

Integrated Actions for the Conservation and Management of NATURA 2000 Sites, Species, Habitats and Ecosystems in Greece







LIFE-IP 4 NATURA LIFE16 IPE/GR/000002



































Structure and objective - LIFE-IP 4 NATURA

It constitutes the first centrally coordinated initiative to implement the Greek PAF on a national regional and local scale.

LIFE-IP 4 NATURA aims at:

- improving the conservation status of species and habitats of Community Interest;
- implementing an integrated approach for the management of the Natura 2000 network;
- building capacities of the competent authorities in support of the implementation of EU nature legislation;
- actively involving stakeholders in the conservation and management of Natura 2000 sites;
- raising awareness among Greek citizens of the Natura 2000 network and its significance;
- promoting citizen participation and adoption of positive attitudes towards the Natura 2000 sites;
- and supporting the mobilization of complementary funds to meet the objectives of the Nature Directives in Greece.

☐ 20 actions

☐ Phases: 4
(2-year duration)









Action A.1: Development and legal adoption of Action Plans (APs) for species and habitats of Community Interest

RB: Ministry of Environment and Energy

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- AP Specifications 09/11/2020, Legal approval
- Selection of species/habitats for the development of APs
 - feedback from scientific community
 - Scientific Advisory Committee
- Local workshops public consultation virtual meetings

12 APs (7 legally adopted) — 18 species

GROUP OF SPECIES	SPECIES SELECTED		
FISH	*Ladigesocypris ghigii Trouts Multispecies Action Plan (Salmo lourosensis, Salmo macedonicus, Salmo farioides, Salmo pelagonicus, Salmo peristericus)		
MAMMALS	Ursus arctos Rupicapra rupicapra balcanica		
BIRDS	Vultures Multispecies Action Plan (Gyps fulvus, Gypaetus barbatus, Aegypius monachus)		
HABITATS	2250* - Coastal dunes with <i>Juniperus</i> spp.		
FLORA	* Silene holzmannii		
AMPHIBIANS/REPTILES	Caretta caretta Pelophylax cerigensis		
INVERTEBRATES	Parnassius apollo		
CETACEANS	Phocoena phocoena Tursiops truncatus		
MARINE MAMMALS	* Monachus monachus		







Action C.1: Field implementation of the Action Plans (APs) for species and habitats

RB: Ministry of Environment and Energy Hellenic Ornithological Society

































Preparatory Actions

- Population monitoring
- Distant monitoring Telemetry
- Data management
- Engagement with local authorities

Vultures with satellite trackers

K87



Actions already under implementation related to conservation of vulture populations

- Poisoned baits management
- Wind farms siting

Complementary Actions

Feeding stations siting and standards







Action A.3: Mapping and Assessment of Ecosystems and their Services (MAES)

RB: University of Patras

























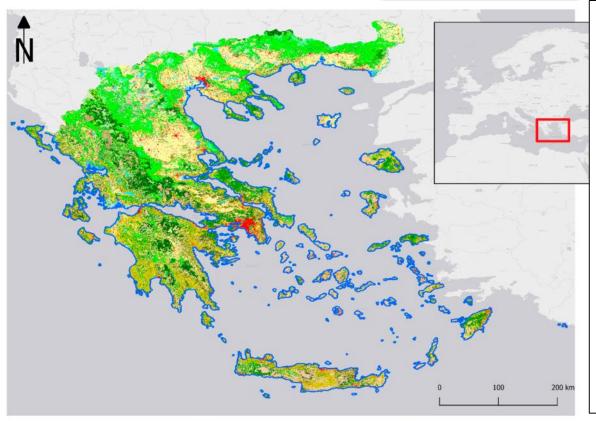






Εδώ ζούμε

Ecosystem type map of Greece (MAES level 3)







National Scale Land Cover Classification for Ecosystem Services Mapping and Assessment, Using Multitemporal Copernicus EO Data and Google Earth Engine

Natalia Verde 1,20, Ioannis P. Kokkoris 30, Charalampos Georgiadis 1, Dimitris Kaimaris 1, Panayotis Dimopoulos 30, Ioannis Mitsopoulos 4 and Giorgos Mallinis 1,2,4

