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INTERNATIONAL CONFERENCE

International Perspectives on Preventing Wildlife Crime

23-25 November 2018

Athens, Greece



UNIVERSITY
OF CRETE



Hellenic Society
for the Protection
of Nature

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FOREWORD

Since October 2015 the Natural History Museum of Crete (University of Crete) has been implementing a LIFE project titled *Promoting awareness of wildlife crime prosecution and liability for biodiversity damage in NATURA 2000 areas in Crete* (LIFE14 GIE/GR/000026 – LIFE Natura Themis), with 60% of co-funding coming from the LIFE Environmental Governance and Information funding instrument administered by the European Commission/ Executive Agency for Small and Medium-Sized Businesses (EASME). The project is further co-financed by the Green Fund, together with funds from all the project beneficiaries.

LIFE Natura Themis will run for five years (01/10/2015 – 30/09/2020), with the island of Crete as its pilot implementation area. The Natural History Museum of Crete (University of Crete) is the Coordinating Beneficiary, with the Heraklion Bar Association (HB), the Chania Bar Association (CB), the Hellenic Society for the Protection of Nature (HSPN) and the Hellenic Ministry of Environment and Energy's Coordination Office for the Implementation of Environmental Liability (MEEN-COIEL) as Associated Beneficiaries.

The project's objectives are: to map environmental offending in the Region of Crete; provide in-depth information to the island's lawyers, judges, as well as and investigating and regional authorities on all aspects of environmental crime; raise awareness on the prosecution of wildlife crimes; increase knowledge about environmental liability for restoring damage and, in the long term, reduce and prevent environmental offending by informing local societies and raising their awareness of the issue.

As part of the LIFE Natura Themis project, **an International Conference titled "International Perspectives on Preventing Wildlife Crime" was held in Athens from 23 to 25 November 2018**, with the participation of leading environmental lawyers and scientists, working on the political and legal aspects of wildlife conservation in and beyond Greece.

The Hellenic Society for the Protection of Nature organised what was generally acclaimed as an impeccably organized congress. Over 140 attendants were informed of developments in European and national environmental legislation, implementation of the Environmental Liability Directive (ELD) and emerging threats to flora and fauna, as well as possible future tools for tackling the loss of biodiversity and European natural heritage.

The conference programme included twenty-six presentations offering comprehensive coverage of issues including: a) wildlife crime legislation and its implementation; b) illegal flora and fauna trafficking; c) cross-sectoral issues in wildlife crime and biodiversity conservation; d) the role and contribution of the LIFE Natura Themis project in tackling environmental crime; e) environmental crimes against wildlife in Europe.

Leading figures in the European legal community working in Environmental Law, experts and representatives of public services and/or agencies charged with implementing environmental legislation, officials from environmental NGOs on the front line of the battle against biodiversity loss, and specialist consultants and scientists working in ecology and conservation analysed a wide range of issues. These included the process of national and European law making; acquired rights and problems in implementing legislation, its effectiveness and conflicts arising in relation to European Union financial and social policies; the legal, financial and technological instruments at the disposal of European judges and prosecutors in implementing Environmental Law; deficiencies in Environmental Law in Europe and proposals for improving it.

This Volume of Proceedings contains the entire text of most of the papers presented at the congress. In cases where full texts were not submitted, we have included summaries. Only one presentation does not appear in either full or summary form, at the presenter's request. Lastly, the volume includes brief biographies of all the contributors.

We hope you find all the papers useful, and that they can prompt better, more effective implementation of Environmental Law in Greece.

Dr Michalis Probonas

University of Crete – Natural History Museum of Crete (UoC – NHMC)
Co-ordinator, LIFE14 GIE/GR/000026 – LIFE Natura Themis

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Programme of the International Conference

Friday, 23 November 2018

- 17:00 Registration
- 18:30 Opening – Welcome
- 19:00 – 19:30 Biodiversity of Greece **Nikos Petrou**, *President of the HSPN Board of Directors*
- 19:30 – 20:00 The LIFE Programme **George Protopapas**, *Green Fund Director*.
- 20:00 – 20:30 The LIFE Natura Themis project **Michalis Probonas**, *UoC – NHMC, LIFE Natura Themis Coordinator*
- 20:30 Welcome Reception – End of the first Conference day

Saturday, 24 November 2018

SESSION I Wildlife Crime Legislation and Implementation

- 09:00 – 09:30 Wildlife crimes and protection of biodiversity: Economic, social and environmental interactions
Joseph van der Stegen, *Policy Officer, Nature Unit, DG Environment, European Commission*
- 09:30 – 10:15 The EU legislation related to wildlife crimes
Ludwig Krämer, *Former Head of Unit, Environmental Department of the European Commission*.
- 10:15 – 11:00 Overview of the Court of Justice of the European Union (CJEU) case law on wildlife crimes
Valerie Fogleman, *Professor of Law, Cardiff University School of Law and Politics; Consultant, Stevens & Bolton LLP*
- 11:00 – 11:15 Discussion
- 11:15 – 11:45 Coffee Break

SESSION II Focus on Wildlife Trafficking

- 11:45 – 12:45 Enforcement of EU wildlife protection and implementation by domestic judges
Matthias Keller, *Presiding Judge, Aachen Administrative Court*
- 12:45 – 13:15 Special focus on illegal trade of birds: A journey through Europe
Jan Van den Berghe, *Vice President of the Court of First Instance, East Flanders*.
- 13:15 – 13:45 IMPELs contribution to the implementation of the EU action plan against wildlife trafficking
John Visbeen, *Representative of the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL)*
- 13:45 – 14:00 Discussion
- 14:00 – 15:30 Coffee Break

SESSION III Cross-cutting Issues on Wildlife Crime and Biodiversity Protection

- 15:30 – 15:50 Sanctions for wildlife crimes: A thorny problem
Georgios Almpouras, *ENPE Working Group Member*
- 15:50 – 16:10 Combating biodiversity loss and wildlife crime through environmental liability
Stavroula Pouli, *Head of the Coordination Office for the Implementation of Environmental Liability, Ministry for the Environment and Energy, MEEN – COIEL LIFE Natura Themis coordinator*
- 16:10 – 16:30 Economic instruments as a complement to biodiversity protection
Angeliki Kallia – Antoniou, *Attorney at Law, PhD, EU Environmental Law Expert, Professor at the National School of Public Administration*
- 16.30 – 16.45 Discussion



SESSION IV The LIFE Natura Themis Project – its Role and Added Value

- 16:45 – 17:00 Wildlife crime in Greece: Out of sight, out of mind
Konstantina Ntemiri, *Hellenic Ornithological Society (HOS), Environmental Policy Officer, Antipoison Task Force Coordinator*
- 17:00 – 17:15 Beyond Themis. Capitalizing experience in combating environmental crime.
Dr Georgios Sbokos, *Bar Association of Heraklion (HB), Head of HB Environmental Committee, HB LIFE Natura Themis Coordinator*
- 17:15 – 17:30 LIFE Natura Themis: Public access to environmental information in Greece through the experience of the Environmental Law Observatories of Crete
Maria Maniadaki, *Bar Association of Chania (CB), CB LIFE Natura Themis Coordinator*
- 17:30 – 17:45 LIFE Natura Themis: Preventing wildlife crime by using IT tools
Christos Georgiadis, *Hellenic Society for the Protection of Nature Projects Coordinator, HSPN LIFE Natura Themis Coordinator*
- 17:45 – 18:00 Discussion
- 18:00 *End of the second Conference day*

Sunday, 25 November 2018

SESSION V Panel Discussion on National Experiences

- 09:30 – 11:00 **Wildlife Crime in EU Landscape**
- Slovenia, **Lea Tomazic**, *Representative of EcoLexLife*
 - Malta, **Antaia Christou**, *Representative of BirdLife Malta*
 - Cyprus, **Nikolaos Kassinis**, *Representative of Game and Fauna Service of the Ministry of Interiors, Cyprus*
 - Hungary, **Lilla Barabas**, *Representative of PannonEagle Life*
- 11:00 – 11:30 *Coffee Break*
- 11:30 – 13:00 **Wildlife Crime in Greece: The role of NGOs**
- Hellenic Society for the Protection of Nature (HSPN)
Dr Irimi Vallianatou, *Biologist, Hippocrates 2500 Years*
 - Hellenic Ornithological Society (HOS – BirdLife Greece)
Victoria Saravia, *Egyptian vulture LIFE project Conservation*
 - Hellenic Society for the Study and Protection of the Monk Seal (MOM)
Dr Panagiotis Dendrinis, *President of the MOM Board of Directors*
 - ANIMA – Wild Life Conservation Society
Anna Kazazou, *Zoologist*
 - ARCHELON – The Sea Turtle Protection Society of Greece
Panagiota Theodorou, *Conservation Coordinator*
- 13:00 – 13:15 Discussion

SESSION VI Reflections for the Future and Final Conclusions

- 13:15 – 13:45 Wildlife crime and biodiversity protection: The way forward
Ludwig Krämer
- 13:45 - 14:00 Final words and future actions
LIFE Natura Themis Project Representative
- 13:45 - 14:00 *Light Lunch and End of the Conference*





Biodiversity of Greece

Nikos Petrou

President, HSPN Board of Directors

Biodiversity

Greece is situated at the crossroads of three continents, with Europe to the north and west, Asia to the east and Africa to the south.

This results in significant climate variability, from a Mediterranean type in the southern parts and coastal areas to a continental type in northern areas and at higher altitudes.

Another consequence is that numerous plant and animal species from all three continents are present here at the extreme limits of their distribution, thus increasing total biodiversity. Most important are species of eastern or southern origin, which here reach the westernmost or northernmost limits of their range, and do not occur anywhere else in Europe.

The main characteristics of the Greek natural environment are its fragmentation, variability and the abrupt juxtaposition of strikingly different geographical features, with high mountains, the second longest coastline in Europe (14,000 km), and thousands of islands. Within this diverse conglomerate, geomorphology is further influenced by local microclimate and geologic substrate, significantly increasing the variety of habitat niches. Another feature of the Greek natural environment, one setting it apart from all other European countries and indeed from most countries of the world, is that this broad spectrum of habitats occurs in a surprisingly small area –both on the large and on the small scale, over the whole country and within specific ecosystems– and this favours a dense concentration of niches and species diversity.

A visitor to Macedonia in June, for example, may explore the wetlands of the Nestos Delta in the early morning looking for the rare Spur-winged Lapwing or White-tailed Eagle, then enjoy a refreshing swim on the sandy beaches of Keramoti and, by late noon, climb high in the Rodopi mountains searching for Chamois, or wander through the spruce and birch forests of Elatia looking for tracks of the Brown Bear and the elusive Capercaillie. The straight-line distance between the two areas is no more than 60 km, yet in traversing it our visitor will have crossed almost all the vegetation zones present on our continent.

Fragmentation and isolation –islands, caves and remote mountaintops– are the major prerequisites for speciation and endemism. The great number of Greek endemics therefore comes as no surprise. Human activities have modified the landscape and natural habitats since ancient times, transforming them into their present-day form through cultivation, grazing, plant collection, fire, forest destruction, drainage of wetlands and even species introduction. Until the 1950s ecosystem loss or degradation due to human activities was restricted to those parts of the country where human pressure was most intense (along the coastline, on the plains and at lower altitudes). In most other places human activities remained on a small scale, so their impact on habitats was limited, and even beneficial for certain species. As a result, vulnerable species –large carnivores, birds of prey and waterfowl, orchids, tulips, seals and marine turtles– survived in good numbers.

Unfortunately, since the 1960s a series of factors have severely degraded many habitats, bringing large numbers of species to the brink of extinction. These include: relentless exploitation (often overexploitation) of natural resources, including extensive land reclamation (wetland drainage and destruction of lowland forests); the replacement of natural forests with commercial monocultures; land consolidation schemes and intensified agriculture; the uncontrolled expansion of urban and tourist infrastructure, especially along the coastline; the abandonment of rural areas, especially of mountain villages; arson; and year upon year of short-sighted handling of environmental and planning issues by the state.

Overall, Greece hosts some 36,000 species of animals and plants. This number represents 23% of total European species, and more than 2% of those in the world. Approximately 32% of the species assessed by the IUCN European Red List of Species are present in Greece. The country is home to 85 habitat types of European importance, including forest, coastal and halophytic habitats, freshwater habitats, coastal sand dunes and natural and semi-natural grassland formations, sclerophyllous scrubs, rocky habitats and caves, raised bogs, mires and fens and, lastly, temperate heath and scrub. It is also home to a large number of species of European importance: 57 mammals, 47 reptiles, 11 amphibians, 21 fishes, 46 invertebrates and 58 plants. The conservation status of these species and habitat types was assessed in 2007, and again in 2015.



