13.1 Valuation of ecosystem functions and services in social and economic terms		
Specific Target 13.2 Promotion of the value of biodiversity and the services provided by biodiversity and ecosystems		
Specific Target 13.3 Promotion, establishment and maintenance of natural green infrastructure		

Table 1. Assessment of the implementation of Greece's National Biodiversity Strategy and its 1stAction Plan during its first implementation period 2014-2020.

Red: minimal progress, **Orange**: partial progress, **Green**: significant progress

From the assessment of the progress during the first implementation period of Greece's National Biodiversity Strategy and its Action Plan (2014-2020), the following conclusions are drawn (Chapter IV):

- In none of the general or specific targets of the National Biodiversity Strategy is significant progress noted.
- Greece follows the global trends regarding the inadequacy of measures to respond to biodiversity loss.
- Even in those targets that are linked to the nature conservation, partial progress is noted.
- Partial or minimal progress is noted in those targets linked to responding to new threats and challenges and promoting new approaches.
- The targets that demonstrate the least implementation progress are those that concern synergies and horizontal integration of biodiversity across the productive sectors.
- The National Biodiversity Strategy has not, to date, become a lever for the transformation of the Greek economy and society
- The Ministry of Environment and Energy's supervisory and coordinating role is absent.
- While the Greek state faces significant difficulties and delays in implementing the Biodiversity Strategy and Action Plan, significant interest and mobilization is noted among other stakeholders, whose actions, however, remain isolated.

The conclusions of the assessment of the implementation progress of Greece's National Biodiversity Strategy and its first National Action Plan can contribute to **the strengthening of the country's national biodiversity policy**. Such a strengthened national policy would correspond to Greece's natural richness.

Given that Greece's national policy is inextricably linked to international and European developments, over the coming period, **Greece must strongly support the elaboration of an ambitious post 2020 framework for biodiversity**.

In parallel, Greece, under the responsibility of the Ministry of Environment and Energy must proceed, without delays, with the timely preparation and adoption of the second National Biodiversity Action Plan and immediately afterwards, with its activation and implementation. In this framework the following recommendations are made:

- The new Action Plan must lead to the implementation of existing commitments, aiming to strengthen nature conservation. Greece has a wide range of institutional and regulatory framework that is implemented inadequately. Consistent implementation of such commitments as the complete designation of protected areas, the conclusion of the land cadaster and the adoption of forest maps are of crucial importance to ensure significant progress in nature conservation.
- Targeted response is needed to explore and address new threats, such as invasive alien species, and to adopt holistic approaches, including taking on actions on the conservation of genetic resources and the integration of actions linked to protecting landscape diversity, areas in which only partial progress is noted.
- Great **emphasis on nature restoration** is needed. This will restore natural ecosystem services, such as flooding protection, will promote nature-based climate solutions, especially in relation to climate adaptation, and will highlight new opportunities for sectors of the economy, which, as of yet, have not been tested in such an approach.
- Beyond above actions, the new Action Plan must include actions that will promote its
 protected areas as models of sustainable development. Hence, it must include
 communications, education and capacity building actions in parallel with actions for the
 creation of a national nature brand (e.g. Nature Greece), which will grant added value to
 local products and offer new opportunities for the tourism sector.
- **Promote the transformation of the Greek economy by integrating biodiversity across sectoral policies**. The new Action Plan must lead to the strengthening of synergies with spatial planning, the primary sector, tourism, etc. Indicatively, setting measurable targets such as halving the use of chemical pesticides or increasing organic farming to cover 25% of all cultivated lands in line with the corresponding targets of the EU Biodiversity Strategy, can speed up the transition of Greece's agriculture to sustainable practices.
- Immediate preparation of the new Action Plan so as to direct in a binding way the planning of the new programming period 2021-2027 and the Recovery Fund. As the infrastructure, agriculture, and fisheries sectors of Greece are dependent, to a great extent, on European funds, the integration of biodiversity conservation and restoration actions must be provided for already during the planning of the new programming period. The coincidence that the drafting of the new Biodiversity Action Plan and the planning of the new co-funded programmes take place at the same time creates a rare opportunity for Greece to plan the transformation of its economy on a sustainable basis. With early planning, Greece can achieve even earlier than envisioned (2024) the commitment to dedicate 7.5% of the annual EU budget to biodiversity, reaping the corresponding relevant benefits.
- Strengthen the position of Greece in the European and global nature policy sphere. In the unfolding European and international developments, Greece must demonstrate a leading role, a par with its biodiversity richness.

For all above actions, the Ministry of Environment and Energy must take on a coordinating and supervisory role, by consolidating the collaboration among all ministries that share responsibility on biodiversity conservation and networking all engaged stakeholders. In addition, the Ministry of Environment and Energy must also create a reliable system of regular monitoring of the implementation progress of the National Biodiversity Strategy and the new Action Plan.

I. Status of nature

The UN Secretary-General began his speech at the recent Biodiversity Summit by saying: "Humanity is waging war against nature". This dramatic phrase captures the ecological crisis that is unfolding before our eyes.

The scientific community has been recording alarming data for years, warning about the loss of biodiversity² and its consequences. Today, however, the data are more disconcerting than ever. In 2019, the conclusions of the global assessment report on the state of nature, which were adopted by the UN Intergovernmental Science-Policy Platform on Biodiversity and Ecosystems (IPBES), reflect the magnitude of the crisis³.

More than one million out of the eight million species already identified, are threatened with extinction. The ratio rises to one in four when focusing on species that have been studied in depth. The rate of change recorded in nature over the past 50 years is unprecedented in human history:

- 75% of the earth's surface has been altered,
- 66% of oceans are subject to significant changes or pressures,
- 85% of wetlands have disappeared.

These changes in land and sea uses, along with the overexploitation of natural resources, as well as climate change, pollution, and alien invasive species lead to the loss of biodiversity richness and range, and put at risk the grid that sustains life in our planet. The degradation of ecosystems leads to the loss of the functions and services they provide, which are indispensable to the well-being of society and the operation of the economy.

Europe is no exception to the aforementioned dire global picture. The European Commission's latest report⁴, based on the detailed technical report of the European Environment Agency⁵, records a perpetual deterioration of the status of nature in the European Union.

The conservation status of 81% of habitat types and 63% of species protected at European level is rated as poor or bad, while only 9% of habitat types and 6% of species show improving trends. All bird species in Europe fare slightly better, with the status of approximately half of the species (47%) being assessed as good. At the same time, however, the breeding population trends have been deteriorating in the past 12 years for 30% of the species.

The threats and pressures recorded in Europe are also in line with the global picture. Intensive agriculture is the leading threat and pressure for both habitats and species; recent studies confirm that the Common Agricultural Policy and the objectives of the European Biodiversity

¹UN Secretary General, 2020. Secretary-General's remarks to United Nations Biodiversity Summit [as delivered]. (30.09.2020) https://cutt.ly/lhWiGvP

²Biodiversity refers to the variability of life on Earth and it is comprised of three levels: ecosystems, species, and genes.

³IPBES.2019, Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES secretariat, Bonn, Germany. https://cutt.ly/NhWiBpa
⁴European commission. 2020. The State of Nature in the European Union. COM(2020) 635 final. https://cutt.ly/WhWi8Kp. The data derive from member states' reports: in accordance to the two main directives on biodiversity conservation in Europe, namely the directive on wild birds (2009/147/EC) and the directive on habitats (92/43/EEC), members states are required to submit a report to the Commission every six years. The data provided are then processed by the European Environment Agency. The most recent six-year period is 2013-2018.

⁵EEA. 2020. The state of nature in the EU: Results from reporting under the nature directives 2013-2018. Report 10/2020. https://cutt.ly/hhWowd2.

Strategy are not aligned⁶. Aside from intensive agriculture, hydrological changes, residential, commercial, industrial, and tourist development, and pollution also constitute major threats to biodiversity in Europe, along with unsustainable forestry practices, poaching, hunting and accidental killing of birds, and overfishing.

The situation in Greece is better compared to the European average, but a large part of Greek biodiversity is under threat⁷. Figures 1 and 2 show the status of habitat types and species, respectively.