- School of Rural and Surveying Engineering, Laboratory of Photogrammetry and Remote Sensing Unit (PERS lab), The Aristode University of Thessaloniki, \$4124 Thessaloniki, Goreoc; nverde@auth.gr (N.V.); harrisg@unikg (P.C.); kainaris@auth.gr (D.K.)
- Forest Remote Sensing and Geospatial Analysis Laboratory, Democritus University of Thrace, 68200 Onstiada, Grevos
- Department of Biology, Laboratory of Botany, University of Patras, 26504 Patras, Greece;
- ipkokkoris@upatras.gr (EFK.); pdimopoulos@upatras.gr (P.D.)
 Ministry of Environment & Energy, Directorate of Budiversity and Natural Environment Managem 11526 Athens, Greece; i.mitsopoulos@prv.ypeka.gr
- Correspondence: gmallin@auth.gr; Tel.: +30-2310-996085

Received: 6 September 2020; Accepted: 7 October 2020; Published: 11 October 2020



Abstract: Land-Use/Land-Cover (LULC) products are a common source of information and a key input for spatially explicit models of ecosystem service (ES) supply and demand. Global, continental and regional, readily available, and free land-cover products generated through Earth Observation (EO) data, can be potentially used as relevant to ES mapping and assessment processes from regional to national scales. However, several limitations exist in these products, highlighting the need for timely land-cover extraction on demand, that could replace or complement existing products. This study focuses on the development of a classification workflow for fine-scale, object-based land cover mapping, employed on terrestrial ES mapping, within the Greek terrestrial territory. The processing was implemented in the Google Earth Engine cloud computing environment using 10 m spatiresolution Sentinel-1 and Sentinel-2 data. Furthermore, the relevance of different training data extraction strategies and temporal EO information for increasing the classification accuracy was also evaluated. The different classification schemes demonstrated differences in overall accuracy ranging from 0.88% to 4.94% with the most accurate classification scheme being the manual sampling/monthl feature classification achieving a 79.55% overall accuracy. The classification results suggest that existing LULC data must be cautiously considered for automated extraction of training samples, in the case of new supervised land cover classifications aiming also to discern complex vegetation classes. The code used in this study is available on Gitl-lub and runs on the Google Earth Engine

Keywords: remote sensing; seasonal; Random Forests; OBIA; machine learning; big data; multispectral; radar; GEE; object

Information on the spatial explicit distribution of ecosystem services (ES) is important for their conservation and management, policy design, implementation and monitoring, fulfillment of reporting

Reserv Sens 2020, 12, 3303; doi:10.33600v.12203300

www.mdpi.com/journal/temotesersing

Legend

Dense to medium dense Urban Fabric (IM.D. 30-100%) 1.1.1

Low density Urban Fabric (IM.D. 0-30%) 1.1.2

Arable land 2.1.1 Permanent crops 2.2.1

Temperate deciduous forests 3.1.1

Mediterranean deciduous forests 3.1.2

Floodplain forests (Riparian forest/ Fluvial forest) 3.2.1

Temperate mountainous coniferous forests 3.3.1 Mediterranean coniferous forests 3.3.2

Mediterranean sclerophyllous forests 3.4.1

Mixed Forest 3.5.1 Grasslands 4.1.1 Moors and heathland 5.1.1

Sclerophyllous vegetation 5.2.1

Sparsely vegetated areas 6.1.1

Beaches, dunes, sands 6.2.1

Bare rocks, burnt areas, mines, dump, land without current use 6.3.1

Inland freshwater and saline marshes 7.1.1

Peat bogs 7.2.1

Marine 7.3.1

Rivers and Lakes 8.1.1







Ερευνα

Πολιτισμική ταυτότητα

ΥΠΗΡΕΣΙΕΣ ΤΟΝ

ΟΙΚΟΣΥΣΤΗΜΑΤΟΝ

διατήρησης





- Ecosystem types' condition map of Greece inside Natura 2000 SACs (scale 1:5,000)
- Ecosystem types' condition map of Greece outside Natura 2000 SACs (scale 1:50,000)
- Provisioning services' map of Greece
- Regulating and Maintenance services map of Greece
- Cultural services map of Greece
- Report on Integrated Natural Capital Accounting for Greece