Flora and vegetation

The range from sea level to 600 metres is covered by Thermo-Mediterranean vegetation (phrygana, maquis and thermophilous conifers); from 600 to 1,000 metres there is Meso-Mediterranean vegetation with sclerophyllous shrubs and forests of deciduous trees and conifers; from 1,000 to 1,500 metres, in the Supra-Mediterranean zone, fir and beech forests are dominant; from 1,500 to 2,000 metres one encounters the Mountain-Mediterranean zone of boreal conifers; finally, above 2,000 metres, in the Oro-Mediterranean or Alpine zone, there are no forests. Forest coverage is estimated at 25.5% of the total surface area (58% are deciduous forests and 42% is covered by conifers). A further 23.9% of the total surface area is classified as partly forested land, covered in bushy vegetation resulting from the destruction of forests.

Greek flora includes 5,752 species and 1,893 subspecies of vascular plants (6,600 taxa), belonging to 1,072 genera and 185 families. It is the second richest in Europe in absolute numbers, after Spain, and third after Cyprus and the Canary Islands per surface area unit.

Greece is also one of the world's hotspots for endemic plants, with 1,278 endemic species (22.2%) and 452 endemic subspecies, cumulatively representing 1,461 taxa (22.1% of total taxa). Most of the endemics occur in only one floristic region (the Peloponnese, Sterea Ellada, and the Cretan Area host the most), while many occur over a very limited range, occasionally even at only one site.

Fungi

Some 3,500 species of fungi have been recorded so far, of which some 1,800 are mushrooms. New species are continuously being found. According to calculations based on existing data from other countries, the total number may be much higher, perhaps even triple that known today, but data on the distribution, ecology, population and trends of many fungi are not available.

Mammals

A total of 115 species occur in Greece, 12 of which are marine mammals, as well as 70-80 local subspecies. Greece is third among European countries in species diversity (after Russia and France), but first when species number is calculated per surface area. It is also among the most important countries for the survival of threatened European mammals such as the Golden Jackal, the Brown Bear, the Wolf and the Mediterranean Monk Seal. According to the Red Data Book of Threatened Animals of Greece (2010), 29 species are included in the three highest risk categories (3 Critically Endangered, 13 Endangered and 13 Vulnerable). Endemism is fairly limited in mammals, with only two endemic species and six subspecies.

Birds

The current list includes 454 species. Of them, 242 (55%) have permanent and regularly breeding populations, 76 are wintering visitors, 29 are regular migrants, 103 are accidental migrants, and 3 have indeterminate status. The Red Data Book (2010) includes 122 species, mainly local breeders. The three highest risk categories include 62 species (14 Critically Endangered, 17 Endangered and 31 Vulnerable), 31 of which have undergone serious decline in numbers.

Greece is of paramount importance for many species with mainly Balkan or Eastern Mediterranean distribution, supporting very large populations, possibly the largest regional ones for these species. This includes all four European vultures, other raptors and many passerines.

Greece also hosts globally important populations of Dalmatian and White Pelicans, the Pygmy Cormorant, the Slender-billed Gull, the Lesser Kestrel and the Ferruginous Duck. The Aegean islands are home to more than 80% of the global population of Eleonora's Falcon. They also hold the largest populations in the Eastern Mediterranean of Audouin's and Mediterranean Gulls, Shag, Cory's and Mediterranean Shearwaters, and the only breeding population of Storm Petrels.

Amphibians and reptiles

Out of the European total of 64 amphibians, 22 species occur in Greece: three species of salamanders, four newts and fifteen species of frogs and toads. There are three endemic species and several endemic subspecies. Greek herpetofauna is the most diverse in Europe, with 64 species: three species of tortoises, three sea turtles and two terrapins, 32 species of lizards, 23 snakes and amphisbaena. Endemics include nine species and 14 subspecies, occurring mostly on islands.



Freshwater fishes

Greece has possibly the richest freshwater fish fauna among Mediterranean and European countries. The list totals 162 species, of which 29 are introduced exotics; 43% of the species that occur in Greece are threatened at the European level.

There are 47 endemic species (35.5%, among the highest rates of endemism in Europe), 14 near endemics, which occur in lakes and river basins in Greece extending up to and just beyond our borders (the Prespa Lakes, Lake Doirani and the Butrint basin), and 28 Balkan endemics found only south of the Danube.

Invertebrates

Invertebrate fauna is rather poorly studied in Greece, with the exceptions of some families (such as Lepidoptera with 3,200 taxa, including 235 butterflies, 11 of which are endemic); the total number of species is unknown. Recent research has identified many species not previously recorded. Some 30,000 have been identified so far, though the total number is estimated to be nearer to 50,000. Some 4,000 endemic taxa have been recorded to date. For some of the taxonomic groups, the percentages of European species that occur in Greece are particularly high, such as dragonflies, butterflies and saproxylic beetles (10% of the species in this group are considered threatened at the European level). Greece hosts the second highest number of terrestrial molluscs described for Europe; 8% are Threatened and 6% are Near Threatened at the European level.

Marine life

Of the 600 fish species present in the Mediterranean, some 476 (almost 79%) occur in Greek waters. They belong to 129 families and 19% are Mediterranean endemics.

Of the 18 cetacean species recorded within the Mediterranean, 12 live in or visit our seas. Another important marine mammal is the Mediterranean Monk Seal, the only seal species in the world adapted to life in warm waters. Its populations have fallen dramatically throughout its range in recent decades, and Greece now is home to about 200-250 individuals, some 43% to 51% of the world population.

Marine habitats also support a rich diversity of invertebrates. Even though our knowledge of them is far from complete, data again point towards an astonishing variety.

Threats

Greece hosts a large proportion of the species that are threatened at the European level, and has the important responsibility of protecting these species within its territory.

The European Red List of Species is a review of the conservation status of around 6,000 species in Europe, compiled according to the IUCN Red List Categories and Criteria and the regional Red Listing. Of the 1,883 species assessed that occur in Greece, 14%* are considered threatened and 8% are Near Threatened at the European level. Species considered threatened at the European level and occurring in Greece are found mostly in wetlands, rocky areas, forest and shrublands. These ecosystems require particular attention to ensure their survival and continued function.

Direct causes of biodiversity loss in Greece include:

Loss, modification, degradation and fragmentation of natural and semi-natural habitats. Greek forests have been exposed to human activity for millenia: those in coastal areas and at low altitude have been particularly degraded due to urbanisation and conversion into agricultural land. The edges of mountainous ecosystems (tree line) have been heavily influenced, especially through overgrazing and the exploitation of forests, although such pressures have significantly decreased. Indeed, afforestation and loss of open spaces is becoming a major issue in many abandoned areas. Between 1925-1965 some 67% of the surface area of Greek wetlands was drained due to demand for housing and agricultural land. Wetlands are the most threatened ecosystems in the Aegean archipelago, and should be treated as such.

Unsustainable practices. A variety of human activities have had a negative impact, including: water abstraction (for irrigation, the manufacturing industry, energy cooling, public water supply); intensive farming; overfishing; overgrazing; the construction of large infrastructure projects (such as the national road axes and dams that change water flow patterns) without adequate provisions for biodiversity; poaching; and, recently, the expansion of renewable energy installations without proper assessment of their impact on biodiversity.



Climate change. Even a small temperature increase may have a noticeable effect on the ability of species to survive and reproduce, especially when it comes to endemics or edge populations. Also, within only a few decades a changed climate could negate all efforts for the conservation and sustainable management of biodiversity. Effects of climate change are already visible (such as changing patterns in the distribution, migration and reproduction of various species).

Soil, water and air pollution. Industrialisation, the intensification of agriculture, disposal of large quantities of untreated or toxic waste and sewage, marine accidents, and the extensive use of non-renewable energy sources all pollute the abiotic resources on which biodiversity depends.

Invasive alien species. These compete with native species for the same survival resources, or interbreed with them, causing population and genetic degradation, or even extinction.

Forest fires. Even though fire is an integral element of Mediterranean ecosystems, repeated episodes in short periods of time prevent natural regeneration, leading to permanent cover loss, changes in hydrology, erosion, and loss of species. Additionally, poor protection of burned areas, especially on the coastline and near urban centres, leads to the illegal expansion of human activities.

Other factors affecting biodiversity include continued lack of knowledge of the state and trends of various biodiversity components; poor integration of measures for biodiversity protection in the sectoral policies of all competent ministries, without an integrated plan; lack of vision, planning and poor application of sustainability measures across different economic sectors; administrative delays in the implementation of physical planning, including the as yet incomplete National Cadastre, and outdated planning for renewable energy installations; limited progress towards completing the framework of thematic strategies aiming at halting biodiversity loss; division, overlap and conflict of competences between various ministries and other authorities; lack of a stable management system for protected areas, including long delays in fulfilling obligations relating to the Natura 2000 network (such as the requisite Special Environmental Studies and relevant management plans); underfinancing of actions related to genetic resource conservation; incorrect application of environmental legislation, poor enforcement of existing legal and institutional provisions (such as official tolerance of illegal building), and impunity regarding environmental crimes.

Environmental damages threaten not only the ecosystems but also human society itself, and their cost is not socially neutral. Sufficient legal framework, including environmental liability, as well as environmental policymaking and its implementation, are critical requirements for social and economic equality. The redrawing of economic and development policies is urgent with the protection of the physical environment and biodiversity as the main axis.



The LIFE Programme

(Excerpts from recorded presentations)

George Protopapas

Green Fund Director

The LIFE Programme is the EU's funding instrument for environmental and climate action. It contributes to the implementation, updating and development of EU environmental and climate policy and legislation by co-financing projects.

The General Objectives of the LIFE Programme are as follows: the emergence of a resource-efficient, low-carbon, climate-resilient economy; protecting and improving the quality of the environment; halting and reversing biodiversity loss; developing, implementing and enforcing the European Union's environmental and climate policy; integrating mainstream environmental and climate objectives into other Union policies and public and private sector practice; improving environmental and climate governance at all levels, including the greater involvement of civil society, NGOs and local actors; supporting the implementation of the 7th Environment Action Programme.

The LIFE Programme places considerable emphasis on long-term sustainability, replicability and transferability, which must be "impact indicator" quantified. LIFE consists of two sub-programmes, one for the environment and the second for climate action.

LIFE co-financed 4,171 projects from 1992 to 2013, contributing €3.1 billion. There were eight projects related to legislative enforcement in the 2010-2018 period, with a total budget of €10.2 million. These were either implemented or are ongoing in Spain, Italy, Slovenia, Poland, the UK and Austria. For the 2014-2020 funding period, LIFE will contribute approximately €3.4 billion to the protection of the environment and climate action.

The Green Fund

The Green Fund is a public funding organization founded in 2010 and supervised by the Ministry of Environment and Energy. The Fund's remit is to enhance development through environmental protection, support the country's environmental and energy policy, and serve public and social interests through the management of Fund resources. The latter derive from fines for environmental offences in urban, rural and marine areas, as well as other revenues (e.g. Special Forest Entity and Green Fund Resources, as per Ministerial Decision 4503/2012). Green Fund resources are made available through the planning and implementation of Funding Programmes for the protection, enhancement and restoration of the natural and urban environment, within the framework of National Environmental Strategy priorities.



The LIFE Natura Themis project

Michalis Probonas

UoC-NHMC, LIFE Natura Themis Coordinator

1. The LIFE Natura Themis Project: Objectives and Actions

“LIFE Natura Themis” (LIFE14 GIE/GR/000026) is a 5-year project (October 2015 – September 2020), which aims to map environmental crime in the Region of Crete, focusing on the protected areas in the NATURA 2000 Network. In the medium term, the project intends to provide in-depth information to both lawyers and the representatives of the judiciary, prosecutors and investigating agencies, as well as the regional authorities of Crete with a remit for all aspects of environmental degradation, with an emphasis on the protected areas of the NATURA 2000 Network. It also intends to promote awareness of the prosecution of wildlife crimes and highlight environmental responsibility for restoring biodiversity damage. In the long term, the project seeks to contribute to the reduction and prevention of environmental crime through raising awareness about the issue in local communities.

The Coordinating Beneficiary of the LIFE Natura Themis project is the University of Crete – Natural History Museum of Crete (UoC–NHMC), with the Ministry of Environment and Energy’s Coordination Office for the Implementation of Environmental Liability (MEEN–COIEL), the Hellenic Society for the Protection of Nature (HSPN), the Chania Bar Association (CB) and the Heraklion Bar Association (HB) as Associated Beneficiaries. 60% of project funding comes from the EC/EASME LIFE “Environmental Governance & Information” financial instrument, while 40% derives from the Green Fund and associated beneficiaries’ own funds.