The data presented in the report on the state of nature in the European Union show that approximately half of the habitat types (48%) in Greece have a good conservation status, while in the whole EU-28 the respective percentage is a mere 15%. Although significantly fewer habitat types in Greece have a bad status (6% compared to 36% in the EU-28), a significant 42% remain in poor conservation status. The data also show that a large proportion (60%) of the habitats in Greece that have unsatisfactory conservation status show stable (60%) or improving (31%) trends.

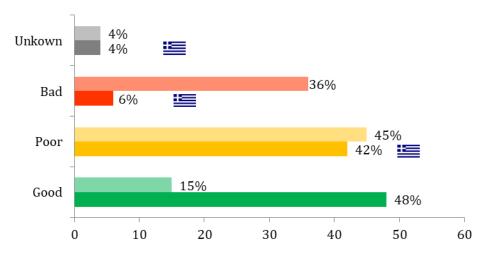


Chart 1: The conservation status of European protected habitat types in Greece and the EU-28. Source: European Environment Agency.

The status of species in Greece is a little better than that of the EU-28; however, there are no great differences, especially since 42% of species in both Greece and the EU-28 have poor conservation status. The percentage of species that is in satisfactory conservation status in Greece is 35% compared to 27% for the EU-28, while, respectively 13% compared to 21% is in bad conservation status. For 10% of the species in both Greece and Europe the situation is assessed as unknown, mainly due to lack of sufficient data. With regards to the populations of species in poor condition, 36% and 12% of species show declining and stable trends, respectively. In only for 4% of species the trend is improving, while the trend is unknown for 48% of species.

⁷Data on biodiversity in Greece are also presented in the State of the Environment reports published by the National Center for the Environment and Sustainable Development (NCESD). NCESD 2018. Greece - The state of the environment 2018. https://cutt.ly/RhWoWcb. NCESD 2020. Greece - the state of the environment 2019 https://cutt.ly/ghWoDUE

⁶Indicatively: European Commission 2019. Evaluation of the impact of the CAP on habitats, landscapes and biodiversity. https://cutt.ly/WhWoobG, European Court of Auditors. 2020. Biodiversity on farmland: CAP contribution has not halted the decline. Special Report 13/2020. https://cutt.ly/XhWos3f

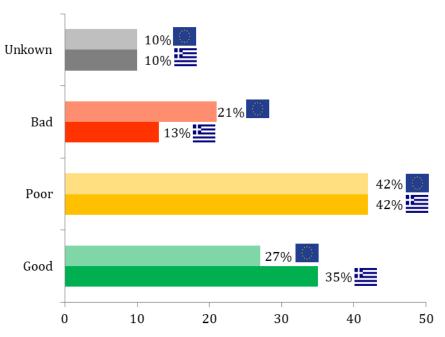


Chart 2: The conservation status of European protected species in Greece and the EU-28. Source: European Environment Agency

The status of birds is similar. Charts 3 and 4 below present the short- and long-term trends of breeding populations in Greece and the EU-28. The greatest differentiation is recorded in the percentage of breeding birds that show steady trends in Greece (60%) vs. the EU-28 (28%), based on the course of the past 12 years; a similar difference is observed following the assessment of the past 38 years, with respective rates of 42% and 18%.

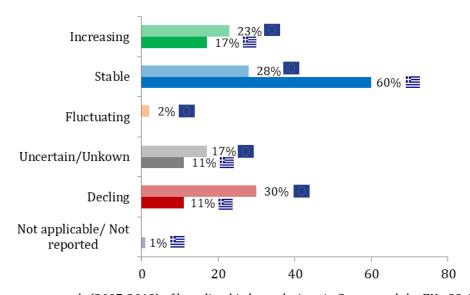


Chart 3: Short-term trends (2007-2018) of breeding bird populations in Greece and the EU - 28. Source: European Environment Agency

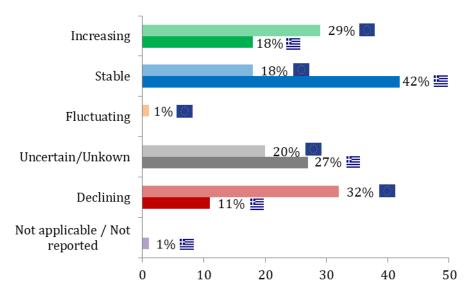


Chart 4: Long-term trends (2080-2018) of breeding bird populations in Greece and the EU - 28. Source: European Environment Agency

In line with international trends, in Greece too, the most important pressures and threats to habitats and species relate to changes in land use; in particular threats from agriculture are responsible for 58% of pressures and 54% of threats to habitat types and 46% of pressures and threats to species. Residential, commercial, industrial, and tourist development rank second within the categories of threats and pressures for both habitat types (accounting for 52% of pressures and threats) and species (accounting for 28% of pressures and 32% of threats). It is characteristic that the highest percentages of habitats in poor conservation status in Greece is recorded in coastal habitat types, namely in areas that endure high pressures for residential development. These changes in land use are also reflected by other indicators, such as the change in land coverage, with an increase in urban land and a decrease in shrubs, namely areas with low vegetation, and rural land⁸.

Particularly for marine habitats, residential, commercial, industrial, and tourist development, pollution, and the exploitation of living resources account for 75% of the most important threats and pressures. The major threats and pressures on marine species are the exploitation of living resources at a rate of 67% (pressures and threats) and climate change at a rate of 39% (pressures) and 50% (threats).

The brief and by no means exhaustive presentation of the state of biodiversity at a global, European and national level attempted in this section demonstrates that nature is under threat, and, therefore, so is human health and well-being. Moreover, the COVID-19 pandemic gravely revealed how strong -albeit vulnerable- the relationship between man and nature is. Although many different diseases exist in nature, their spread and evolution into pandemics is due to anthropogenic changes to the environment⁹. Therefore, preventing the spread of new diseases and ensuring public health depends to a large extent on the preservation and restoration of nature's health.

On an encouraging note, the reports by the scientific community that present the dramatic state of nature also identify and include proposals for the required response. If the necessary measures are taken for the conservation, sustainable management, and restoration of nature,

⁸NESCD. 2020. Greece - The state of the environment -2019. https://cutt.ly/ghWoDUE

⁹IPBES. 2020. Workshop Report on Biodiversity and Pandemics of the Intergovernmental Platform on Biodiversity and Ecosystem Services. IPBES Secretariat. Bonn, Germany. https://cutt.ly/ohWoZjn

then, as scientists claim, nature can recover. Indeed, numerous successful actions have assisted in the recovery of wildlife species populations, even when the latter were on the verge of extinction. The recent developments in nature policy, which will be presented in the next section, show that now is the right time to take action, and that there is reason to be optimistic.

II. Nature policy developments

International developments

2020 had been marked as the year for biodiversity¹⁰. During 2020, the global community was expected to agree on a new framework for biodiversity policies and measures, in the context of the UN Convention on Biological Diversity. Due to the spread of the COVID-19 pandemic, the relevant negotiations were delayed; the date of the conference of the Parties to the Convention, originally scheduled for October 2020 in Kunming, China, was moved to May 2021¹¹.

The processes that are currently unfolding concern the latest chapter of the global community's commitments for the conservation of biodiversity that will be valid after 2020.

Nature conservation measures had been applied by various countries in the late 19th century, and more intensively so during the second half of the 20th century; nonetheless, states' commitments form part of an overall long-term global strategic textbook with measurable objectives only as of 2002. Specifically, the first strategic framework¹², with an eight-year duration, was drawn up ten years after the adoption of the Convention on Biological Policy.

In 2010, acknowledging that the targets set for a significant reduction in biodiversity loss had not yet been met, and that, on the contrary, scientific evidence showed a deterioration in the state of nature, the global community renewed its commitment. The 10th Conference of the States Parties, held in Nagoya, adopted a new ten-year framework¹³; entitled "Living in harmony with nature", and inspired by a long-term vision for 2050¹⁴ this ambitious plan set 5 goals¹⁵ further divided into 20 headline targets -the so-called Aichi Biodiversity Targets. The objective of this ten-year plan was not only to reduce biodiversity loss, but also to bring it to a halt by 2020. Along with the implementation of actions to achieve the new biodiversity targets, 2011 marked the beginning of the UN Decade on Biodiversity¹⁶.