SAVE THE DATE 4th ESP Europe Conference Heraklion, Crete, Greece 10-14 October 2022









Action C.6: Implementing Mapping and Assessment of Ecosystem Services (MAES) at pilot studies

RB: University of Patras

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Action CA.1: Main Complementary Action of the project

Special Environmental Studies and Management Plans for Natura 2000 sites



Action C.2: Pilot implementation of selected NATURA 2000 sites Management Plans (MPs) in four Greek Regions

RB: Ministry of Environment and Energy

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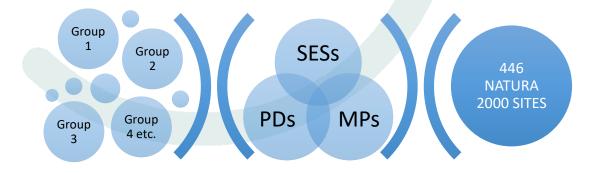


Complementary Action

Assembly of Special Environmental Studies and Management Plans for Natura 2000 sites in Greece (National Operational Plan "Transport, Infrastructure, Environment and Sustainable Development")

- Special Environmental Studies (SESs), Presidential Decrees (PDs) and Management Plans (MPs) that will cover all Natura 2000 sites (SCI-SACs and SPAs) in Greece.
- The SESs consist of
 - background information (general data, ecological and socio-economic information, spatial planning, protection objectives etc.)
 - and proposal of management activities (management objectives and proposed measures).
- The PDs set out, regulate and define the conservation terms and the measures required for a coherent management of the Natura 2000 sites.
- The MPs list all necessary management activities that have to be implemented in order to achieve the conservation objectives of each Natura 2000 site.

11 Beneficiaries / 23 groups of areas + 1 Coordinator





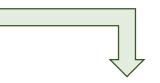




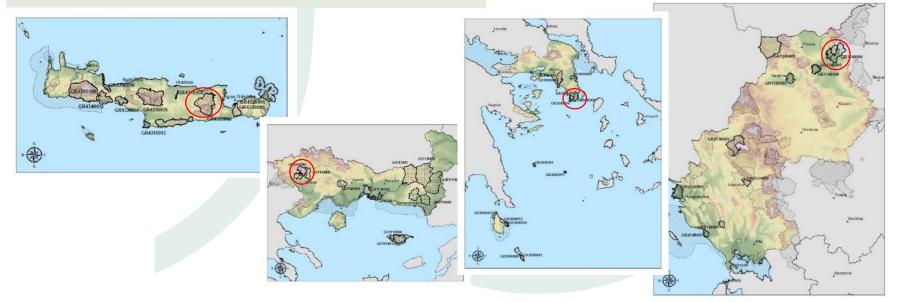
C.2 Pilot implementation of selected NATURA 2000 sites Management Plans (MPs) in four Greek Regions

Sub-Action C.2.1 Selection of the pilot Natura 2000 sites

Provisional list of the proposed pilot Natura 2000 sites for each of the 4 regions based on following criteria: threats and pressures, SDFs, habitats/species of Community Interest, presence/absence of management bodies, existing information from previous projects/actions, PAF proposed measures. Representativeness in different ecosystem types has been a pivotal criterion for selecting and including the Natura 2000 sites in the provisional list attached in this Action.



CRETE, REMTH, RoA and APDHP-DM
May — June 2021 - 4 workshops (one in each region)





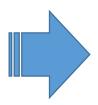






Action A.2: Streamlining, ensuring compatibility and optimizing the specifications of all existing species and habitat monitoring data of the Natura 2000 network at national level

RB: Ministry of Environment and Energy



Action C.3: Development and Operation of a Decision Support System (DSS) for NATURA 2000 site management