The main objectives of the project are summarised in brief below:

1. To study and statistically analyse environmental degradation in Crete, focusing on the protected areas of the NATURA 2000 Network. The results will be used to inform all stakeholders of possible legislative proposals, as well as for academic purposes.
2. To cultivate skills among target audiences and stakeholders (judges and prosecutors, lawyers, civil servants from the Region of Crete, the Decentralised Administration Authority of Crete and Municipalities, NGOs on Crete, etc.), so as to effectively prevent environmental crime. To assist in addressing that crime and in taking remedial measures where feasible and where required by implementing environmental liability legislation.
3. To inform the inhabitants of NATURA 2000 areas in Crete of the illegal activities that take place in their areas, which in turn undermine local development, social cohesion and economic progress.
4. To encourage a change of attitude in all competent authorities regarding the recognition, recording and prevention of violations of environmental legislation and environmental crime.

In the field of research, the project’s actions involve recording the pre-existing situation in relation to European and national environmental legislation on the NATURA 2000 Network in Greece, as well as collating and statistically analysing judicial procedures in Crete; creating two Environmental Law Observatories in west and east Crete respectively; and collecting, recording and processing data on environmental offences in Crete (as well as posting and publishing the results on the project’s geoinformation map).

Regarding information, education and raising awareness among stakeholders and target groups, the main actions are briefly the following:

- A project website (www.lifethemis.eu) and social media tools
- A smart device application (LIFENatura Themis)
- Electronic and printed information material
- TV and radio spots
- Three technical guides for judges/prosecutors, lawyers and the general public
- Sixteen workshops throughout Crete
- Six training seminars for public officers with investigative duties
- Nine training seminars for judges/prosecutors, lawyers, local authority employees and environmental NGOs



- Two national conferences and one international congress
- Participation in events throughout Crete

The project's communication strategy is based on actions related to research into the knowledge, perceptions and behaviours of target groups and social partners regarding both the NATURA 2000 Network sites and promoting awareness of wildlife crime prosecution, as well as the emergence of environmental liability for the remediation of biodiversity damage. The project messages are the following:

- Right and liability for the environment
- Law at the service of the environment

Three (3) Technical Guides have been already issued:

- a) The Birds and Habitats Directives: A Technical Guide for Lawyers and Public Administrators;
- b) Environmental Law and the NATURA 2000 Network: A Technical Guide for Citizens;
- c) The Environmental Liability Directive and Wildlife: A Technical Guide for the Judiciary.

The smart device application (LIFE Natura Themis) has been in operation since August 2017 and has already received a large number of reports of environmental offences in Crete. Almost all complaints have been forwarded to competent services, and in two cases a fine has been already imposed and/or the environmental degradation in question restored.

A national conference on Environmental Liability (Heraklion, September 7-9, 2017) and an international congress on Environmental Crime (Athens, November 23-25, 2018) have already taken place. Finally, a series of workshops, meetings, events and training seminars have been held throughout Crete.

2. Innovative Actions

The LIFE Natura Themis project is of itself innovative with regard to Greece, since it is the first time the country's legal and administrative world has ever come into contact with environmental liability, co-operated with environmental scientists and NGOs and met local society. The involvement and cooperation of Bar Associations in a LIFE and/or a non-LIFE project is unprecedented in Greece, while the involvement of the judiciary (Judges, prosecutors, lawyers) as a target audience and their interaction with environmentalists, biologists, members of NGOs, citizens and other parties involved with the environment in Greece, is another rare occurrence. In addition, this is the first time that environmental crime has been recorded and entered as a separate type of crime, and the first time data on complaints and legal cases relating to environmental crime have been collected in Greece.

Implementation of the project's objectives is based on the primary material, gathered for the first time ever, in cooperation with the competent authorities, the courts and local residents by the two Environmental Law Observatories (ELOs), structures which were established within the framework of the LIFE Natura Themis project. The ELOs also monitor the development and implementation of environmental legislation in Crete (and Greece). The unique characteristics of the Environmental Law Observatories of Crete are: 1) independent operation; 2) recording and analysis of environmental cases in the penal courts and the administrative fines imposed in the respective regions, with an emphasis on NATURA 2000 areas in Crete; and 3) entry of collected data into a geo-informatics (GIS) map accessible to the public via the project's website.

The innovative aspect of this action is that by localizing research into the implementation of environmental law, the project created relevant data for the first time. This data could serve as the starting point for addressing environmental crime in the country. Added to existing EU data and with the cooperation of European Institutions such as the Academy of European Law or the European Union Action to Fight Environmental Crime, this will contribute to an efficient transfer of know-how and experience throughout EU member states facing similar environmental problems.

The geo-informatics map in particular is an innovative tool, as it is easy for anyone to extract information on recorded offences or current complaints, as well on how the respective public services have tackled or are tackling each one of them. Through available GIS maps, direct monitoring of the efficiency of the relevant public services is enabled, and "hotspots" of criminal activity and environmental degradation can be targeted. Public authorities can more easily see their individual responsibility for preventing and remedying environmental damage. The same tool can also serve as a road map for how Geographic Information Systems (GIS) are able to boost environmental information and affect law and environmental governance.



This is also the first time that citizens have had the opportunity to get involved and act anonymously as environmental crime reporters, by using the smart device application produced by the project. With this tool citizens can report an environmental crime in real time, without running the risk of being ignored by the authorities, of coming into direct conflict with the potential perpetrator or of getting involved in a lengthy and painful legal process. At the same time, targeted handling of the reports by the application's administrators demonstrably activate the public services, bring about the effective implementation of legislation and lend impetus to remedying environmental damage.

However, we believe that above all the LIFE Natura Themis project has built strong bridges of communication between stakeholders and target audiences, and assisted in mitigating conflicts between them.

3. Effectiveness and Perception of the Project's Activities

The LIFE Natura Themis project has had to face two serious challenges: firstly, covering the two different objectives, namely protecting/enhancing protected areas and correctly implementing the Environmental Liability Directive [ELD]; and, secondly, bringing together opposed social and/or professional communities/groups such as the administrative and executive public authorities responsible for implementing the Environmental Liability Directive (key stakeholders) on the one hand, and potential environmental law offenders (target audiences) on the other.

The project's principal aim is to enforce European legislation on biodiversity through specific training programmes on the NATURA 2000 Network for judges, public prosecutors, lawyers, public servants and investigating agents, by developing better compliance promotion capacities and by increasing stakeholder access to judicial procedures on environmental matters. In particular, the project encompasses awareness raising and training activities on access to justice in the field of wildlife crime and liability for remediating biodiversity damage, including how to ensure and evaluate the efficiency and effectiveness of judicial review procedures. Moreover, the above activities place particular emphasis on the Environmental Liability Directive with regard to the rights and obligations of public officials on Crete, environmental NGOs and each stakeholder group, in order to provide them with the appropriate skills to demand measures for the remediation of damage to biodiversity.

Current legislation regarding the Greek NATURA 2000 Network is focused on protecting wildlife through penalties (which should be the last resort), but neglects the socio-economic dynamics underlying compliance and enforcement. The project addresses people living near or within NATURA 2000 sites who were not involved in developing the legislation, so as to enlist their cooperation in conserving the network. Bearing in mind that the necessary pre-conditions for successful law enforcement include a stable economic, political and legal environment, the objectives of the legislative framework will only be achieved via clear government policy, and above all by elaborating the proper social structure to allow the regulations to function towards common economic and social interest. Effective compliance and enforcement are heavily dependent on developing the socio-economic capabilities of people in society, as well as on the ability to empower institutions and competent authorities to precisely determine the relevant piece of legislation.

We believe that by taking specific actions, the LIFE Natura Themis project has contributed to reconciling interests and perceptions in Cretan society over implementation of the Environmental Liability Directive. The above actions include the following: establishing the two Environmental Law Observatories in east and west Crete; launching the smart device application; holding training seminars for stakeholders, as well as workshops and open events for the target audiences, plus conferences for stakeholders, relevant authorities and policy makers; producing easy to use and aesthetically appealing printed and electronic information material; and, lastly, initiating networking activities with experts and specialist scientists, and contacts with government officials and agencies related to the project objectives.

The project team has been warmly received at the local, national and international level. The initial results of the completed and ongoing actions have been well accepted within Greece and abroad. The majority of stakeholders' representatives have been informed and made aware of the project, ELD objectives and obligations, and the impacts of environmental crimes. Lawyers, judges, administrative employees, investigating agents, journalists, NGOs and individuals frequently contact the project, expressing their interest in environmental issues. At the same time, researchers, journalists, academics and NGOs, as well as private individuals, often contact the Environmental Law Observatories to report cases or ask for information regarding Environmental Law, while several citizens from other areas of Greece have also contacted the project asking for advice on how to deal with environmental crimes that have come to their attention.

The feedback provided by participants at all the events organized and/or co-organized by the project has been more than positive, especially from scientists and members of NGOs or experts working on environmental policy issues.



Communications specialists and a large number of citizens have made positive comments about the quality of the printed and electronic material produced and the effective dissemination of the messages it contained.

Through networking and awareness activities in the previous period, interest in the LIFE Natura Themis project was expressed by other LIFE projects and NGOs operating in other countries, combined with interest in its goals, aims and the methods used in implementing specific actions.

4. Transferability and Replicability of the Project's Actions

Continuation of the project's activities will be ensured by implementing the core actions that serve as the backbone of the communication and environmental awareness campaign over the remaining period. Furthermore, by holding training seminars, workshops and conferences, providing information material and working with the local media, we expect to change the attitudes of stakeholders, targeted audiences and the general public in Crete, and engage with them in protecting biodiversity, enforcing and strengthening substantive and effective implementation of national and European environmental legislation.

Operation of the east and west Crete Environmental Law Observatories and systematic monitoring and evaluation of the project's effectiveness will ensure it continues to have a positive impact, even after its end.

The beneficiaries are continuing their efforts to ensure the project is successfully completed and makes a positive contribution to awareness of wildlife crime prosecution and liability for biodiversity damage in NATURA 2000 areas at the local, regional and national level. In addition, the project's beneficiaries anticipate that the methodology implemented will be transferred to other countries or policy areas, i.e. other LIFE projects, European level NGOs, Management Bodies of NATURA 2000 areas in Greece, etc.

The project's activities positively empowered young legal professionals to channel their interest in environmental topics and environmental legislation. In addition, targeted dissemination of the project has served as a catalyst in activating other Bar Associations throughout the country and abroad, some of which are already looking to establish an environmental observatory within the framework of their own activity.

Furthermore, the two Bar Association partners in the project are now collaborating and working on a permanent basis with their counterparts in other regions of Greece, thus rendering the project transferable to other parts of the country. For example, the Piraeus Bar Association has forwarded the Technical Guides survey to all its members, as it considers that particular Action and the project as a whole will greatly impact all legal professionals.

All of the training and awareness activities in the project and the positive feedback obtained from participants and all those involved in one way or another will ensure the long-term effects of our action.

The project website will remain active for five more years, and the GIS map and all the project's information materials and results will remain available for the forthcoming period too. Public authorities are already using them to target the "hotspots" of criminal activity and environmental degradation in Crete. This will enable them to direct regional strategies against environmental offences and influence law and environmental governance in the future.

The smart device application will be administered by the project until the end of the programme (September 2020). If its pilot operation until that time is evaluated as successful, it will become a useful and efficient tool for the competent authorities in Greece and other countries of the EU. The plan is for it to be adopted and administered by the Ministry of Environment and Energy and to be upgraded for use nationwide.

Good practices to ensure the active involvement of both public and private stakeholders and the implementation of the replicability/transferability plan have emerged on two fronts: in the results obtained from collecting and statistically analysing judicial procedures on environmental violations in Crete regarding wildlife and environmental liability issues; and in the project's communication strategy, via a series of awareness-raising actions directed at all the stakeholders and target groups involved.

Together with the project's communication strategy and establishment of the west and east Crete Environmental Law Observatories, the smart device application (the Life Natura THEMIS App) and geoinformation map recording all cases of environmental violations in Crete will be a model for replication/transfer to other regions of the country and/or Europe.



During the project implementation period, the associated beneficiaries had the opportunity to meet officials in the competent authorities at all levels in the administration. Specific cases emerging from these contacts highlighted serious efforts and smart solutions for tackling environmental crime, enriching the project team's knowledge and assisting us to disseminate and transfer the experience gained to other authorities and administrative officers. Further cooperation is foreseen in due time.

The technical guides targeting lawyers, judges/prosecutors and the general public were delivered to numerous bodies and authorities both in Crete and countrywide, and are available for free download from the project website, so that the action has multiplying effects on all target audiences. All other printed and electronic material is also available for free downloading in electronic format from the website. As one of the project's most successful tools, the GIS map can be used by any interested body or individual and is replicable in any country or by any public service, state, institution, NGO or management body.

Both as an idea and in action, the smart devices application can be transferred anywhere and by anyone either in full or with minor adjustments to differing local conditions, whether natural, social or administrative.

Our experience so far has shown that the methods used by the partners in the surveys, in holding the events, in the communication strategy, in handling the tools produced and in establishing contacts with the state and public services were effective. The partners' efforts to reach out, strengthening contacts and reinforcing relationships between the various parties yielded positive results. All these methods and experience will be presented in the layman's report and can be used as good practices and general guidelines for building a successful network of parties/groups with different or even opposing interests and perceptions of specific domains/topics.