2020 marks the end of this ten-year effort. In September 2020, the Global Biodiversity Outlook report was published¹⁷, assessing the progress made towards the targets set in 2010. It concludes that none of the 20 Aichi Biodiversity Targets has been fully met.

¹⁰IISD. 14.1.2020. "2020's Buzzword is Nature" https://cutt.ly/EhWoCOd. The video message by the Executive Director of the UN Environment Program on February 10th 2020 is also indicative: https://cutt.ly/yhWoN4X.

¹¹Convention on Biological Diversity.157.2020. "New dates announced for UN Biodiversity Convention meetings crucial to development of the post-2020 global biodiversity framework" Press Release https://cutt.ly/0hWo11u.

¹²Convention on Biodiversity. 2002. Decision. COP 6 Decision VI/26 - Strategic plan for the Convention on Biological Diversity (2002-2010). https://cutt.ly/0hWo2Hd.

¹³Convention on Biodiversity. 2002. Decision. UNEP/CBD/COP/DEC/X/2. - The Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets. https://cutt.ly/EhWo4qv.

 $^{^{14}}$ Vision on biodiversity by 2050: "By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."

¹⁵The five Strategic Targets: A) Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society, B) Reduce the direct pressures on biodiversity and promote sustainable use, C) Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity, D) Enhance the benefits to all from biodiversity and ecosystem services, E) Enhance implementation through participatory planning, knowledge management and capacity-building.

¹⁶ United Nations Decade on Biodiversity 2011-2020. https://cutt.ly/ZhWo60j.

¹⁷Secretariat of the Convention on Biological Diversity, 2020. Global Biodiversity Outlook 5.https://cutt.ly/UhWpw7Y.

The fact that the targets have not been achieved justifies nature's poor state. Despite the commitments, the measures taken are not sufficient, not implemented, or not implemented at an adequate speed and intensity or to the extent required in order to contribute to the conservation of nature, it's sustainable management, and ultimately to its recovery. With future trends predicting a further deterioration of the ecological crisis, time is running out for nature to recover.

The desired goals are well established, hence the actions to be implemented must aim at bringing radical changes in production and consumption, as well as to the corresponding set of policies and regulations. The main pillars are the following: designation of more territories as protected areas, restoration of degraded ecosystems, integration of biodiversity conservation into all sectors of the economy, abolishment of subsidies and redefinition of funding to support projects with good practices, and continuous enrichment of the available knowledge. In fact, many solutions and measures are already being implemented in this direction with encouraging results, but on a scale that cannot yet reverse global trends. This effort must now be intensified in order to transform both the economy and society, and achieve the transition into a sustainable future that gives priority to nature.

An initial approach to the new post-2020 biodiversity policy framework was announced by the Secretariat of the Convention on Biological Diversity in January 2020¹⁸. The draft was revised in August 2020¹⁹ and is expected to be finally adopted at the Convention Conference scheduled to take place in May 2021.

The new framework aims to specify the necessary immediate transformational actions, which are to be implemented with the participation of national governments, as well as all stakeholders, and society as a whole. It maintains the vision for 2050 that was formulated in 2010, and specializes in four long-term goals that aim at:

- the conservation of biodiversity
- the sustainable management of natural resources
- the equitable distribution of benefits arising from the utilization of genetic resources
- the facilitation of access to appropriate and adequate implementation instruments to achieve all goals.

The new targets for 2030 follow the same structure. These 20 new targets seek to stabilize, rather than completely halt, the loss of biodiversity by 2030. Although this shows less ambition than before, it is nevertheless realistic: with the continuing deterioration of the state of biodiversity and ecosystems recorded by scientists, it is no longer possible to achieve the goal of halting biodiversity loss by 2030. The new policy framework does not seek to constitute a general wish list, but, instead, to be a binding roadmap for immediate and urgent action, setting specific milestones and new targets to be achieved by 2030, so that nature can recover over the next 20 years, by 2050. In fact, already in March 2019, the UN General Assembly had set the tone for the direction to be followed, by declaring the decade 2021-2030 as the Decade on Ecosystem Restoration²⁰.

¹⁸Convention on Biological Diversity 2020. "Zero Draft of the Post-2020 Global Biodiversity Framework" (CBD/WG2020/2/3) 6.1.2020. https://cutt.ly/jhWpoey.

¹⁹Convention on Biological Diversity. 2020. "Update to the Zero Draft of the Post-2020 Global Biodiversity Framework" (CBD/POST2020/PREP/2/1) 17.8.2020. https://cutt.ly/vhWpaU3.

²⁰UN General Assembly. 2019. United Nations Decade on Ecosystem Restoration (2021–2030) (A/RES/73/284). 1.3.2019.

Indicatively here are several of the targets that have been proposed for 2030:

- Carry out spatial planning for [50%]²¹ of the planet's land and sea areas, preserving most of the virgin and wild areas intact, and seeking the restoration of [X%] natural ecosystems. (Target 1)
- Designate 30% of the planet's land and sea areas as protected, and ensure their effective management. (Target 2)
- Manage and effectively control gateways and pathways of invasive alien species with the aim of reducing new introductions by [50%] and controlling or eliminating invasive species by [50%]. (Target 5)
- Support the productivity, sustainability, and resilience of biodiversity in agricultural and other productive ecosystems, through their conservation and sustainable use, reducing productivity gaps by at least [50%]. (Target 9)
- Amplify the benefits of biodiversity and green/blue spaces for public health and well-being, by increasing the percentage of individuals who have access to such spaces by at least [100%], especially for city dwellers. (Target 11)
- Achieve a reduction of negative impacts on biodiversity by at least [50%], by ensuring sustainable production practices and supply chains. (Target 14)
- Redirect, reuse, reform, or eliminate incentives that are harmful to biodiversity, including a [X%] reduction of harmful subsidies, and ensure that incentives, public or private, financial or regulatory, are either positive or neutral for biodiversity. (Target 17)

The chapter on the mechanisms for the implementation of the new framework is also considered crucial; the provisions for mobilization of sufficient resources, capacity training, enrichment of knowledge, and transfer of know-how give an operational tone to the political commitments. In addition, the new text proposes a transparent monitoring mechanism with specific indicators. The national strategies and action plans for biodiversity, as well as the national progress reports to be submitted by the countries to the Secretariat of the Convention, assume a key role.

At the September 2020 Biodiversity Summit, the UN Secretary-General once again called on the world community to take immediate and urgent action on biodiversity²². The participating state leaders and representatives, as well as other stakeholders, expressed their common concern regarding the substantiated deteriorating state of nature, and agreed on the need to formulate an ambitious post-2020 biodiversity policy framework with specific and measurable targets²³. In fact, several of the leaders had already co-signed the "Leaders Pledge for Nature", acknowledging that the planet is in a state of emergency, and renewed their commitment to take immediate action²⁴. At the same time, several participants noted the magnitude of the challenge and stressed that a necessary condition for achieving the new targets is to secure the means for both implementation and implementation progress monitoring.

European developments

While the new global strategic framework will be finalized in the upcoming Conference in China, the European Union maintains its leading role in biodiversity conservation policy.

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 $^{^{21}\}mbox{The}$ brackets denote that these percentages are still under negotiation.

²²UN Secretary-General 2020. Secretary-General's remarks to United Nations Biodiversity Summit [as delivered]. (30.09.2020)https://cutt.ly/lhWiGyP

²³ United Nations General Assembly. 2020. United Nations Summit on Biodiversity – 30 September 2020 - Summary of the President of the General Assembly https://cutt.ly/UhWphTg.

²⁴Leaders Pledge for Nature.2020. https://cutt.ly/fhWplSW.