RB: Aristotle University of Thessaloniki





















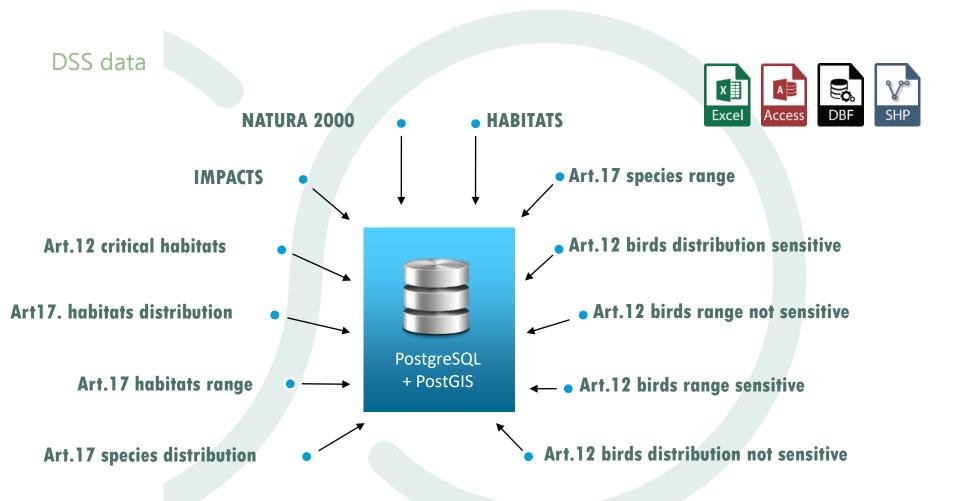




















Action C.4 Creation of an interactive and interoperable Public Participation Geographic Information System (ppGIS)/webGIS for ecosystem services visualization and monitoring

RB: Aristotle University of Thessaloniki























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Public Participation Geographic Information System (ppGIS)/webGIS

Overall concept

- **★ Maps presenting ES indicators**
- Dashboard with statistics related to the indicators
- **※** ✓ Wiki on Ecosystem Services
- Story maps over pilot areas for ES
- Mobile app for uploading information on ES status and Pressures in order to enable public participation nationwide
- **★** Geoprocessing tools for mapping Cultural Ecosystem Services
- **☆** Geoprocessing tools for updating selected ES
- Interface to access tools







Action A.4: Stakeholder mapping and analysis

RB: WWF Greece



Action C.5: Stakeholder Capacity Building

RB: WWF Greece

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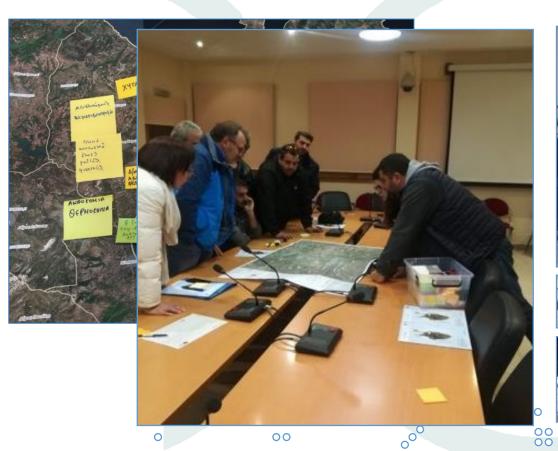








Action A.4 Stakeholder mapping and analysis Focus groups











Launch of capacity building in 4 regions — live sessions to be COVID-proof (webinars)

Webinars











Το νομικό πλαίσιο για την προστασία της βιοποικιλότητας και τις περιοχές Natura 2000

Διαδικτυακό σεμινάριο στο πλαίσιο του έργου LIFE-IP 4 NATURA 30 louviou 2021

























Το νομικό πλαίσιο για την προστασία της βιοποικιλότητας και το δίκτυο Natura 2000 Στόχοι σεμιναρίου

Μέρος Ι

- Κατανόηση της αλληλεπίδρασης και των διασυνδέσεων της διεθνούς, ευρωπαϊκής και εθνικής έννομης τάξης για την προστασία της βιοποικιλότητας
- Γνωριμία με το ευρωπαϊκό νομικό πλαίσιο για τις περιοχές Natura 2000
 - ✓ Η ευρωπαϊκή στρατηγική για την προστασία της βιοποικιλότητας
 - 🗸 Οι ευρωπαϊκές οδηγίες για τη φύση, και οι βασικές υποχρεώσεις που προκύπτουν για τα κράτη μέλη
 - ✓ Οι διατάξεις του άρθρου 6 της οδηγίας για τους οικοτόπους