Wildlife Crime Legislation and Implementation

Wildlife crimes and the protection of biodiversity: Economic, social and environmental interactions

(Excerpts from recorded presentations)

Joseph van der Stegen

Policy Officer, Nature Unit, DG Environment, European Commission

The issue of bird killing is still a highly crucial one. Given that illegal actions can take various forms, involving trade, trapping or poisoning, there is a need to cover different type of activities in order to combat such crime. The primary responsibility of the European Commission is enforcement, but this cannot be achieved without national or regional collaboration.

In January 2018, the European Commission adopted a plan to improve compliance with EU environmental rules. The Action Plan rests on three main pillars: the promotion of compliance; inspections and checks (collecting information on levels of compliance and providing solid evidence for enforcement); and enforcement.

The Action Plan aims to:

- Encourage the professional training of different types of actors as well as authorities, so as to render them more effective.
- Spread knowledge in order to know what is happening and where illegal activities are taking place.
- Raise awareness not only among people directly involved in legal activities, but also among those buying the products of illegal activities.
- Improve the handling of citizens' complaints (citizens provide valuable information about wrongdoing, which can help authorities do their job better).
- Create a group of people with different skills for the implementation of the Action Plan, such as experts in economics, social scientists, biologists, etc.
- Coordinate actions and use resources in the best way.
- Focus on the issue of poisoned baits, an issue which has not been addressed much to date.
- Prevent hunting tourism, which may often be an illegal activity.

The EU is committed to supporting actions against the illegal killing of species as it has done so far, and will continue funding several types of projects, including LIFE projects.



EU legislation relating to wildlife crimes

Ludwig Krämer

Former Head of Unit, Environmental Department of the European Commission

“Wildlife crime” is not defined in EU law. Generally speaking, it is understood as an act which breaches environmental legislation on the conservation of fauna and flora. This definition will be used in this contribution, though some clarifications appear necessary. Firstly, not all breaches of environmental legislation are criminal acts; rather, it is up to national or EU legislation to determine when an infringement of environmental legislation is sufficiently serious to deserve or require classification as a “crime”. Secondly, an omission to act may be qualified as a crime in cases where the person had a legal obligation to act, but did not do so.

EU legislation on wildlife crime

EU environmental law has mainly used three instruments to fight wildlife crime: preventive measures, prohibitions and sanctions. An example of preventive measures is the explicit protection of all wild living birds by Directive 2009/147¹, and of those fauna and flora species that are listed in Directive 92/43². These provisions accorded the listed species increased specific protection status, differentiating them from other fauna and flora species³. Regulation 338/97 established a list of endangered species of fauna and flora and introduced the requirement of a permit for the import, export or re-export of specimens of such species. A regulation on timber provides that only legally harvested timber can be marketed in the EU⁴. Directive 1999/22 asked all zoos which wanted to use animals in performances to obtain a permit⁵.

Hand in hand with such preventive measures to protect fauna and flora species went the instrument of prohibitions in EU law. The requirement to obtain a permit in order to exercise a specific activity – hunting, fishing, trading animals or plants etc. – already meant that an activity was prohibited when no permit had been granted. There are numerous examples of prohibitions in EU law which aim to protect fauna and flora species. For example, the Birds Directive prohibits the deliberate killing and capture of birds, the destruction of their nests and habitats or their deliberate disturbance and only allows very limited exemptions from these requirements.

The Habitats Directive likewise prohibits the deliberate capture and killing of animals, the taking of their eggs, trade of animals, and disturbing them. Furthermore, the deliberate picking, collecting, cutting, destruction or uprooting of plants is prohibited, as is the significant deterioration of a protected habitat. Regulation 1007/2009 prohibits trade in seals and seal products⁶, and Regulation 995/2010 trade in illegally harvested timber.

The main emphasis in the fight against wildlife crime lies in the system of sanctions. Criminal sanctions were for a long time considered to be part of the core of national sovereignty, and Member States were therefore reluctant to allow the EU institutions the establishment of criminal law sanctions. Rather, it was the norm for EU legislation to leave the question of sanctions for non-compliance with EU environmental law to the national implementing legislation. It thus asked Member States to provide for effective, proportionate and dissuasive “sanctions” in cases of non-compliance with the EU rules. The term “sanction” left it to the discretion of Member States to decide whether these sanctions should be of a civil, administrative or criminal nature.

It was only in 2008, after a long battle between the European Commission and the Council (the 28 Member States) and following a clarifying judgment from the EU Court of Justice⁷, that the EU adopted a directive on the protection of the environment through criminal law⁸. As the Court of Justice had held that the determination of the nature and kind of a criminal sanction (imprisonment, financial penalty) did not fall within the remit of the EU, the Directive

1 Directive 2009/147 on the protection of wild birds, OJ 2010, L 20 p.7.

2 Directive 92/43 on the conservation of natural habitats and of wild fauna and flora, OJ 1992, L 206 p.7.

3 Regulation 338/97 on the protection of species of wild fauna and flora by regulating trade therein, OJ 1997, L 67 p.1.

4 Regulation 995/2010 laying down the obligations of operators who place timber and timber products on the market, OJ 2010, L 295 p.23.

5 Directive 1999/22 relating to the keeping of wild animals in zoos, OJ 1999, L 94 p.24.

6 Regulation 1007/2009 on trade in seal products, OJ 2009, L 286 p.36.

7 CJEU, case C-176/03, Commission v. Council, ECLI:EU:C:2003:xxx.

8 Directive 2008/99 on the protection of the environment through criminal law, OJ 2008, L 328 p.28.



does not provide for such aspects. Article 83 TFEU now allows the EU⁹ to fix sanctions “in the area of particularly serious crime with a cross-border dimension”. That Article enumerates the areas of crime which constitute such particularly serious crimes. Environmental crime is not listed in that provision. The Council may unanimously add to the list of particularly serious crimes, but has not yet done so.

Directive 2008/98 defined the following as criminal offences:

- The killing, destruction, possession or taking of species of protected wild fauna and flora, except for cases where the conduct concerns a negligible quantity of such specimens and has a negligible impact on the conservation of the species.
- Trading in specimens of protected wild fauna or flora species or derivatives thereof, except for cases where the conduct concerns a negligible quantity of such specimen and has a negligible impact on the conservation status of the species.
- Any conduct which causes the significant deterioration of a habitat within a protected site.
- Illegal logging, hunting or fishing, and breaches of animal welfare provisions are not included in the Directive.

Effectiveness

Little is known about the effectiveness of Directive 2008/99. Generally, though, it is considered to be low. This is due to its vague wording, to the fact that most offences were already considered to be criminal offences under national law before the Directive was adopted, and to failure to apply and enforce the provisions of the Directive.

As regards the wording, it should be mentioned that the Commission proposal for the Directive had suggested that, for example, the disposal of waste outside an authorized landfill constituted a criminal offence. The final text of the Directive only considered this to be a criminal offence when the disposal “causes or is likely to cause death or serious injury to any person or substantive damage to the quality” of air, soil or water. It is clear that this change makes it much more difficult for public prosecutors, the police or the courts to prove the existence of an offence. Similar examples could be given for several of the other offences listed in Directive 2008/99.

Other circumstances which further impede the full application of Directive 2008/99 are the almost total absence of any monitoring of it by the EU Commission, the notorious lack of personal and financial means to pursue criminal offences (customs authorities, police, the judiciary, etc.), and the fact that police, prosecutors, administrations and courts consider environmental crimes to be infringements for which criminal sanctions are inappropriate (“negligible quantity”; “serious injury”; “substantive damage”). This perception is facilitated by an appalling lack of data on environmental impairment. Neither the courts nor police offices or prosecutors’ offices in the EU keep statistics on wildlife crime judgments and the penalties pronounced. As neither the environment nor environmental crime is limited to the national borders of a country, close cooperation among all involved administrations would be necessary – though this is all too often lacking within EU Member States and within the EU as a whole; linguistic difficulties add to this. Local and regional administrations called upon to apply the sanctions are often unwilling to prosecute wildlife crime, as the offender might be a local employer, the offending practice – hunting, fishing – is widespread¹⁰ or the public authorities themselves may have allowed the offence to be committed¹¹, be it by not stopping illegal discharges, emissions, constructions or by other activities which breach environmental protection legislation. Political reasons might also lead prosecutors not to interfere¹². Finally, public authorities prefer administrative sanctions to criminal ones, as the former are easier to provide for, there is normally no public procedure, and the offender is likely to accept an administrative sanction more easily.

⁹ CJEU, case C-440/05 Commission v. European Parliament and Council, ECLI:EU:C:2007:xxx.

¹⁰ The Ortolan (*Emberiza hortulana*) is a migrating bird which is protected by Directive 2009/147. Its capture, killing and sale has been prohibited since 1979. However, it is estimated that 30,000 to 50,000 Ortolans are captured every year, sold to restaurants and eaten. France promised in 1979, 1999, 2007, 2016 and 2017 to end the practice. On the last promise, the EU Commission stopped its infringement procedure against France.

¹¹ In 2007, the Regional Government of Extremadura (Spain) granted a permit to build 300 luxury villas, two hotels, a marina, a golf course etc. in the protected habitat of Valdecanas. The decision was declared illegal by the Spanish Supreme Court (cases 2414/2011 and 2940/2011, judgment of 29 January 2014). No criminal prosecution was ever initiated against the regional government.

¹² Birdlife International, an environmental organization, estimates that about 25 million birds are killed or captured in the Mediterranean region annually, with estimations for Italy (3.4 to 7.8 million) Cyprus (1.3 to 5.2 million), Greece (485,000 to 922,000) and France (149,000 to 895,000) ranking highest.



Ways ahead

The question of what could or should be done to improve the situation cannot be answered easily. The first measure which springs to the mind is the adoption of new legislation, be it at the national or EU level. One could think of EU legislation to protect biodiversity as such, building on the international Convention on Biodiversity. Also, the Council of Europe Convention on the Protection of Landscapes could be transposed into EU legislation; this would extend the protection status of present EU law, which only protects designated species and fauna and flora habitats. Other measures which could be considered are a general ban on the ivory trade, legislation on the protection of marine mammals or an act to better regulate the use of pesticides and biocides¹³.

However, the problem of wildlife crime is not a lack of legislation protecting wildlife. Rather it is the widespread lack of serious law enforcement. Agricultural activities –the use of chemicals, intensive farming methods, monocultures, waste handling etc.– plus urban sprawl and infrastructure projects for transport and energy all contribute to a slow but continuous degradation of the environment, making it all the more necessary to fully apply and enforce existing protection legislation. In some cities, adopting zero tolerance policies against graffiti, the breach of waste disposal and traffic provisions has led to significant improvements regarding cleanliness, citizen welfare and safety. A similar approach towards wildlife protection might have to be considered.

This would mean more controls and audits. Such controls need not be established by EU legislation – though in the area of food and feed law and competition, the EU legislation has established a detailed system¹⁴; and it is a political decision not to have a similar system for wildlife protection. What is necessary are investigations and controls, including on-the-spot verifications, audits, and efficient sanctions. All this can be done by local, regional or national authorities if the corresponding political will to reduce wildlife crime exists.

Transparency is the key to the greater effectiveness of wildlife protection legislation, as the overall objective must be to make wildlife crime a socially undesirable activity – just as the EU has succeeded in making smoking a socially undesirable activity. Transparency would at the same time place the blame on offenders and ensure that officials of public authorities do their job.

Increased transparency would mean that:

- The facts on cases of wildlife crime were systematically collected and made publicly available.
- The results of legislative and administrative measures and their impact on wildlife were made publicly available, such as the planting of eucalyptus trees and forest fires, bird trapping, insects disappearing due to pesticide use, the impact of tourist activities on turtles, etc.
- Criminal activities were made public.
- Administrative and court sanctions were made public (name and shame), compared with sanctions in similar cases and their dissuasive effect.
- Good and bad results were publicly discussed, including decisions –or the lack thereof– by officials.

Any serious attempt to combat wildlife crime needs the participation and active involvement of committed individual persons and environmental organizations. Unfortunately, public authorities all too often have a tendency to turn a blind eye to wildlife crime, even facilitating it or siding with offenders. Networking of NGOs has become easier in the electronic age and should be more extensively and better used. Environmental crime is not an act of God; it can be combatted.

"If you fight, you may lose; if you do not fight, you have already lost" (Bertolt Brecht).

¹³ Although EU legislation on the sustainable use of pesticides does exist (Directive 2009/128, OJ 2009, L 309 p.71), it is not very effective and scarcely enforced.

¹⁴ Regulation 2017/625 on official controls and other official activities, OJ 2017, L 95 p.1; Regulation 2003/1 on the implementation of the rules on competition, OJ 2003, L 1 p.1.