Developments in international and European biodiversity conservation have been strongly interacting for decades. The Convention on Biological Diversity at the UN Summit and Directive 92/43/EEC on Habitats were adopted in the same year. The latter, together with Directive 2009/147/EC on wild birds, are EU's main legal instruments for biodiversity conservation. In line with its commitments to the UN Convention, the European Commission announced the first European Biodiversity Strategy in 1998²⁵, which was accompanied by four Action Plans for specific sectors²⁶ in 2001, shortly before the adoption of the first global strategic plan. Immediately after the global commitment to address biodiversity loss in Nagoya in 2010, Europe unveiled its own Strategy to 2020²⁷. The new European vision for 2050 and the primary target for 2020 had already been pre-approved²⁸.

This Strategy is currently under assessment²⁹. However, the available scientific data show that despite any progress made³⁰ the status of nature has not improved, while pressures remain; thus, there is an imperative need to strengthen the actions³¹.

In December 2019, the new European Commission announced the European Green Deal³² as the new development strategy of the European Union for the next decade. Through the green transformation of the European economy, Europe has committed to become the first climate-neutral continent by 2050, and at the same time preserve and restore nature. In fact, in view of the global conference, both the Council³³ and the European Parliament³⁴ had called on the Commission to speed up the presentation of its proposals for the post-2020 biodiversity conservation framework, and to support a truly ambitious outcome at the international negotiations.

Indeed, in May 2020, the European Commission presented the new EU Biodiversity Strategy to 2030³⁵. The European Biodiversity Strategy has been approved by the Environment Council³⁶.

²⁵European Commission. 1998. Communication from the Commission to the Council and the European Parliament. On a European Community Biodiversity Strategy. (COM (1998) 42 final). https://cutt.lv/lhwpmxD.

²⁶European Commission. 2001. Communication from the Commission to the Council and the European Parliament - Biodiversity Action Plans in the areas of Conservation of Natural Resources, Agriculture, Fisheries, and Development and Economic Co-operation (COM/2001/0162 final) https://cutt.ly/ZhWpEfR.

²⁷European Commission. 2001. Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee off the Regions. Our life insurance, our natural capital: an EU biodiversity strategy to 2020 (COM /2011/0244 final). https://cutt.ly/ZhWpYd1

²⁸Council of the European Union. 2010. Council conclusions - Biodiversity: Post-2010 EU and global vision and targets and international ABS regime. 16.3.2010. (7536/10). https://cutt.ly/QhWpA9z

²⁹European Commission. 2020. EU Biodiversity Strategy to 2020 – Evaluation of the strategy. https://cutt.ly/whWpF7b.

³⁰European Commission 2015. Report from the Commission to the European Parliament and the Council. The midterm review of the EU Biodiversity Strategy to 2020. (COM (2015) 478 final). https://cutt.ly/jhWp[IX]

 $^{^{31}}$ UNEP – WCMC, IEEP, Trinomics. 2019. EU Conference on Biodiversity and Ecosystem Services: A common agenda to 2020 and beyond - Brussels, Belgium 23rd - 24th May 2019. $\frac{1}{100}$

³²European Commission. 2019. Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee off the Regions. The European Green Deal (COM/2019/640 final). https://cutt.ly/phWpMXt

³³Council of the European Union. 2018. The Convention on Biodiversity - Council conclusions. 9.10.2018. (12948/18)https://cutt.ly/1hWp0ZI. Council of the European Union 2019. Preparation of the post-2020 global biodiversity framework - Council conclusions. 19.12.2019. (15272/19) https://cutt.ly/5hWp9BW

³⁴European Parliament. 2020. European Parliament resolution of 16 January 2020 on the 15th meeting of the Conference of Parties (COP15) to the Convention on Biological Diversity (2019/2824(RSP)). (P9_TA(2020)0015) 16.1.2020. https://bit.ly/3gl5lPc

³⁵European Commission 2020 Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee off the Regions. EU Biodiversity Strategy for 2030. Bringing nature back into our lives. (COM/2020/380 final). https://cutt.ly/7hWau]N.

Given the COVID-19 pandemic that is spreading around us, and the resulting economic crisis, the new Biodiversity Strategy prioritizes nature conservation as an integral part of our physical and mental health and wellness, but also as a foundation for the recovery of the European economy. At the same time, nature is also identified as a vital ally in addressing the climate crisis.

Entitled "Restoring Nature in Our Lives", the Biodiversity Strategy to 2030 allows the European Union to lead the way in achieving the common global vision for 2050. In this context, Europe aims to have biodiversity already in a recovery trajectory by 2030. The structure of the new strategy is based on two equally important pillars: the expansion of the network of protected areas and the development of an ambitious nature restoration plan. These two pillars further specialize into more specific commitments and measurable targets.

With regard to nature conservation, the Strategy provides for an increase in protected areas to cover 30% of the EU land and sea area; together with the designation of ecological corridors, this shall lead to the creation of a coherent trans-European network of protected areas. Moreover, it provides for one third of the protected areas, namely 10% of the EU area, to be assigned a strict protection status.

With regard to nature restoration, in addition to the commitments for a new legal framework with legally binding targets, the fundamental principle of the Strategy dictates that there should be no deterioration in the status and conservation trends of protected species and habitats. Great emphasis is placed on the transformation of the agricultural sector, as agriculture constitutes both the main threat and pressure on nature. It is no coincidence that the Biodiversity Strategy was announced together with the new "Farm to Fork" Strategy³⁷ which seeks the transition of agriculture to sustainable practices. In addition to synergies, the Biodiversity Strategy seeks to set specific measures for agricultural land: a 50% reduction in total chemical pesticide use -and more specifically with regard to harmful pesticides, the reinstatement of high diversity landscape features to at least 10% of agricultural land, and a commitment that 25% of agricultural land will be allocated to organic crops.

In addition to the agricultural sector, the Strategy provides for, inter alia, actions to better integrate biodiversity into the energy sector, spatial and urban planning, and fisheries. It also includes major nature conservation initiatives, such as the planting of 3 billion trees, and the restoration of at least 25,000 km of rivers to a status of free flow, in response to the second major threat to European biodiversity, which is related to changes in the hydrological status of ecosystems.

The 2030 Strategy not only sets new targets, but seeks to establish a new governance framework, with strict implementation monitoring and assessment. Furthermore, it provides for the participation of all stakeholders, with particular emphasis on the contribution of entrepreneurship and investment. The implementation of the Strategy targets is expected to require at least 20 billion euros per year.

³⁶Council of the European Union. 2020. Council adopts conclusions on the EU biodiversity strategy for 2030. Brussels. 23.10.2020 (11829/20). https://cutt.ly/qhWaU5N

³⁷European Commission 2020 Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee off the Regions. A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system (COM COM/2020/381 final). https://cutt.ly/UhWsrZE

An encouraging fact with regard to the Strategy's implementation is that the political agreement reached on 10 November 2020, in the context of the tripartite negotiations on the new Multiannual Financial Framework 2021-2027, included a commitment that, as of 2024 and 2026, respectively, 7.5% and 10% of annual spending will be dedicated to biodiversity³⁸. Nevertheless, the final decision approving the new EU multiannual budget remains pending.

An overview of developments in nature conservation policy reveals that the ecological crisis documented by scientists is being recognized at the political level; in addition, it is becoming increasingly clear that this crisis can only be addressed through radical changes. However, both the response time and the extent of implementation of the commitments made, still remain uncertain.

³⁸European Parliament. 2020. Compromise on long-term EU budget: EP obtains €16 billion more for key programmes Press Release 10.11.2020. https://bit.ly/3710ML5.

III. Greece's biodiversity conservation action

Greece's National Biodiversity Strategy

Greece has particular natural richness³⁹ and a wide range of institutional instruments for the protection of the natural environment, deriving from its Constitution and the European acquis. Furthermore, Greece has ratified several international and regional conventions that aim to preserve specific characteristics of nature or to address specific threats. However, over the years it has not developed a comprehensive approach and an organized framework of actions to halt biodiversity loss.