Μέρος ΙΙ

- Εξοικείωση με το Εθνικό Σύστημα Προστατευόμενων Περιοχών της Ελλάδας
 - ✓ Εθνικό σύστημα προστατευόμενων περιοχών: Κατηγορίες ΠΠ & Εργαλεία διαχείρισης
 - ✓ Προστασία ειδών
 - ✓ Διακυβέρνηση προστατευόμενων περιοχών: ν. 4685/2020 & ΟΦΥΠΕΚΑ











ΣΥΧΝΕΣ ΕΡΩΤΗΣΕΙΣ ΕΠΙΚΟΙΝΩΝΙΑ ΣΥΝΔΕΣΗ / ΕΓΓΡΑΦΗ

ΕΠΙΣΤΡΟΦΗ ΣΤΟ ΕΔΩ ΖΟΥΜΕ



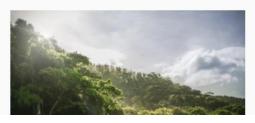
...μια εκπαιδευτική ηλεκτρονική πλατφόρμα που στοχεύει στη βελτίωση της κατανόησης του θεωρητικού και θεσμικού πλαισίου, αλλά και πρακτικών θεμάτων εφαρμογής και διαχείρισης των περιοχών Natura 2000 της Ελλάδας

Ξεκίνα την εκπαίδευση



τα μαθήματά μας

Ενδεικτικά παρουσιάζονται κάποια από τα μαθήματα της πλατφόρμας.















Action C.7: Establishment of conservation objectives for SACs and SPAs

RB: Ministry of Environment and Energy

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Action C.7: Establishment of conservation objectives for SACs and SPAs

Monitoring and assessment of the conservation status of species and habitat types of Community Interest in Greece' (MEEN, 2012-2015)



- lack of field/baseline data in various species
- limited time of field work

LIFE-IP 4 NATURA new action C.7: evaluation, review and update the COs



- new information and data on the status of habitats and species of community importance
- expert opinion
- Natura 2000 Committee (April 2018) revision
- DG Environment communication

Legislation of Conservation Objectives for species and habitat types of community importance at national level, SAC level, for bird species at SPA level



National Monitoring Programme 2023

ФЕК В **1375/07.04.2021** ФЕК В **1915/13.05.2020**







Action D.1: Monitoring of the project's contribution to the implementation of the Greek Prioritised Action Framework (PAF) 2014-2020, the overall progress of the Greek PAF 2014-2020, the drafting/revision of the Greek PAF 2021-2027 and the success of the capacity building actions

RB: Green Fund



























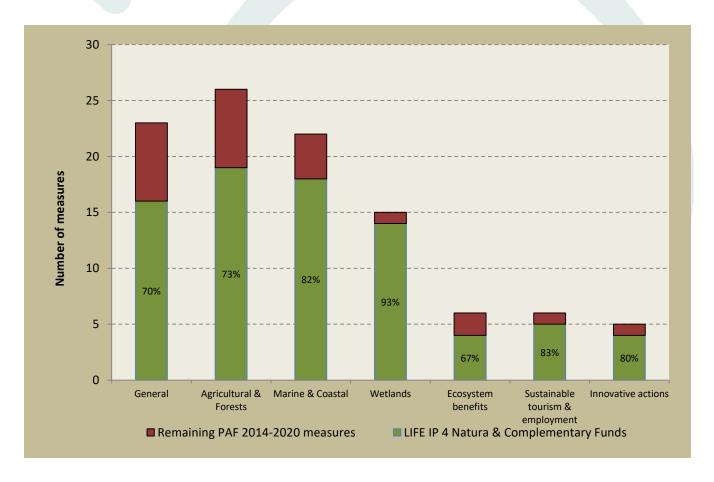








LIFE IP 4 NATURA actions and complementary funding projects linked to PAF 2014-2020 measures



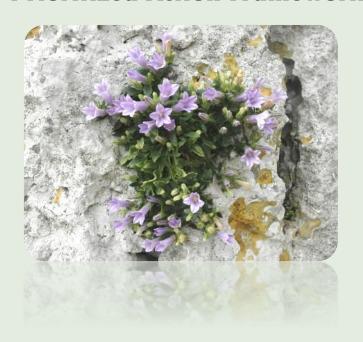
Project actions & Complementary actions have been linked to 80 PAF measures.