Overview of the Court of Justice of the European Union (CJEU) case law on wildlife crimes

(Abstract)

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This presentation comments on CJEU case law in three areas of wildlife law, and lawful and unlawful compliance with it. The three areas are:

- The Wildlife Trade Regulations, mainly Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade therein (Basic Regulation).
- Derogations and prohibitions under the Birds Directive (2009/147/EC, codified version).
- Derogations and prohibitions under the Habitats Directive (92/43/EEC, consolidated version).

First, the presentation reviews three decisions by the Court of Justice of the European Union (CJEU) that demonstrate the wide range of cases subject to the Basic Regulation. The cases concern the following issues: whether stuffed animals are 'worked specimens' under the Basic Regulation; how a person being prosecuted for a wildlife crime proves that he acquired specimens lawfully when domestic law does not provide for registration certificates for the relevant species; and whether a regulatory authority may seize all the animals imported in a single cargo into a Member State of the EU when the import permit is invalid for some of those animals.

Next, the presentation reviews six cases concerning derogations and prohibitions under the Birds Directive. Again, these demonstrate the wide range of cases that have come before the CJEU on the above topics. The cases concern the criteria for granting derogations from general prohibitions, and compliance with the prohibition on the capture and keeping of birds. Other cases involve the requirement that derogation must apply to the hunting of only 'small numbers' of birds and the requirement to show that there is no other satisfactory solution to the derogation for hunting. The remaining cases involve derogations involving the hunting season for birds, and the requirement to ensure that populations of birds are maintained at a satisfactory level. Hunting that fails to comply with these obligations is prohibited by the Birds Directive.

Finally, the presentation reviews six cases under the provisions on derogations under the Habitats Directive, again to show the wide range of such cases that have been decided by the CJEU. The cases concern a general prohibition on the use of all indiscriminate means to prevent the local disappearance of, or serious disturbance to, populations of protected species of animals. Three of them involve the meaning of the word 'deliberate' in respect to the disturbance of protected animals during their breeding period, as well as the meaning of that term in the phrase 'all forms of deliberate capture or killing of specimens' in article 12 of the Habitats Directive, with three of the cases involving the protection of the Loggerhead Sea Turtle (*Caretta caretta*). The remaining case concerns conditions for granting derogation for killing animals in a species when a species is not in a favourable conservation status in its natural range.





Focus on Wildlife Trafficking

Enforcement of EU wildlife protection and implementation by domestic judges

(Abstract)

Matthias Keller

Presiding Judge, Aachen Administrative Court

Wildlife trafficking is a global problem of significant negative economic, environmental and social impact.

However, cases on the matter are not very common at the level of national courts. In order to fulfil the 21st century tasks of Green Justice in an adequate way, discussions among legal practitioners are urgently needed. The multi-layered system of law within the EU is a demanding challenge for all legal practitioners dealing with it.

This presentation tries to reduce this complexity by naming the three layers and using a metaphor (“juggling with three balls”) to describe their interplay. The “toolbox of the national judge” shows the main legal devices within the EU law system in order to deal with inconsistencies (“dark side”). The triad of “supremacy”, “consistent interpretation” and, last but not least, “preliminary reference” is presented within that context.

The presentation highlights the administrative law concept followed by CITES and Council Regulation No 338/97 – the well-known concept of prior approval by issuing permits or certificates. Furthermore, CITES and the Council Regulation No 338/97 follow a criminal law agenda. It is worth remembering that administrative assessment takes priority. If a valid CITES document is issued there is obviously no room for criminal sanctions.

The benefits of administrative measures lie in preventive, more flexible control of the matter. Furthermore, an administrative judge may be able to become more specialized than an ordinary judge. However, the presentation is meant to enhance open debate on the current situation in the national judiciaries. Very often wildlife cases are not at the centre of interest and even administrative judges do not seem to be sufficiently specialized.

The last part of the presentation focuses on a case study. An administrative case (“Precious Old Rhino Horn”) raises questions as to whether a 19th century rhino horn can gain administrative approval to be put on the market and sold at an auction house. The case is assessed under Article 8 of Reg. No 338/97. Firstly, the strict prohibition in Article 8 para. 1 of the regulation is shown. Secondly, possible exemptions in Article 8 para. 3 lit. a), b) and c) are discussed. Thirdly, the question of whether there is proper use of administrative discretion is asked.

One fact highlighted is that the administration used its discretion to deny the requested exemption by relying solely on a Guidance Document of the EU Commission. The problem is whether this can really be seen as deciding on a “case-by-case” basis, since an exemption under Art. 8 (3) a) is pertinent and was ignored by the reasoning of the administration.



IMPEL's contribution to implementing the EU action plan against wildlife trafficking

John Visbeen

Representative of the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL)

IMPEL: working together to combat wildlife crime

The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) is an international non-profit association of environmental authorities in European Union Member States, acceding and candidate countries of the EU, EEA and EFTA countries. The association is registered in Belgium, with its legal seat in Brussels. IMPEL currently has 53 members from 36 countries, including all EU Member States, the former Yugoslav Republic of Macedonia, Serbia, Turkey, Iceland, Kosovo, Albania, Switzerland and Norway.

IMPEL is an informal network of European regulators and authorities concerned with the implementation and enforcement of environmental law and the law on nature conservation. The network's objective is to create the necessary impetus in the European Community to make progress on ensuring a more effective application of environmental legislation and nature conservation law. The expertise and experience of the participants within IMPEL make the network uniquely qualified to work on both technical and regulatory aspects of EU environmental legislation and nature conservation law.

IMPEL's Expert Nature Protection Team

Nature legislation (the Birds and Habitat Directives) is essential for achieving the EU 2020 biodiversity target. However, implementation and enforcement need to be improved. As a relatively high number of complaints and infringement procedures relating to these nature Directives reach the EC every year, there is a need to strengthen inspection and enforcement on this issue, and doing so makes it necessary to join forces with other Nature networks in Europe. According to the IMPEL strategy, the main areas of interest for nature protection will be covered by the work of the Expert Team on Nature Protection. This approach has been envisaged as the most efficient in dealing with new perspectives in European nature legislation implementation: it will permit a focussed approach to nature conservation issues, while enabling constant, structured dialogue among nature experts and authorities, as well as other important networks of prosecutors, judges, NGOs and scientific institutes.

The overall objective of the Expert Team on Nature Protection is to contribute to strengthening the implementation of EU Nature legislation through raising awareness, extending the network of green experts, exchanging best practices, strengthening collaboration with EU networks of prosecutors and judges, strengthening collaboration and sharing knowledge with NGOs, improving co-operation between (enforcement) experts and by executing peer reviews (Impel Review Initiative). The Expert Team also will organise joint inspections to share best practices and transboundary collaboration in investigating crime cases. By working together, the Expert Team is building up a European network of experts in the area of nature conservation. IMPEL is willing to combine the effort of all the networks and NGOs and use its experience in inspection and enforcement to determine projects and activities that add value to the regulation > permit and inspection > enforcement > prosecution > verdict chain, as well as evaluating the effectiveness of legislation.

At present the Expert Team is working on projects to tackle illegal hunting tourism, to share best practices in tackling wildlife trafficking (with a priority on NATURA 2000 areas), and to exchange information between NGOs and authorities (IMPEL-ESIX). Another key activity carried out by IMPEL and the Expert Team is the execution of peer reviews (IRI).

Combatting illegal hunting tourism

During a workshop held in Romania in 2015, the working group identified the issue of 'illegal hunting tourism' as an opportunity to work together in identifying the scope of the activity and associated legal and illegal aspects. This was based on a presentation by a prosecutor in Romania, where Italian hunters illegally killed birds and transported them to Italy for consumption. This case had a serious impact on the birds' nature conservation status, and it was stated that such illegal activities still continue, both in Romania and elsewhere. The case was also presented at the first joint network conference in Utrecht in 2016, held by IMPEL together with the European Union Forum of Judges for the Environment (EUFJE), the European Network of Prosecutors for the Environment (ENPE) and the relevant police network (EnviCrimeNet). The importance of working on this topic was emphasized by all participating



organizations. We thus began a project led by Slovenia and The Netherlands. This year a questionnaire will be sent out to all IMPEL partners and to Birdlife and FACE to examine the actual scope of the problem. We aim to gather the information from different points of view in order to gain a complete picture of this issue.

As we have progressed with internet searches and the questionnaire, together with the serious information from the IMPEL-ESIX mailing list, it has emerged that illegal hunting tourism is still occurring. This fact must lead us to joint inspections involving enforcement officers and probably customs officers. At the next Expert Team meeting a decision will be taken as to which countries can carry out a joint inspection.

Wildlife Trafficking – sharing good practices

Another project focused on wildlife trafficking is being led by Portugal. The scale of the problem is such that it now poses a genuine threat to the survival of some of nature's most emblematic species. Wildlife trafficking has become a billion-euro criminal industry dominated by organized criminal groups. Though the countries most affected are those with greater biodiversity, which generally lie outside the EU, Europe is directly concerned and affected too. Endangered birds and reptiles are offered for sale in the European Union, protected timber and ivory have been sneaked through harbours, and highly endangered Glass Eels from Europe are ending up for sale in Asia.

Implementing the EU Action Plan against Wildlife Trafficking will require broad support not just from the EU institutions, but also from the EU agencies (Europol and Eurojust), the Member States and their relevant agencies, the EU Delegations and Member State embassies in third countries.

To achieve those goals it will be essential for Member States to work together closely with stakeholders, including civil society organizations and relevant business sectors, on many specific measures to make maximum use of the available expertise and knowledge and ensure maximum impact. IMPEL's Expert Team on Nature Protection also wants to contribute to the implementation, initially by sharing good practices and working to eliminate loopholes identified during workshops.

In 2018 a first workshop was held to bring all participants up to the same level of knowledge regarding wildlife trafficking. All aspects of the important investigation in Portugal and Spain led by the authorities and prosecutors concerning the violation of nature conservation law in the Glass Eel case were explained.

During the workshop, several loopholes in regulations on wildlife trafficking were pointed out, in addition to the situation regarding captive bred animals. This is not only a loophole according to CITES legislation, but also a topic which demands further exploration under the terms of the EU Birds Directive, and was therefore addressed as an issue of importance during the workshop and expert team meeting. The same was also confirmed at a meeting on the EU action plan to combat the illegal killing of birds. The project will continue in 2019.

IMPEL-ESIX – exchange of information between NGOs and authorities

Another important project when it comes to combatting wildlife trafficking involves the exchange of information between NGOs and the authorities. Illegal killing of birds (IKB) crimes are, in many cases, a cross-border problem and enforcement is patchy (even in Member States). Information and intelligence are the drivers of good enforcement. There is a need to gather and exchange information and intelligence. In the field of combatting the illegal killing of birds, NGOs also provide information. It is important to have a platform where this information can be shared between authorities and NGOs, which can also be used for sharing information on timber legislation infringements.

In 2016 we launched a website at www.IMPEL-ESIX.eu and established a controlled mailing list based on protocols and appointments with authorities and umbrella organizations (e.g. Birdlife Europe, FACE) for the exchange of information on criminal activities and seizures relating to the illegal killing of birds and EU timber regulations. The idea was based on the success of the existing EU TWIX mailing list, which is used by authorities only.

All Member States are involved, and the number of participants has grown to over 250. Better information exchange and intelligence will certainly improve enforcement in this field. For 2019 the challenge is to establish IMPEL-ESIX by increasing the number of participants as regards both NGOs and authorities.



Planning tool for NATURA 2000 site inspections

Another project involves developing an easy and flexible tool as a part of planning NATURA 2000 site inspections linked to European environmental law and the RMCEI. The Birds and Habitats Directives are central to achieving the EU 2020 target of halting and reversing the loss of biodiversity endorsed by Heads of State and Government. The Action Plan for nature, people and the economy, COM (2017) 198, points out that key factors behind the shortcomings in the implementation of the Nature Directives include “limited resources, weak enforcement, poor integration of nature objectives into other policy areas, insufficient knowledge and access to data”. The RMCEI contains non-binding criteria for planning, carrying out, following up and reporting environmental inspections. The development of an IT tool as a part of the planning nature conservation site inspections will provide a systematic approach, maximizing resources in key areas of concern. This IMPEL project intends to provide such criteria and an IT tool as part of the planning for nature conservation sites in the Member States.

In this project we will adjust the already existing and successful IRAM (Integrated Risk Assessment Methodology) tool, which provides a method for assessing the frequency of regulatory/compliance visits to industry. The project intends to evaluate different methods and find out whether the IRAM tool could be expanded beyond its current remit to include a risk-based approach to the frequency of visits to nature conservation sites, including NATURA 2000 sites.

IMPEL Review Initiative – sharing good practices to improve organization

One of IMPEL’s key activities over many years has been holding the IRI (IMPEL Review Initiative) The IRI is a voluntary scheme providing for informal reviews of environmental authorities in IMPEL member countries. The IRI is an informal review, not an audit process, intended to enable the environmental authority in question and the Review Team to explore how the authority carries out its tasks. It aims to identify areas of good practice for dissemination, together with opportunities to develop existing practice within the authority and its counterparts in other IMPEL member countries.