Article 6 of the UN Convention on Biological Diversity provides that State Parties shall develop strategies for biodiversity; national strategies assist countries in the design, planning, and implementation of actions to meet their commitments in all relevant sectors. Despite the aforementioned provision and the fact that Greece has ratified the Convention since 1994⁴⁰, it took 20 years to formulate and adopt the National Strategy for Biodiversity⁴¹. The adoption of the first National Biodiversity Strategy is an important milestone in the national policy for biodiversity conservation, precisely because it addresses this gap that had existed for years. The National Strategy has a fifteen-year duration, starting in the middle of the UN Decade on Biodiversity, and spanning through almost the entire UN Decade on Ecosystem Restoration, as it will formally conclude in 2029. Its structure follows that of the strategic framework of both the Convention on Biodiversity and the EU Strategy for 2020. It includes a long-term vision for 2050 and a general aim for 2029, with an intermediate milestone set for 2026.

The 2050 vision for Biodiversity: By 2050, biodiversity in Greece and the ecosystem services it provides – the country's natural capital – are protected. This protection is warranted because of the intrinsic value of biodiversity, along with its essential contribution to human well-being and economic prosperity, and aims to avoid catastrophic changes caused by the loss of biodiversity. In this context, the value of ecosystem services and functioning are highlighted and the functions that have been degraded are restored.

The Aim of the Biodiversity strategy is to halt the loss of biodiversity and the degradation of ecosystem services in Greece by 2026, and restore them, as far as it is feasible, while communicating the value of biodiversity as our national capital, and stepping up the Greek contribution towards averting global biodiversity loss.

The vision for biodiversity in Greece emphasizes the need for conservation, presenting the inherent and functional reasons that render it indispensable, while incorporating the concept of restoration. In line with this vision, the main aim of the Strategy is to halt biodiversity loss, with a milestone set in 2026, namely six years after the deadline set for the respective international and European targets. Less emphasis, albeit particular significance is placed on biodiversity restoration, with the relevant targets set to be achieved by the end of the Strategy. In addition, the Strategy to 2029 includes two more objectives. First, to promote biodiversity as national capital, which mainly concerns the communication of the value of biodiversity, but also its integration in all sectors of the economy and society; secondly, to enhance Greece's contribution

³⁹Concise report of biodiversity richness in Greece. PD 40332/2014. National Strategy for Biodiversity (B 2383), NCESD. 2018. Greece - State of the Environment 2018. https://cutt.ly/RhWoWcb

⁴⁰Law 2204/1994 Ratification of the Convention on Biological Diversity (A 599).

⁴¹MD 40332/2014. National Strategy for Biodiversity (B 2383).

to the efforts of the global community, by actively engaging in the formulation of nature preservation policies and practices.

The Strategy is divided into 13 general and 39 specific targets, which are also aligned with international and European texts. In fact, the Strategy itself contains a comparative table showing the correspondence of the specific targets with those of the Strategic Framework of the UN Convention and the EU Strategy for the decade. The targets of the Strategy concern: the protection of biodiversity at the level of ecosystems, species, and genetic resources; the cross-sectoral integration of the Strategy, mainly by promoting the sustainable use of natural resources; and the management of pressures and threats, direct and indirect, that lead to biodiversity loss.

General targets

- 1 Increasing knowledge about the assessment of biodiversity status
- 2 Conservation of national natural capital and ecosystem restoration
- 3 Organisation and operations of a National System of Protected Areas and enhancement of the benefits from their management
- 4 Conservation of the genetic resources of Greece-Facilitating access to genetic resources-Fair and equitable sharing of the benefits arising from their utilisation
- 5 Enhancing the synergies among the main sectoral policies for the conservation of biodiversity Establishing incentives
- 6 Conservation of landscape diversity
- 7 Prevention and minimisation of the impacts of climate change on biodiversity
- 8 Protection of biodiversity from invasive alien species
- 9 Enhancing international cooperation for biodiversity conservation
- 10 Upgrading the quality and efficiency of public administration on biodiversity conservation
- 11 Integration of biodiversity conservation into the value system of society
- 12 Citizen participation in biodiversity conservation
- 13 Appreciation of ecosystem services and the promotion of the value of Greek biodiversity

The Ministry of Environment and Energy (MEEN)⁴² is responsible for the implementation of the Strategy and the coordination with the relevant competent ministries. The Strategy is structured to be implemented through five-year action plans. The first Action Plan for the implementation of the National Strategy (2014-2018) was approved along with the National Strategy. It includes approximately 100 specific actions per specific Strategy target. In fact, the first Action Plan remained in force until 2020, in order to coincide with the review of the European and international frameworks for biodiversity, and allow for coordination with the latter.

Methodology: the assessment of action implementation in Greece

With the completion of the first implementation period of the National Biodiversity Strategy, and while significant developments in nature conservation policy are taking place, it is necessary to carry out an evaluation of the progress made to date. This report seeks to contribute in this direction by presenting the findings of our assessment.

 $^{^{42}}$ In 2014, when the Strategy was adopted, the Ministry was officially called "Ministry of Environment, Energy, and Climate Change".

The assessment evaluated the implementation progress for all actions corresponding to the general and specific targets of the Strategy, as provided by the first Action Plan. In particular, progress was assessed on the basis of publicly available data and information. During the search for data and information, greater emphasis was placed on the actions of the state and the Ministry of Environment and Energy, as, according to the Strategy itself, this party is responsible for the Plan's implementation. The progress report presented in the Annex provides short comments and a progress score for each action.

The scoring scale below is an adjustment of the corresponding scales used in the mid-term review of the EU Biodiversity Strategy to 2020⁴³ and the Global Biodiversity Outlook report⁴⁴. The values presented in the colored cells correspond to the degree of progress, so that the overall course of implementation of each specific target can be evaluated, as presented in the results of the assessment.

Significant Progress : The action has been completed or is at a very advanced stage of implementation; it contributes to meeting the specific target.	(3)
Partial Progress : The action has been activated, however, without contributing towards the general target; without further action, it will not contribute towards the specific target.	(2)
Minimal Progress : There has been no action or activation, or it is so insignificant, that it has no effect on the target.	(1)

It should be noted that the National Strategy itself stipulates an evaluation report of the Strategy every five years, to be supported by the development of a monitoring system, also provided by the Strategy (see Action 1.1.4). Exceptionally, the first evaluation period is extended until 2020 to coincide with the completion of the implementation of the global and European Biodiversity Frameworks. In order to support the design of this monitoring system, the Strategy has included certain initial indicators per General Target; these however, do not cover all the specific targets of the fifteen-year plan, nor do they correspond to the actions of the first Action Plan. To date, the MEEN has neither developed the monitoring system, nor has it completed the initial indicators, while it has no systematic way of collecting data for their completion. Certain indicators have been selected from the chapter on biodiversity and nature of the Report on the state of the environment in Greece, as they can be employed in the assessment of certain specific targets of the National Strategy⁴⁵.

In 2019, the Directorate of Natural Environment Management and Biodiversity of the MEEN initiated the process of collecting information on the activities and actions related to the Action Plan that have been implemented by various stakeholders, in order to prepare an evaluation report. Data collection is complete; however, the study has not yet been published.

is necessary for the timely achievement of the target); Green: on track towards the achievement of the target (the current course will lead to the achievement of the target by 2020). European Commission. 2015. Report from the Commission to the European Parliament and the Council. The mid-term review of the EU Biodiversity Strategy to 2020. (COM (2015) 478 final. https://cutt.lv/jhWpIIX.

⁴³The scale used in the mid-term review by the EU was: Red: no significant overall progress (a much bigger effort is necessary for the timely achievement of the target); Orange: poor progress in target implementation (a bigger effort

⁴⁴The scale used in the Biodiversity Outlook Report: Blue: the target has been met and surpassed; Green: the target has been met or will be met by 2020; Yellow: progress is noted by the target has not been met; Red: no significant change is noted; Purple: trends show deviation from the target; Grey: not enough data available for assessment. Secretariat of the Convention on Biological Diversity. 2020. Global Biodiversity Outlook 5. https://cutt.lv/UhWpw7Y. ⁴⁵NCESD. 2018. Greece - State of the Environment, 2018. https://cutt.ly/RhWoWcb. The indicators presented in this report relate to specific targets: 2.1, 3.1-3.3, 5.2-5.8, 6.2-6.3, 7.2, 7.4 and 8.2.