Prioritized Action Framework for N2K areas 2021-2027



Priority financing needs 2021-2027			
	Annual running costs (Euros / year)	One-off / project costs (Euros / year)	
Horizontal measures and administrative costs related to Natura 2000	6.056.797 €	8.508.087€	
Natura 2000 site-related maintenance and restoration measures for species and habitats	84.250.499€	10.920.715€	
Additional "Green infrastructure" measures beyond Natura 2000 (further improving coherence of the Natura 2000 network, including in a cross- border context)	16.776.571€	2.024.565 €	
Additional species-specific measures not related to specific ecosystems or habitats	16.769.543€	3.199.468 €	
Annual total	123.853.410€	24.652.835 €	
Total (2021-2027)		1.039.543.715€	

Examples of measures for Agroecosystems (incl. croplands, excl. grasslands)

- ☐ Management actions aimed at increasing agricultural biodiversity for the improvement / conservation of bird species (e.g. unharvested production, special crops)
- ☐ Agri-environmental measures in crops in Natura areas with rivers and lakes (400 euros / ha / year)
- ☐ Installation and maintenance of agroforestry structures (10,000 euros / ha)

https://edozoume.gr/plaisio-draseon-proteraiotitas-2021-2027/

https://ypen.gov.gr/wp-content/uploads/2021/04/PAF-EL_FINAL.pdf









Action F.2: Coordination of Complementary Funds

RB: Green Fund

























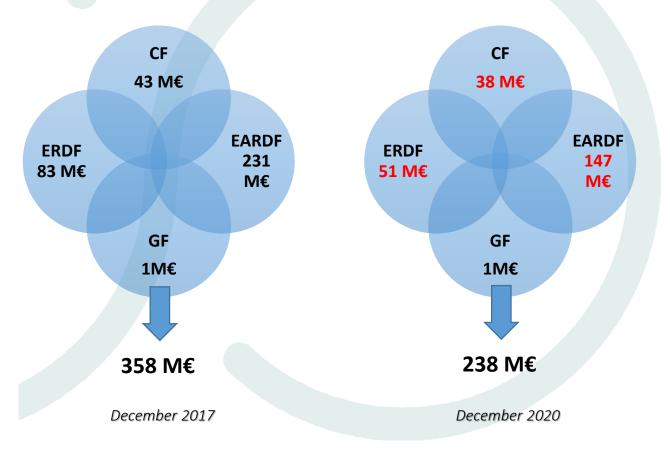








Complementary funds have been identified from the Structural Funds through investment priority 6iii/6d or similar from CF and ERDF, through Measures 7, 10, 11 and 12 from EARDF and a project funded for MEEN from the Green Fund.









Complementary Funds

Funds:

- Cohesion Fund
- 2. European Regional Development Fund
- 3. European Agricultural Fund for Rural Development
- 4. Green Fund (National)



investment priority 6iii/6d: Protecting and restoring biodiversity and soil and promoting ecosystem services, including through Natura 2000, and areen infrastructure

Measures directly benefiting N2K areas

Actions:

- 1. Monitoring of the progress (approved projects, spending, etc.)
- 2. Meeting with relevant authorities for the coordination of activities
- 3. Participation in the design of the Programme 'Environment Energy Climate Change' 2021-2027 (CF&ERDF) and the Strategic Planning for the Common Agricultural Policy 2021-2027
- 4. Collection of data, reports and deliverables of approved projects

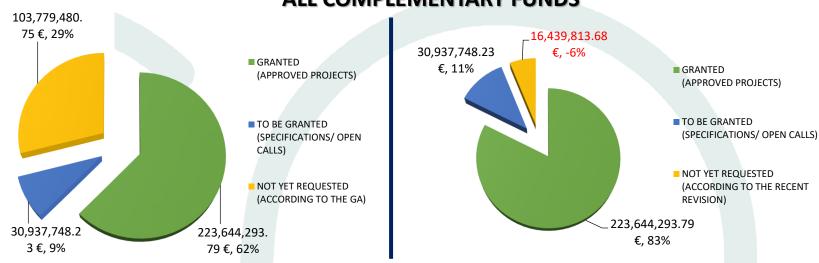
→ Monitoring of 84 approved projects/measures