Sharing good practices will improve the quality of work done by environmental authorities and contribute to continuous improvements in the quality and consistency of environmental law implementation across the EU (“the level playing-field”).The IRI uses the structure of the environmental inspection cycle from the IMPEL “Doing the right things” Guidance Book when planning environmental inspections. The Guidance Book was developed to support inspectorates in implementing the RMCEI and describes the different steps in the Environmental Inspection Cycle pursuant to the RMCEI.

During the IRI it is possible to examine the implementation and enforcement of a broad range of ‘green’ activities such as protecting conservation areas, and preventing the illegal killing, trapping and trade of wild birds, wildlife trafficking, illegal hunting and fishing, and illegal logging, amongst others. The review team can focus on the quality and quantity of inspections, effectiveness in the inspection > prosecution > verdict chain, intelligence and information sharing, promoting cooperation with networks of practitioners, collaboration with NGOs and public participation.

In 2014 the first ‘green’ IRI (Impel Review Initiative/Peer Review) was organized in the Danube Delta Area of Romania. Here the main recommendation was to improve the inspection, prosecution and verdict chain. Following up on this IRI, based on the recommendation from the review team, a change was made to legislation according better control of access to the Danube Delta to prevent poaching, plus more boats and fuel for the inspectorates to enable more effective surveillance there. In 2016 a second green IRI was organized by the Strait of Messina in Italy, where the former Corpo Forestale successfully eliminated illegal activities during the raptor migration season, thanks to good collaboration with NGOs. In 2018 a green IRI was carried out in Albania and a further one is planned for Greece, probably in 2019.



Cross-cutting Issues on Wildlife Crime and Biodiversity Protection

Sanctions for wildlife crimes: A thorny problem

(Excerpts from recorded presentations)

Georgios Almpouras

ENPE Working Group Member

Under the “green” legal system, criminal and administrative sanctions for offenders of environmental crimes are both provided for at the same time. Criminal penalties apply only to natural persons. Administrative penalties may apply both to natural and legal persons and include mainly fines, temporary or permanent withdrawal of licenses, exclusion from public tenders and publication of the decision. The common trend is to impose both administrative and criminal penalties, which is mandatory for the Prosecutor’s office.

Criminal laws providing for imprisonment or/and fines:

- General law (Law 1650/1986),
- Forest damage (L 998/1979, L 1892/1990),
- Clean sea law (L 743/1977),
- Forest code (L Decree 86/1969),
- Seashore law (L 2971/2001),
- Urban planning (L 1337/1983),
- Forest arson (265 PC),
- Source and pasture poisoning (282 PC),
- Illegal sand extraction and mining (L 1219/1938),
- Clean air (Ministerial Decision 14122/549/E103).

It would appear that Greek law is complete, and that punishment of violators is just a matter of enforcement. Unfortunately, this conclusion is misleading.

There is a lack of political will to prosecute environmental crime in the face of major industrial and commercial interests. Secondly, ignorance of environmental law and corruption in governmental and administrative services often leads to inaction and the understaffing of control administrations (private rangers, environmental licensing).

Additionally, courts consider environmental crimes of no great importance, and impose reduced penalties. This is due to the fact that environmental crimes belong to a new generation of crimes, which are not yet acknowledged and perceived as “real” crimes by judicial bodies. Other reasons are lack of specific training of judicial officers, reduced awareness of the severity of environmental damage, and a lack of heightened moral concern over environmental damage in society. This is often coupled with lack of representation in civil claims for damages, which strengthens the defence’s arguments by leaving them unchallenged. As a result, the criminal courts are ultimately ineffective in the fight against environmental crime.

There is no imprisonment for misdemeanours, and there are specific laws of temporary duration concerning the temporary cessation of prosecution, the mandatory conversion of issued custodial sanctions to financial penalties, the compulsory cessation of enforcement of convictions, and direct proscription of misdemeanours.

To sum up, criminal provisions must be both dissuasive and proportionate. It is extremely unlikely that the current legal framework can ensure a high level of environmental protection, so the question is whether the only remaining remedy is a formal report to the European Commission on breaches of European law, or whether an alternative can be found.



Combating biodiversity loss and wildlife crime through environmental liability

Stavroula Pouli

Head of the Ministry for the Environment and Energy Coordination Office for the Implementation of Environmental Liability (MEEN – COIEL), LIFE Natura Themis coordinator

The Environmental Liability Directive (ELD) establishes a framework for the prevention and remediation of environmental damage caused to water, land and biodiversity, based on the “polluter pays” principle. In this way the operator assumes responsibility, and public money for implementing remediation efforts is saved.

ELD was transposed into Greek legislation via the Presidential Decree 148/2009. The competent authorities established were:

- at the national level, the Ministry for Environment and Energy’s Coordination Office for the Implementation of Environmental Liability for cases of national importance, incidents that extend to more than one region or to the territory of other neighbouring Member States, cases involving exceptional-particular conditions or in cases of extreme urgency for preventing irreversible environmental damage.
- at the regional level, the Environmental Liability Committees in Decentralized Authorities, which are responsible for cases within their territorial competency (13 regional committees have been established for the 13 regions).

The Environmental Liability Directive is based on the Habitats and Birds directives regarding the definition of damage to protected species and natural habitats, i.e. “*damage to protected species and natural habitats, which is any damage that has significant adverse effects on the favourable conservation status of such habitats or species (according to dir. 92/43/EEC, 79/409/EEC)*”.

In Greece, damage to protected species and natural habitats caused by non-Annex III activities is also included in the scope of national legislation on ELD, regardless of the operator’s culpability.

ELD, and the Habitats and Birds Directives have the overall objective of halting biodiversity loss. Minor differences in the definitions of these Directives may be critical in implementing the ELD.

Habitats Directive	Environmental Liability Directive
Disturbances that affect the conservation status	Significantly affect the conservation status

According to national legislation, the significance of damage should be assessed in relation to the baseline condition that would have prevailed had the damage not occurred, as well as to the services provided by the habitats and species, taking into account their ability for natural regeneration.

Environmental liability applies to designated protected areas characterized as:

- Areas of absolute nature protection
- Nature protection areas
- Natural parks
- 4.1 Special Areas of Conservation
- 4.2 Special Protection Areas
- Other areas where habitats are damaged, as well as to
- Species of Community or national interest.



When environmental damage occurs, the national competent authority:

- **makes recommendations** to the Minister on the appropriate prevention or remediation measures that shall be implemented with the cooperation of the relevant operator;
- **may take** the appropriate (prevention or remediation) measures and recover the expenses from the responsible operator;
- **monitors** environmental liability implementation at both the national and regional level, collects information of environmental liability cases at the national and regional level, provides guidelines and training;
- **recommends** measures for financial security.

Since 2016, COIEL, as the authority with a remit for environmental liability, has conducted environmental inspections in order to verify whether operators comply with any environmental prevention and remediation measures that may be imposed. Administrative sanctions are imposed in cases of non-compliance. This legislation is expected to further enhance ELD application in Greece.

Identification of environmental damage and operator is achieved:

- via environmental inspections by national and regional authorities, which are carried out to gather information on the environmental damage that was caused, to investigate the link between the activity and the damage caused, and to establish whether damage has been caused to protected species and natural habitats by Annex III or non-Annex III activity.
- following submission to the competent authority of properly documented requests by natural or legal persons and NGOs seeking remedial action.

There are cases that fall under a special remediation regime on the basis of previous national legislation, such as quarries, waste disposal and hazardous waste management. In these cases, it is established whether a combination of both regimes could be applied.

Information on the baseline condition is crucial, as remediation studies should be developed according to the criteria of Annexes I and II to Article 21 of Presidential Decree 148/2009. To this end, environmental information already produced is made full use of. For example, for water damage we refer to the information derived from the Management Plans for the respective water basins. Regarding biodiversity, we refer to NATURA 2000 standard data forms and the MAP VIEWER site. Other information may be obtained from Environmental Impact Assessments, and Decisions of Approval of Environmental Terms, which include useful information on:

- description of the initial state of the environment,
- description of the production process (establishing the link between the activity and the environmental damage).

ELD Cases between 2007-2017 are reported as follows:

- 82 open ELD cases (damage or imminent threat)
- 21 cases under investigation to determine if ELD applies
- 26 cases have been closed
- 6 cases were rejected.

Additionally, in 45 cases where the operator was unknown, (brownfield) remediation was achieved using public funding from the Green Fund (1.5 million Euro over the period from 2013 to 2017).

Other factors such as the magnitude of damage, the time needed for remediation, etc. are also considered. Especially regarding biodiversity, illegal actions cause the greatest and most significant effects. Many cases have been reported in wetlands and coastal areas; according to available data, wind farms appear to present a serious threat to bird species.

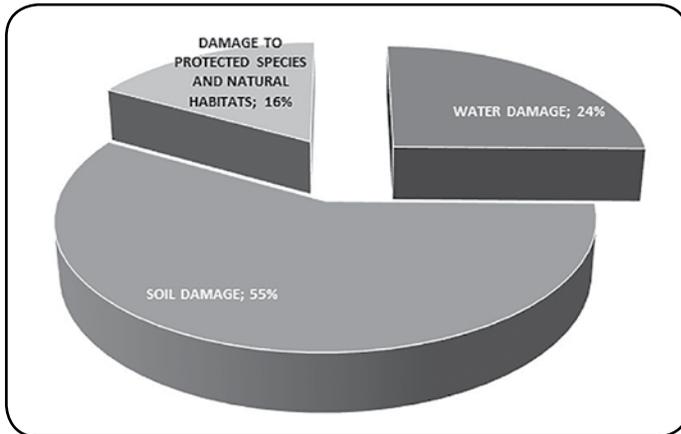


Figure 1. Type of damage:

24% water damage

55 % soil damage

16 % damage to protected species and natural habitats

Case study: illegal road construction (Zakynthos)

This area is located within the National Marine Park of Zakynthos, which is well known for the protected species *Caretta caretta*, and is included in the Natura 2000 Network. It was affected by wildfire in 2011, and if left undeveloped could have been completely reforested and restored to the pre-fire state.

Large-scale interventions were identified in 2016, such as the construction of a road approximately 3-7m wide and 1 kilometer in length, on private land designated as a forest area. The specific area is characterised as a Protected Landscape, and the law provides that: "No new roads may be opened except for what is strictly necessary for access to property, with the agreement of the Management Board of the Marine National Park". We were notified of the incident by the Park Management Board.

Local public services responsible for environmental and construction inspections conducted a survey, and informed the Ministry that environmental damage had been identified. The local services imposed fines.

According to the data collected, two habitat types are present in this area:

- Type 5210 is characterized by Mediterranean and sub-Mediterranean evergreen sclerophyllous shrubs, with *Juniperus phoenicea*;
- Type 5240 is characterized by phrygana with characteristic species including *Sarcopoterium spinosum*, *Genista acanthoclada*, *Satureja thymbra* and others.
It is also a bird nesting area for species such as Scopoli's Shearwater (*Calonectris diomedea*), the Common Buzzard (*Buteo buteo*), the Common House Martin (*Delichon urbicum*), etc.

The measures imposed on the operator to prevent environmental damage were aimed at restoring the landscape (roads, slopes and platforms), if possible to its original state, in order to achieve natural regeneration of the vegetation. The operator is also obliged to submit a remediation study.



Photos 1, 2: Case study of illegal road construction (Zakynthos)



Case study: wetland destruction at Legraina, Attica

Illegal shrub removal for road construction on the Legraina Wetland in Attica Region was reported to have occurred in the course of municipal works to create vehicle access and a parking area. The area is a Natura 2000 site and comes under the supervision of the Schinias National Park Management Board. We were notified of the incident by NGOs. Local authorities conducted an environmental inspection and imposed a fine on the municipality responsible.

Remediation measures were imposed by ministerial decision at the expense of the municipality concerned. Measures were imposed to prohibit vehicle access, restore the vegetation and install signs regarding the area's protection status, in collaboration with the Ministry and the National Park Management Board.



Photos 3, 4: Wetland at Legraina Attica, illegal shrub removal for parking and road construction.

Case study: AGIA ZONI shipwreck, September 2017

Pollution was caused to the coasts and marine area of the Saronic Gulf by an oil spill due to the sinking of the AGIA ZONI II tanker.

Activities taken by the competent authorities included:

- implementing the contingency plan for combating oil pollution as envisaged in Presidential Decree 11/2002 on "National Emergency Plan for Oil and Other Polluting Pollution Incidents";
- using environmental liability as a complementary tool in order to minimise environmental damage;
- following the completion of cleaning operations, measures were imposed to monitor both coastal and marine, sediments, protected species and natural habitats in the Saronic Gulf affected by the oil spill.