Assessment results

Table 1 below presents the assessment of the implementation of the Biodiversity Strategy and the $1^{\rm st}$ National Action Plan per specific target. The detailed results per action are presented in the Annex.

General and specific targets of the National Biodiversity Strategy	Assessment
General Target 1 Increasing knowledge about the assessment of biodiversity status	
Specific Target1.1 Facilitate access to scientific knowledge (regarding Greek flora and fauna) and filling the gaps in scientific data	
Specific Target1.2 Facilitating access to information on actions for biodiversity conservation and monitoring, as well as implementing the national strategy	
General Target 2 Conservation of national natural capital and ecosystem restoration	
Specific Target 2.1 Conservation of species and habitat types in Greek terrestrial and marine ecosystems, to promote the goal of sustainability	
Specific Target 2.2. Restoration of important species and habitat types	
General Target 3 Organisation and operations of a National System of Protected Area enhancement of the benefits from their management	s and
Specific Target 3.1 Effective organisation of the administration and management of	
protected areas and implementing preventive measures in protected areas	
Specific Target 3.2 Application of exemplary and innovative practices in the productive sectors and tourism based on the areas management plans for biodiversity conservation and management	
Specific Target 3.3 Design, and possible integration, of ecological corridors of special designation status and their effective management.	
General Target 4 Conservation of the genetic resources of Greece-Facilitating access t	o genetic
resources-Fair and equitable sharing of the benefits arising from their utilisation	
Specific Target 4.1 Ensuring access to scientific records of genetic resources and filling gaps in scientific data	
Specific Target 4.2. In situ and / or ex situ conservation of Greek genetic resources	
Specific Target 4.3 Facilitating access to genetic resources and the fair and equitable sharing of benefits arising from the utilisation of genetic resources	
Specific Target 4.4 Study, prevention and reduction of the impact of Genetically Modified Organisms on biodiversity	
General Target 5 Enhancing the synergies among the main sectoral policies for the co	nservation of
biodiversity -Establishing incentives	
Specific Target 5.1 Effective integration of biodiversity conservation at all levels of spatial planning	
Specific Target 5.2 Minimise impacts of large infrastructure projects	
Specific Target 5.3 Ensure the compatibility of residential and industrial development activities (including conventional energy production) with biodiversity conservation	
Specific Target 5.4 Ensure the compatibility of tourist activities with biodiversity conservation	
Specific Target 5.5 Ensure the compatibility of agricultural, fisheries, and forestry activities with biodiversity conservation	
Specific Target 5.6 Ensure the compatibility of energy production activities and infrastructure (including renewable energy) with biodiversity conservation	
Specific Target 5.7 Ensure the compatibility of mining activities with biodiversity conservation	

Specific Target 5.8 Ensure the compatibility of other activities (like hunting, collection of plants or animals) with biodiversity conservation		
General Target 6 Conservation of landscape diversity		
Specific Target 6.1 Completion of integration of conservation landscape diversity policy into all sectoral policies		
Specific Target 6.2 Maintaining the diversity of the landscape both inside and outside of protected areas		
Specific Target 6.3 Conservation of unique landscapes		
General Target 7 Prevention and minimisation of the impacts of climate change on biodiversity		
Specific Target 7.1 Maintaining the diversity of the landscape both inside and outside of protected areas		
Specific Target 7.2 Take action so that the components of biodiversity will be able to adapt to climate change		
Specific Target 7.3 Reduce the impacts of actions established to address climate change on biodiversity		
Specific Target 7.4 Enhance the role of forests in mitigating the effects of climate change		
General Target 8 Protection of biodiversity from invasive alien species		
Specific Target 8.1 Prevention, early detection, and controlling the introduction and spread of invasive species.		
Specific Target 8.2 Taking action to restore the impacts of invasive alien species on biodiversity		
General Target 9 Enhancing international cooperation for biodiversity conservation		
Specific Target 9.1 Substantially enhancing the effectiveness of international, regional and transnational cooperation for the conservation of biodiversity and ecosystem services		
Specific Target 9.2 Enhancing transboundary cooperation for biodiversity conservation		
General Target 10 Upgrading the quality and efficiency of public administration on biodiversity conservation		
Specific Target 10.1 Improving public administration in organisational issues, scientific issues and decision-making processes for the effective implementation of policies, measures and legislation on biodiversity		
Specific Target 10.2 Ensuring adequate funding for biodiversity conservation.		
General Target 11 Integration of biodiversity conservation into the value system of so	ociety	
Specific Target 11.1 Integrating biodiversity issues in formal and non-formal education and the promotion of the value of biodiversity		
Specific Target 11.2 Promoting environmental awareness in biodiversity conservation		
General Target 12 Citizen participation in biodiversity conservation		
Specific Target 12.1 Establishment of cooperation among citizens, scientists and public administration in the decision making process and monitoring of its implementation		
Specific Target 12.2 Promoting the accountability of companies in the context of biodiversity conservation		
General Target 13 Appreciation of ecosystem services and the promotion of the value biodiversity	of Greek	
Specific Target 13.1 Valuation of ecosystem functions and services in social and economic terms		
Specific Target 13.2 Promotion of the value of biodiversity and the services provided by biodiversity and ecosystems		
Specific Target 13.3 Promotion, establishment and maintenance of natural green infrastructure		
Table 1 Assessment of the implementation of Creece's National Riediversity Strategy and its	4-14-14 101	

Table 1. Assessment of the implementation of Greece's National Biodiversity Strategy and its 1stAction Plan during its first implementation period 2014-2020. **Red**: minimal progress, **Orange**: partial progress, **Green**: significant progress

IV. Conclusions and Recommendations

Following the assessment of the implementation of the National Biodiversity Strategy and the Action Plan for the first period of its implementation (2014-2020) -the results of which are presented briefly in the previous section and in detail in the annex- the following emerge:

In none of the general or specific targets of the National Biodiversity Strategy is significant progress noted. According to the assessment of the implementation of the National Biodiversity Strategy and Action Plan, there is no significant progress in any of the 13 general targets or the 39 specific targets. Minimal progress is noted on 12 of the 39 specific targets, including all those that form Target 8 of the Strategy. With regards to the remaining targets, progress is partial; even though certain actions have been carried out, without being further strengthened or intensified, they cannot sufficiently contribute to the implementation of the target.

Greece follows the global international trends regarding the inadequacy of measures to halt biodiversity loss. The overall picture of the implementation of the National Strategy and Action Plan does not differ significantly from that recorded at a global level. Therefore, in Greece too, even though significant progress is noted in certain specific actions, or in other cases certain measures are taken, or certain actions are implemented, these are not sufficient or in the necessary scale and intensity so as to produce significant overall results. Without significant progress in the implementation of the commitments made by countries, it will not be possible to reverse the trends that lead to the biodiversity loss crisis.

Even in the targets linked to the conservation of biodiversity, only partial progress is noted. The actions for the conservation of nature (General Targets 2, 3, 4), are at the core of the Strategy with respect to halting biodiversity loss. In fact, Greece has designated a protected status to more than 35% of its land area and 19% of its domestic waters, exceeding the targets of 17% and 10% respectively set for 2020, and approaching the overall target of designating protected status to 30% of the planet by 2030. There have been initiatives -among which the expansion of the Natura 2000 network stands out; nonetheless, the designation of protected areas is still not institutionally complete. Moreover, the protected areas' effective management has not been achieved, despite the fact that, during the reporting period, two laws were adopted on the organization of their governance system. In addition, the designation of ecological corridors that was foreseen, in order to create a cohesive network of the country's protected areas, has not been implemented. Another conservation action that stands out is the approval of the first action plans for three endangered species; several more are expected to be drawn up in the near future. On the other hand, the actions related to the conservation of genetic resources have not been sufficiently implemented.