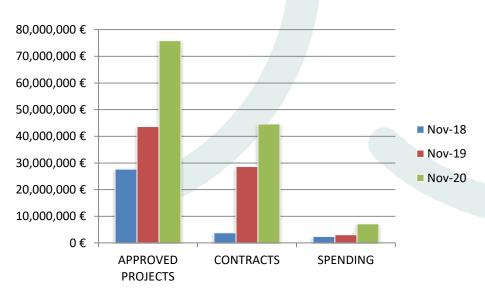


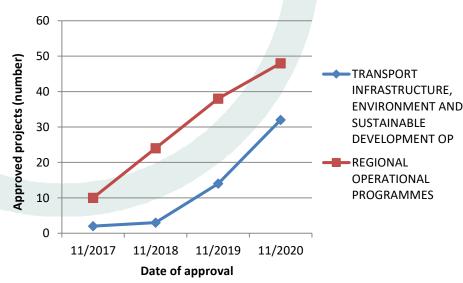


ALL COMPLEMENTARY FUNDS



COHESION FUND & EUROPEAN REGIONAL DEVELOPMENT FUND















Action E.1: Communication and dissemination

RB: WWF Greece

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PROJECT BROCHURE - 1st & 2nd EDITION









Promo video









TVC & radio spot

TVC



Radio spot

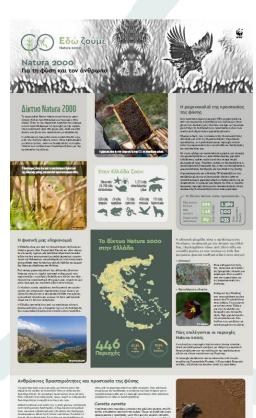








Factsheet #1 Natura 2000 at a glance















European Natura 2000 Day

@Stavros Niarchos Foundation Cultural Center









Attendance > 500 Social media reach > 101.000











Nationwide photo contest Natura 2000: Click in nature!



Participation

1,071 contestants

of which:

107
professional photographers

964 amateur photographers

Photographs submitted

7,943







Social media Facebook insights

Natura 2000 awareness + promoting Natura Day event

2021 Total reach - The number of people who had any content from our Page or about our Page enter their screen (Unique Users):

448,768

Impressions - The number of times any content from your Page or about your Page entered a person's screen:

1,569,765







Networking with other LIFE projects Two-day meeting of 13 Greek LIFE Nature projects















Action E.2: Replication and transfer of projects results and achievements nationally and on EU level

RB: GRFU

Formulation of the project's Transfer and Replication Strategy

Replication and Transfer of good practices and lessons learned during the implementation of Natura 2000 management plans on a national level

Replication and Transfer of good practices and lessons learned on a EU level - Field implementation of Action Plans



























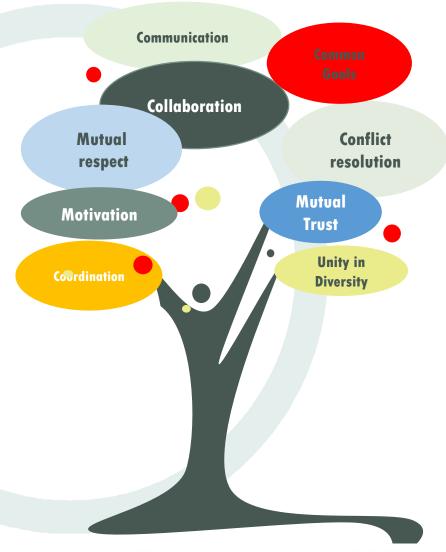




Action F.1: Project Structure and Management

RB: Ministry of Environment and Energy

- Overall project management and coordination
- Establishment and operation of the project Committees
- External Audit
- Indicators of Progress

































With the contribution of the LIFE Programme of the European Union

With the contribution of the Green Fund



LIFE-IP 4 NATURA LIFE16 IPE/GR/000002