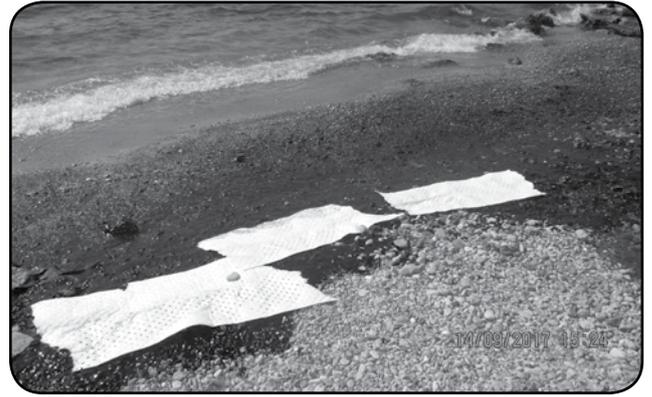
The area polluted by the sinking of the AGIA ZONI II tanker is designated as an Important Bird Area (IBA) referred to as the "Saronic Gulf islands" (GR 199). This area is also included in the NATURA 2000 Network (GR 3000020 Saronic Gulf islands).

Under the terms imposed, the responsible operator must, within a timeframe of 12 months:

- investigate the sediments of the open Saronic Gulf using submarine systems with external artificial lighting (e.g. ROV) in order to gather more information on the possible presence of oil residues on the seabed,
- continue monitoring water quality in the existing network of coastal sampling stations by conducting water sampling and measurements of total petroleum and polycyclic aromatic hydrocarbons,
- if pollution is found in sediments, extra monitoring will be required,
- collect information on the biotope of *Phalacrocorax aristotelis desmarestii* in cooperation with a scientific organization.



SESSION III



Photos 5, 6, 7: AGIA ZONI tanker wreck in the Saronic Gulf in September 2017 resulted in a spill of roughly 250-300 tn of oil.



Economic instruments as a complement to biodiversity protection

(Abstract)

Angeliki Kallia-Antoniou

Attorney at Law, PhD, EU Environmental Law Expert, Professor at the National School of Public Administration

This presentation explains how the need to use economic instruments is estimated at the international and EU level. It is alarming to realize that global biodiversity is declining, threatening the future survival of humanity. Without ambitious policies, biodiversity is projected to decline by a further 10% globally by 2050 (Organization for the Economic Collaboration and Development – OECD, 2012).

Economic instruments for biodiversity conservation are mechanisms aimed at changing the behaviours of economic agents by internalizing the costs of natural resource utilization. They are further subdivided into market-based and non-market-based instruments. The former include economic incentive funds and framework incentives, while the latter are standards, regulations and management plans.

The Organization for Economic Collaboration and Development has declared that the strategies employed to address biodiversity decline include economic instruments which provide a means of internalizing costs and benefit, and which aim to influence decision making and behaviour in such a way that alternatives are chosen, leading to more environmentally desirable situations than would occur in the absence of the instrument.

The EU framework for financing biodiversity is based on integrating conservation goals into existing funding instruments. The EU 2014-2020 Multiannual Financial Framework offers opportunities for financing biodiversity, but EU funding for Natura 2000 only meets 20% of the required level, and the national funding is insufficient to make up the remainder.

A new Conservation Fund should be created, with a wider scope and a bigger budget than LIFE, targeted at EU biodiversity priorities (Implementation of Natura 2000 plus other EU biodiversity goals). This proposal was elaborated by the Institute for European Environmental Policy in its January 2017 report entitled: "Integration approach to EU biodiversity financing".

It is also recommended that improvements be made to the existing EU Financial Framework, so as to achieve better coordination and coherence of funds which affect biodiversity, reduction of the administrative burden in applying for funding and reporting, and greater awareness of the importance of conservation and its connection to other socio-economic goals.

Economic instruments are not a panacea; they should be used **as complements and supplements** to other biodiversity conservation strategies.

Looking into the future, it is obvious that global collaboration including all continents and countries is needed, as well as a global control and implementation mechanism that is much more effective than the present status arising from International Conventions.





The LIFE Natura Themis Project - its Role and Added Value

Illegal killing, trapping and trade in wild birds: out of sight, out of mind?

Konstantina Ntemiri

Hellenic Ornithological Society (HOS), Environmental Policy Officer, Anti-poison Task Force Coordinator

Crime against wild birds poses a significant threat to the survival not only of such iconic species as eagles and vultures, but also of other once common ones such as the well-known Turtle Dove, populations of which have fallen dramatically due to a range of factors.

Illegal killing, trapping and trade in wild birds is a widespread problem in the European Union. It negatively impacts the populations of certain bird species, and is particularly intense in specific areas. Yet, despite the serious extent and scale of the problem, no single standardized monitoring system exists in the EU.

It was only in 2015 that the first scientific report on the issue was published by BirdLife International and its partners in the Mediterranean, including the Hellenic Ornithological Society. This revealed the shocking extent of decimation in the Mediterranean, where wild birds that are unlucky enough to fall victim to poaching end up trapped in nets or stuck on lime sticks. It was the first attempt to map crime against wildlife on a broader scale.

According to the report, Egypt topped the ranks with an estimated average of 5.7 million birds killed annually. Italy came second with 5.6 million and Cyprus fifth at 2.3 million, behind Syria and Lebanon. Sadly, Greece was inevitably within the top ten, taking sixth place on the rather conservative estimate that an average of 704,000 birds are killed illegally in our country each year. Greece is acknowledged as being the third worst corridor in the Mediterranean for the Turtle Dove. During its spring migration to breeding sites in Europe, the Turtle Dove crosses the Sahara Desert and the Mediterranean Sea in one go. The birds are utterly exhausted on reaching reach the first stopping point on their long journey in the Ionian Islands, only to encounter the shot of poachers exercising their so-called hereditary right to the “tradition” of spring hunting.

Poaching does of course occur across the length and breadth of the country, even in supposedly strictly protected areas, such as the core zones of National Parks. A typical example is the Kotychi-Strofyliya Wetlands National Park, where every weekend balaclava-clad hunters in motorized boats freely engage in literally massacring ducks. Another sad example is the Amvrakikos Gulf National Park, with many instances of decoy use, poaching protected species—the most common victim being the Ferruginous Duck—and of course black market sales of the poached ducks as a delicacy in local taverns. This depressing picture is supplemented by rehabilitation data revealing that the majority of poaching incidents occur during open season, with raptors as the commonest victims.

Illegal trapping is relatively widespread and large-scale in the Greek countryside, and is intensively pursued, especially on the Aegean islands. Captured male songbirds, usually Goldfinches, Serins and Chaffinches—in their thousands—end up hostage to illegal trade. either in pet shops or in open markets, such as the infamous bazaar at Schisto. The Internet is also a new venue for conducting black market trade safely, far from the reach of monitoring procedures. Financial gain is the driving force behind trapping in Greece, leading migratory birds to suffering and death.

Crime against wild birds has many faces, another one of which is poisoning. The use of poisoned baits comes at great cost to the survival of endangered species, and is acknowledged as being the main reason for the collapse in vulture populations across Greece. A typical example is the Egyptian Vulture, once the commonest of its kind and now the most endangered bird in the country, with a mere five pairs remaining.

Known incidents of crime against wild birds are of course only the tip of the iceberg, as the majority of cases either go undetected or unrecorded. There is a total lack of any national monitoring system collecting data on the number of birds illegally killed or trapped and then put up for sale.



Does the fact that there is no data mean that there is no corresponding problem? Why do we find ourselves in this situation?

Combatting wild bird crime is not seen as a priority by law enforcement agencies. In addition, there is a general ignorance of the law regulating wildlife crimes. Understaffing and the lack of infrastructure and knowhow also hamper any effective way of dealing with the phenomenon. A key role is likewise played by the judicial system, in which the judges and state prosecutors handling such cases lack specialization or training in issues concerning wild bird crime. It is also worth noting that, as the courts are overloaded, low-grade offences are often dismissed due to statutory time limitations, including all crimes against wild birds. As a consequence, very few cases ever reach court, while the trial of those that do is delayed by endless deferrals. Many cases end in acquittal, while the sanctions for those that end in conviction are so light that they do not act as a deterrent.

Mentality also play a part in the poor handling of such crimes. Local communities do not see illegal killing as a crime, and thus do not report incidents. Considerable tolerance is shown, while in some areas, such as the Ionian Islands, illegal acts are defended by evoking tradition.

The fight against wildlife crime is a long and difficult one. The Hellenic Ornithological Society is actively engaged in tackling illegal killing, trapping and trading in birds via reports to State authorities, and through its involvement in a whole host of projects, such as the LIFE project to combat wild bird crime and the “LIFE for the Egyptian Vulture” project, as well as through other funding instruments with a series of field conservation and communication activities, such as public information and awareness campaigns, ranging from schools to the countryside and land users.

Our success in curbing the phenomenon requires the active participation and engagement of all those involved. First and foremost, it calls for political will and commitment; significant support and reinforcement of monitoring mechanisms; more stringent sanctions and serious state monitoring of the problem. It means cultivating zero tolerance in the hunting community and society in general, and clearly also considerable awareness-building and a powerful voice coming from civil society.



Beyond Themis. Capitalizing experience in combating environmental crime

Dr Georgios Sbokos

Heraklion Bar Association (HB), Head of HB Environmental Committee, HB LIFE Natura Themis Coordinator

LIFE Natura Themis, the first explicit research on environmental crime, is an EU co-funded project run by the University of Crete, which inputs court decisions into a geoinformation map depicting the number and type of environmental crimes on Crete (www.lifethemis.eu).

The Environmental Law Observatory of east Crete, coordinated by Dr iur. Georgios Sbokos, works with 19 administrative bodies, conducting surveys and proposing tools for better environmental prosecution. The main obstacles result from the lack of electronic records, staffing levels and administrative audit. The main advantages derive from acceptance of the Observatory's work by stakeholders, raising media awareness and Heraklion Bar Association support for unimpeded work. Efforts have been acknowledged on the legislative level. On February 18, 2018, the Greek parliament passed Law 4519, regulating the organization and operation of Management Bodies for NATURA 2000 protected sites. Unfortunately, Law 4512/2018 (Article 127 et seq.) simultaneously changed the control regime of Act 1650/86 on environmental audits [Article 127 (4) (g)], providing for limitations on state intervention, while the mass media reported the national government's intention to privatize environmental auditing and abolish the managing bodies of NATURA 2000 sites.

As far as local environmental criminality is concerned, 56% of the crimes were committed in the Heraklion region and 44% in the Lassithi region. 53% of the cases were discussed and 47% were postponed. 16% of the cases discussed led to conviction, while 58% led to acquittal. 26% of the cases were dropped without judgement due to legislative provisions, such as law 4411/2016. These results were delivered from 01/10/2017 to 31/12/2018 to all 19 special prosecution units and project stakeholders, and were presented in 3 TV and 3 radio broadcasts, 3 publications, 1 special seminar and 4 speeches by the HB Coordinator. 72 persons were personally contacted and informed.

Nevertheless, the data displayed do not suffice to enforce more effective prosecution. There are two main factors hindering the sound judicial handling of "green" crime – both the restricted method of drafting indictments and the beneficial provisions of Law 4411/2016 affect the effectiveness of prosecution.

Major opportunities

Initial personal contact with court officials proved decisive in arranging access to judicial archives. The issuing of a Data Protection Agency License made the research possible. However, inordinate effort and time was required. Lack of computerization and a common system of administrative case filing was the major problem encountered by the Coordinators. In the first year of implementation, the preparatory tasks (Action A1) we faced were more than those initially provided for. As this was the first time Cretan courts had ever faced the challenge of having their performance statistically analysed, the HB Coordinator had to convince the stakeholders of the reasoning, aim and necessity of the project before research could go ahead.

The methodology applied was generally effective. Personal contact between the HB Coordinator and judicial and administrative clerks opened the LIFE Natura Themis project up to the local community. Relations were built upon trust and cooperation. The only failure in the methodology applied was poor feedback from some administrative clerks in supplying data to the Observatory. This was partly due to the provision of Data Protection Agency licenses and partly to problems communicating the project results back to the administration.

Major obstacles

Article 8 of Law 4411/2016 grants an amnesty for crimes involving imprisonment of up to two years. Judges are forced to apply this legal provision, meaning that criminals remain *de lege lata* unpunished. The following crimes, all of which are recorded in our 2010-2015 research, cannot be prosecuted: poisoning (par. 1 art. 8 of JMD 37338/1807/E.103/1-9-10); illegal logging (art. 268 of Law 86/1969); illegal grazing (par. 2, art. 38 of Law 4055/2012); unlicensed organized camps (art. 9 & 10 of Law 392/1976); poaching, poaching within protected areas, weapons transfer, hunting without permission, group hunting, out-of-season hunting, hunting of protected species, exposure of dead animals to public view (art. 251, 256, 258, 259 of Law 86/69 etc.).