Partial or minimal progress is noted in the response to new threats and challenges, such as addressing foreign invasive species (General Target 8), promoting green infrastructure (Specific Target 13.3), and nature restoration (General Target 2). Partial progress is also noted in promoting new approaches, such as the implementation of combined actions in biodiversity conservation and landscape diversity conservation (Overall Target 6), or in preventing the impacts of climate change (Target 7) through biodiversity conservation. Despite the fact that a relevant policy framework has been established at a European and an

international level, Greece has not been able to respond in a timely manner, so as to formulate its own framework and implement its own actions.

The least implementation progress is noted in the targets that concern synergies and horizontal integration of biodiversity in production sectors (General Target 5). At all levels -global, European, and in Greece- the biggest challenge in responding to the ecological crisis lies in the successful reversal of the pressures and threats that cause it, through a change in the development and production model. During the first period of implementation of the National Strategy, the targets related to infrastructure, and to the integration of biodiversity in sectors such as tourism, agriculture, and fisheries, show the least progress. The institutional strengthening of biodiversity integration shows no progress, while several of the specific actions foreseen by the first Action Plan have not been implemented. All actions that are implemented, are done so partially or with a delay, and typically as an act of compliance with the European regulatory framework; moreover, the available resources either remain unused, or they are employed with long delays, resulting in minimal progress. At the same time, it should be emphasized that the European regulatory framework too is not always in line with biodiversity conservation targets, most notably in the case of the Common Agricultural Policy and the Common Fisheries Policy, even despite the latter's recent amendments. The European acquis, however, is not as influential in certain sectors; there, a strong national framework is key to achieving the targets of the National Biodiversity Strategy. The case of spatial planning is a typical example; regrettably, the partial progress noted here also results in implementation difficulties in other sectors, such as the renewable energy sector.

The National Strategy for Biodiversity has not to date become a lever for the transformation of the Greek economy and society. The Biodiversity Strategy and the first Action Plan were adopted at a time when the country was facing an unprecedented economic crisis. During the crisis, one after another, Greece's governments took several legislative initiatives and made reforms, mainly aiming to reduce the public sector and simplify procedures. The natural environment was treated as an obstacle to the recovery from the crisis and, therefore, no priority was given to biodiversity conservation. The timing of the adoption of the Strategy is significant; however, evidently, the latter did not succeed in differentiating development policy and preparing the Greek economy for a sustainable future that gives priority to nature. Partial or minimal progress was noted in the Strategy actions linked to the integration of biodiversity in the main productive sectors of the country. Similar progress was noted in actions linked to development, which could have utilized and applied the advantage contained in the conservation of biodiversity to several sectors, such as ecotourism or the certification of sustainable management products.

The Ministry of Environment and Energy did not live up to its role with regard to the supervision and monitoring of Strategy implementation, the coordination of actions with relevant ministries, and the collaboration with other bodies. The state, under the responsibility of the MEEN, had been charged to carry out actions aiming to strengthen public administration, so as to achieve a more effective implementation of biodiversity policies, measures, and legislation; the progress noted in the associated targets is partial to minimal.

While the state is facing significant difficulties and delays in the implementation of the Strategy and Action Plan, significant interest and mobilization has been noted by other stakeholders, which partially fill the gap. However, most of these actions are isolated and have a focused impact. During the first period of implementation of the National Strategy, several projects and actions have been implemented by research centers, academic institutions,

and environmental non-governmental organizations, protected area management bodies, as well as other stakeholders who contribute to the implementation of almost every Strategy target. Several of these actions are innovative and constitute pilot projects with prospects of a multiplier impact. In most cases, however, these actions are isolated; hence, both the dissemination of results and the development of synergies depend to a large extent on the requirements of each project and on the will of each implementing body. Environmental nongovernmental organizations are more active in communicating their work; as a result, the general public is often aware of their actions. A special role is also played by the managing bodies of protected areas, which, for the most part of the reporting period, and despite the uncertainty regarding their future, have accomplished remarkable projects, utilizing the resources allocated from the Green Fund, the state budget, and other funds for the implementation of European projects. Research centers and academic institutions play a key role in enriching knowledge, but the information and data they collect are not disseminated or made publicly available. The state has not systematically organized the available knowledge and the operation of databases. At the same time, the practice of "open" data is not customary in Greece; nor is the will to make information available and easily accessible to the interested public.

Recommendations

The conclusions of the assessment of the implementation of the National Biodiversity Strategy and the first National Action Plan, as presented in the previous section, can contribute to the strengthening of the national biodiversity conservation policy, which is inextricably linked to European and international developments. Such a strengthened national policy would correspond to Greece's natural richness.

As the new post-2020 policy framework for the conservation of biodiversity is being formulated at an international and a European level, now is the right time for Greece to develop a policy apar with its natural richness. Greece already supports the European Green Deal and its goals, and has co-signed the Leaders Pledge for Nature along with all European leaders; it has also called for urgent action on biodiversity⁴⁶ and has endorsed the new EU Biodiversity Strategy⁴⁷. Given its stance thus far, in the near future too, **Greece must support the elaboration of an ambitious post-2020 global framework for biodiversity**.

In parallel, the state, under the responsibility of the MEEN, must proceed, without delay, with the timely preparation and adoption of the second five-year Biodiversity Action Plan, and thereafter, with its prompt activation and implementation. In this context, the following recommendations are made:

The alignment of the new Action Plan's specific targets with those of both the European Strategy to 2030 and the post 2020 global policy framework, which is now being formulated. The general targets of the Strategy cover the thematic priorities set for the new decade, and are deemed sufficient and compatible with the international and European

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⁴⁶Message of Kostis Hatzidakis, Minister of the Environment and Energy, at the UN Summit on Biodiversity, 30.9.2020. https://cutt.ly/dhWsj73.

⁴⁷The position adopted by the Secretary General of the Greek Ministry of the Environment and Energy at the EU Environment Council's public session on the EU Biodiversity Strategy. Brussels. 23.10.2020. https://cutt.ly/RhWsxba.

frameworks. They aim at the conservation as well as the restoration of biodiversity, its integration into the productive sectors, and its incorporation into the value system of society. However, in order to achieve the general targets and to align the National Strategy with European and international developments, it is necessary to review several of the specific targets, so as to make them more specific, measurable, and attainable. This requirement is crucial, as, to date, measurable targets have been completely absent from the Strategy and the Action Plan. Indicatively, a measurable target should be set with regards to the percentage (10% according to the European Biodiversity Strategy) of protected areas -which already exceed 35% of the country's land area- that will be designated a strict protection status. In fact, the categories and zones of protected areas that fall under this designation should be determined at national level; the areas currently defined as zones of absolute protection and natural protection⁴⁸, are the most likely candidates.

The implementation of specific measurable and attainable actions that will enhance nature conservation. The next Action Plan should lead to the implementation of effective interventions for nature conservation, rather than constitute yet another long list of actions that cannot be implemented within the next five years. The proposed actions must be binding and therefore implemented systematically, and without delays. For instance, specific targets need to be set to improve the status of species and habitat types of European interest, as surveillance measures are in place, and measurable data are already available. On the other hand, in the case of species of national interest, the actions should aim at completing these species' institutional recognition and status assessment. The MEEN has a wide range of institutional and regulatory framework that is implemented inadequately. Consistent implementation of commitments, such as the completion of focused environmental studies, the approval of presidential decrees and management plans for protected areas, the conclusion of the land cadaster, the adoption of forest maps, the review of spatial frameworks, and the implementation of water and marine monitoring and management measures are of vital importance to ensure significant progress in nature conservation. The MEEN is responsible to carry out projects that will strengthen the implementation of these commitments, such as the two integrated LIFE projects coordinated by the Ministry, namely LIFE-IP 4 NATURA and LIFE-IP AdaptInGR; both the latter will assist in the implementation of nature conservation actions and in the adaptation of the country's natural environment to climate change.

A targeted response is required to explore and address new threats and to adopt holistic approaches. The assessment highlighted the targets related to addressing new threats as the areas of conservation with the least progress. The new Action Plan must adopt a gradual approach, starting with the acquisition of key instruments, and followed by the promotion of subsequent actions. For example, with regards to invasive alien species, an immediate priority should be to draw up and adopt a list of species, map their spread and record the gates/corridors of their introduction, as well as to define the responsibilities of the relevant competent services. The activation of the latter should be immediately followed and enhanced by the provision of training for the detection and timely control of the spread of such species. The new Action Plan should also focus on holistic approaches to biodiversity conservation, by integrating actions linked to the protection of landscape diversity and the conservation of genetic resources, as, to date, only partial progress has been noted in these areas.

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 $^{^{48}}$ Law 4685/2020 on the reform of the environmental legislation, the integration into the Greek legislation of the directives 2018/844 and 2019/692 of the European Parliament and the European Council, and other provisions. (A 92)

A greater emphasis on nature restoration. The new Action Plan should include targets and actions that will not only promote the conservation of nature, but also its restoration. Certain targets that are formulated at European level, such as the restoration the natural flow of rivers, give Greece the opportunity to incorporate measurable targets and actions for the restoration of nature, especially with regards to streams, coasts, and wetlands. As, to date, nature restoration approaches have not been sufficiently developed in our country, the new Action Plan should provide for the implementation of a few pilot but emblematic projects. This will not only restore natural ecosystem functions (such as flood and corrosion protection), but will also promote nature-based solutions in relation to climate adaptation. At the same time, new opportunities will emerge for sectors of the economy that, as of yet, have not been tested in this approach. Furthermore, this will lay the foundations for the implementation of more such projects in the second half of the decade, in the context of the third five-year Biodiversity Action Plan. The reforestation program announced by the MEEN already appears to be in line with the EU's goal of planting 3 billion trees in Europe by 2030, if implemented through methods compatible with biodiversity conservation. In particular, with regards to targets related to urban biodiversity and the creation of green spaces in cities, these actions should constitute the central pillar in the urban regeneration projects that will be implemented in the coming years. In fact, the COVID-19 pandemic highlighted the citizens' vital need for quality green spaces.

Highlighting the development potential of biodiversity conservation and restoration. Especially with regards to protected areas, in addition to the organization of the national system of protected areas with the full operation of the Natural Environment and Climate Change Agency (NECCA), the new Action Plan should highlight them as models of sustainable development. It should therefore provide for specific communication, education, and capacity building actions on the value of biodiversity, in parallel with actions to create a national nature brand (e.g. Nature Greece), which will grant added value to local products and offer new opportunities for the tourism sector. These actions will require synergy with the relevant competent ministries and the private sector. This process will further highlight the need to incorporate biodiversity in several sectoral policies, and generate opportunities to certify sustainable management in the primary sector (forest, agricultural, or fishery products), while providing institutional support for nature tourism and ecotourism.

The transformation of the Greek economy through the integration of biodiversity in sectoral policies. The specific targets and actions that require synergies with other sectors (under General Target 5) must be strengthened, as only horizontal integration of biodiversity can lead to the radical changes in the production model that are necessary in order to reverse the pressures and threats to nature. Setting more specific and measurable targets, in line with those of the EU Strategy for 2030 and the -now being formulated- global framework, can make a significant contribution in this direction. For example, national spatial planning must take into account the (now under formulation) target of the global biodiversity framework; through spatial planning the latter seeks to address changes in land and sea use, preserve natural land that is still intact and wild, and restore land that has been degraded for 50% of the planet by 2030. Adapted for Greece, such a target will not only address the most important threat to the status of protected species and habitat types, namely land use changes, but will also commit any subsequent legal initiative and particularly the preparation of new spatial and urban plans. Furthermore, if the targets of increasing agro-ecological practices, halving chemical and harmful pesticide use, and increasing the percentage of organic crops to at least 25% are integrated at a national level, they will guide the preparation of the Strategic Plan for Rural Development, as well as the overall stance of Greece in the negotiations for the revision of the Common Agricultural Policy, which are expected to continue for at least another year. Corresponding targets and specific actions must be set for the sectors of energy, tourism, fisheries, etc. to accelerate their transition to sustainable practices.

Immediate preparation of the new Action Plan so as to direct in a binding way the planning of both the new programming period 2021-2027 and the Recovery Fund. The National Biodiversity Strategy was adopted in 2014, when the planning of the 2014-2020 programming period was almost complete, leaving a limited margin to influence the commitment of European resources towards biodiversity objectives. This time, the new National Strategic Reference Framework (NSRF) and the new Action Plan for Biodiversity are being prepared during the same period; moreover, the actions that will be funded in this programming period coincide with the implementation of the next two action plans for Biodiversity. As our country's infrastructure, agriculture, and fisheries sectors are highly dependent on European funds, the integration of biodiversity must be provided for already during the planning stage of the new programming period. The new Action Plan must influence the priorities that will be set in the NSRF 2021-2027, the Strategic Plan for Rural Development, and the Recovery Fund. In this way Greece can achieve -even earlier than envisioned (2024)the commitment of 7.5% of European funds to the conservation of biodiversity, and be on the right track to secure the respective commitment of 10% set for 2026. The new Prioritized Action Framework for Natura 2000, which is expected to be completed in the near future will assist in the optimal planning of the new programming period.

Strengthening Greece's position in the European and international nature policy sphere.

In the coming years, the issue of biodiversity conservation will become increasingly important in international political developments, as is already the case with the climate crisis. In this context, Greece must adopt a leading role, apar with its biodiversity richness. The Action Plan should therefore include actions that will strengthen Greece's position in European and global nature policy developments. First and foremost, this will require the presence of Greece in European and international negotiations. Regrettably, to date, Greece is often represented only via European groups, or does not participate at all, thus, missing out on opportunities to exchange information, experiences, and lessons learned, as well as to influence decisions and take initiatives. The new Biodiversity Action Plan should provide for the strengthening of the competent authorities, in order for the country to be consistent and comply in a timely manner with the requirements for the submission of national reports and data. At the same time, in the context of the forthcoming period, Greece should take green diplomacy initiatives, particularly with neighboring countries, and, within this decade, strive to become a hub of green transnational actions aimed at conserving biodiversity in Southeast Europe and the Mediterranean.

For all the above actions to be achieved, the activation of the Greek state is necessary. The following are therefore also recommended:

The MEEN must take on a coordinating and supervisory role for the conservation of biodiversity. In terms of public administration, the MEEN has the responsibility to ensure that Greece will contribute to the global targets for the conservation of biodiversity -a contribution that should be proportional to its natural richness. In order for the Ministry to fulfil its supervisory role, the competent services will need reinforcement, staffing, resources, and capacity building. To this end, and with adequate support, the new NECCA and the Nature 2000 Committee, can constitute important allies of the MEEN competent services. In addition, synergies need to be formed between the bodies that already exist within the Ministry (e.g. Nature 2000 Committee, National Water Council, Council on Climate Change Adaptation, etc.).

The Ministry should focus primarily on the immediate implementation of the targets already set in the first Action Plan (under General Target 1) with regards to the organization of available biodiversity information and data, through the operation of interconnected, open, and accessible databases. The establishment of a consistent collaboration among all ministries that share responsibility in biodiversity conservation is also crucial in this direction. The design of the new National Action Plan is an opportunity to consolidate such collaborations.

The establishment of a reliable system for regular monitoring of the implementation progress of the National Biodiversity Strategy and the new Action Plan. The Ministry of Environment and Energy should establish a reliable monitoring system, based on adequate indicators. In particular, the indicators must be appropriate and assist in pinpointing the necessary corrective measures throughout the course of the implementation of the Strategy. The MEEN must commit to regularly collecting the necessary data for each indicator.

The integration of actions to promote networking and the development of synergies between stakeholders. Despite its essential role, the state alone cannot meet the challenge of halting biodiversity loss. Therefore, it is necessary to cultivate synergies with all stakeholders: research and academic centers, local government organizations, members of civil society, but also the business community. There is already great mobilization on the part of several bodies that can decisively contribute to the achievement of the National Strategy targets. During the next period, priority should be given in this direction, initially with the formation of an open web portal for biodiversity, but also via the organization of specific actions (which could also be conducted online) to facilitate the exchange of knowledge and experiences and provide opportunities for networking.