The whole procedure of “fast track” licensing (Law 3894/2010) for private and business interests allows interventions at the expense of the NATURA 2000 protected areas. This licensing procedure bypasses all prescribed hearing, expropriation, land planning and regional development frameworks.

The new forest law (Law 4467/17) drives NATURA 2000 protected areas to extinction, considering that almost 90% of forest areas overlap with NATURA 2000 areas. The new law was issued in line with the aforementioned “fast track” Law, and provides that forest areas logged or burned before 2007 may be turned over to farmland (art. 4 of Law 4467/17). Warehouses, water facilities and electricity connections are allowed (art. 2 of Law 4467/17). Acts of declaring a forest redeemable may be revoked (contrary to Article 117 of the Constitution). The ban on legalizing land reclamation in protected areas, national parks and NATURA 2000 areas has been lifted. Industrial units may be constructed on forest land, and the establishment of processing plants for agricultural products, wineries, distilleries, beverages, bottling centres, oil mills and slaughterhouses is also permitted (art. 3 of Law 4467/17).

Last but not least, the regional land development plan for Crete serves exclusively private, non-regional interests, breaching the principle of regional development. Thirty-three wind parks have been approved, to double the island’s energy generating capacity (1,100 MW). All main- and sub-projects provided for are located within NATURA 2000 areas. No nature and biodiversity spatial plan, strategic impact assessment or special ecological evaluation has been issued.

Beyond LIFE Natura Themis

The Environmental Law Observatory is drafting a proposal regarding the establishment of four regional police units and their direct cooperation with a specialized state prosecutor in each of the four Courts of First Instance on Crete. The main obstacle is the unwillingness of police authorities to broaden their operational status, as well as technical and financial needs which might arise for the police. The second additional proposal drafted is on a technical issue, regarding the way court cases are filed. An “environmental code” should be inserted when registering an environmental degradation case, in order to indicate the nature of the case for future research. The aim of this proposal is to accelerate jurisprudential research. The main obstacle is establishing the court filing method, which, to some extent, prohibits court employees from following any additional or different procedure.



Accessing environmental information in Greece: just how easy is it?

Maria Maniadaki

Chania Bar Association (CB), CB LIFE Natura Themis Coordinator

“[...] for, unlike any other nation, regarding him who takes no part in these [public] duties not as unambitious but as useless, we Athenians are able to judge at all events...”

Funeral Oration by Pericles in Thucydides' *History of the Peloponnesian War*, 2.40.2

Accessing environmental information is without doubt the first step on the road to citizen participation in public life concerning environmental issues. It is in fact a right established in Greece on the one hand via the Aarhus International Convention, signed in Denmark on 25th June 1998 and ratified by Greece in December 2005 by Law 3422/2005 (Government Gazette [GG] A303, and on the other via Joint Ministerial Decision [JMD] 11764/653/2006 (GG B 327), which incorporates EU Directive 2003/04/EC. New, more specific legal texts are constantly being added to the relevant regulatory framework.

The aim of the present study¹ is not of course to set out the legal framework in question, but rather to look at how feasible it really is to access environmental information in Greece.

According to the National Report on Implementation of the Aarhus Convention (2017)², the following problems were pinpointed by public authorities involved in implementing the framework of Article 4 of the Convention, i.e. implementing **passive environmental information, which involves providing information in response to a request from an interested party**: a) *lack of resources (staff, financial resources etc.); b) administrative burden due to understaffing—in some cases the request is extremely vague or unreasonable, and officials have to assist the applicant in further defining it or submitting accompanying documents with additional details; c) delays due to the complexity of the information requested, as providing it takes time and co-operation with other public services; d) limited difficulties associated with the interpretation of “environmental information”; e) lack of material and technological infrastructure (lack of research archives, lack of computers and record-keeping software); lack of electronic records, increased workload and documents for distribution; f) public ignorance (according to the Ombudsman), in some cases, regarding which information is available and which agency can provide it; g) lack of legal services on the local level, so as to assess whether requested information is covered by commercial or industrial confidentiality clauses and is thus deemed classified; h) difficulty accessing the public service concerned, when it is far from citizens' place of residence (in cases where the available database is in the regional capital and they have to travel their at their own expense; i) inadequate classification and specification of information (according to the Ombudsman), in some cases, placing an additional administrative burden on citizens; j) the need for greater cross-functionality between databases; k) lack (according to the Ombudsman) of a Data Monitoring System guaranteeing transparency and promptness; l) non-implementation, despite efforts in some specific instances [according to one Non-Government Organization (NGO)], of the provisions of Article 4, Par. 2, Point A by certain Public Law Legal Entities, which refuse to make information available without proof of legal interest.*

According to the above report, the following obstacles and problems were pinpointed by the public services involved in implementing the framework of Article 5 of the Aarhus International Convention, i.e. on **active environmental information, which is the other form of information, involving the active dissemination** of environmental information by the administration: a) delays in information flow to central administration; b) delays in making reports and data available to the public; c) lack of staff and resources; d) lack of systematically organised archives in some public services; e) legal complexity; f) misunderstandings relating to the public's rights and the administration's obligations; g) lack of collaboration between public services; h) lack of a comprehensive catalogue listing all sources of environmental data; i) in some instances, existence of more than one environmental information database for the same area, with different entries, plus a lack of interconnectivity between related databases; j) infrequent updating of databases and environmental data, plus lack of a mechanism specifying the need for their revision, despite the fact that sufficient quality checks are carried

¹ This article is an elaborated summary of an oral presentation by the author entitled: “Public Access to Environmental Information in Greece through the Experience of the Environmental Law Observatories of Crete” presented in Athens on 23- 25 November 2018 as part of the international conference held by the LIFE Natura Themis Project on International Perspectives on Preventing Wildlife Crime.

² Source: https://www.unece.org/fileadmin/DAM/env/pp/mop6/NIR_2017/2017_Greece_AC_NIR_EN_trc.doc [accessed 20-4-2020]



out regarding publicly available data on the technical specifications of each programme; k) non-publication of studies by institutes and universities on a regular basis.

The above data are sadly far from encouraging, and render the right to access information on environmental issues an officially established right, but one effectively undermined by existing administrative practice.

The data in question are confirmed by the experience and research of the Crete Environmental Law Observatories, which have operated since their establishment as early as October 2016 under the terms of the LIFE Natura Themis Project (LIFE 14/ GIE/GR/000026). In particular, two Environmental Law Observatories now operate in Crete, one in East Crete covering Heraklion and Lasithi Regional Units, and one in West Crete covering Chania and Rethymnon Regional Units. The Environmental Law Observatories have their head offices in Heraklion and Chania respectively, falling within the brief of the local Bar Associations.

The unique features of the above Crete Environmental Law Observatories are as follows:

1. Independent operation – guaranteed objectivity.
2. Systematic recording of verdicts in the Criminal Courts of Crete concerning environmental crimes (authorized holding of archives with sensitive data – primary research).
3. Systematic recording of official fines relating to environmental offences on Crete.
4. Spatio-temporal reporting of collected data via GIS, with emphasis on law-breaking in NATURA 2000 areas.
5. Immediate dissemination of information to the general public.

So it is that, within the above terms of operation, the Environmental Law Observatories are in constant contact with public authorities in order to collate environmental information, and especially that relating to the implementation of Environmental Law.

For instance, since 2016 the West Crete Environmental Observatory has collated data from 12 public bodies, and thus has valuable experience as regards access to environmental information. Although there were differences between the public services we applied to concerning direct access to files for on-site study, it is a fact that between 2016 and 2018 there was a slight, gradual improvement in the provision of environmental information to the West Crete Environmental Law Observatory; over the course of those three years, the number of public services meeting information collation requests increased, making their own staff available. Over time the Fire Service was also seen to begin operating a more user-friendly electronic database, making a wide range of data easily obtainable by all.

Drawing on the experience of the West Crete Environmental Law Observatory, we consider that collaboration with public services within the terms of the LIFE Natura Themis project can be termed productive, considering it was, and is constant, thus enabling the responsible parties to gain assurances over the course of time as to the purpose of data collation, and so to overcome any initial suspicion towards us as applicants. A significant role was of course played by knowledge of the relevant legal framework on our part, our professional capacity (lawyers/bar association representatives), and time spent cooperating with the public service to collate the requested information. There was only one instance in which we encountered initial refusal to grant information, though this was overcome by explaining the current legal framework without any need for recourse to legal action. Of course, this long-term collaboration also revealed the “shortcomings” in accessing environmental information in Greece, **particularly when access is sought by an ordinary citizen rather than a lawyer.**

To be specific, **article 3, par. 5 (passive environmental information)** of Directive 2003/4/EC “On public access to environmental information and repealing Council Directive 90/313/EEC provides, among other things, that: “Member States shall ensure that: (a) officials are required to support the public in seeking access to information; [...] and (c) the practical arrangements are defined for ensuring that the right of access to environmental information can be effectively exercised, such as:

- the designation of information officers;
- the establishment and maintenance of facilities for the examination of the information required,
- registers or lists of the environmental information held by public authorities or information points, with clear indications of where such information can be found.”

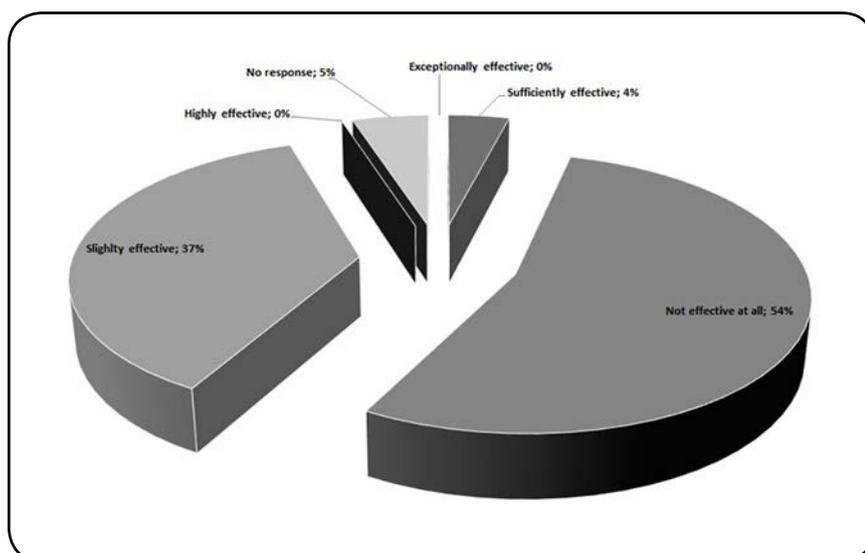


Figure 1: Effectiveness of prosecuting environmental offences according to the LIFE Natura Themis survey.

In practice however, when acting as applicants we were initially called upon to inform the administration and, in most cases, to prove that our access to environmental information was a legal right, whereas on the basis of legislation the administration itself ought to have informed us of our rights, giving guidance and advice to that end. Unfortunately, we observed that employees at the services were either entirely ignorant of the legal framework in question or had no staffed legal service to turn to and settle their queries on implementation. In many cases staff even professed an inability to procure environmental information that was essential for performing their duties, due to a lack of cooperation between the services that possessed the relevant information. In such circumstances, one has to wonder just what luck an ordinary citizen would have applying to a public agency in search of environmental information.

Beyond this, **article 7, par. 1 and 2 (active environmental information)** of EU Directive 2003/4/EC “On public access to environmental information and repealing Council Directive 90/313/EEC” provides, among other things, that:

“1. Member States shall take the necessary measures to ensure that public authorities organise the environmental information which is relevant to their functions and which is held by or for them, with a view to its active and systematic dissemination to the public, in particular by means of computer telecommunication and/or electronic technology, where available [...] and 2) The information to be made available and disseminated shall be updated as appropriate”. In practice, however, we observed that barely any services (just one of those we applied to) had organized environmental information accessible to all via electronic technology, while the various databases made available via central authorities (e.g. ministries) are rarely updated on a regular basis. At any event, in all instances involving regular updating and database interconnectivity between public agencies, results in the domain of combating environmental crime were spectacular³.

Beyond cooperation with public services within the terms of the LIFE Natura Themis project, we also came into contact with citizens, both via the operation of the Environmental Law Observatories and in the course of a large questionnaire-based environmental survey sampling 3,131 individuals (population groups: judges and prosecutors, employees at the Decentralized Administration of Crete, members of NGOs, farming population, tourism entrepreneurs, investigating officers, general population).

The widespread overall feeling that it is difficult to access public authorities on environmental issues, which does of course begin with the difficulty of accessing environmental information, was once again confirmed by those who applied to the Observatories or were asked during the survey. From their very first visit to a public service, citizens can sense that far from being “welcome”, they place an additional “burden” on the agency’s operation, which is overloaded and slow-moving due to a lack of staff. Indeed, the answers citizens receive to questions they ask the authorities are so imprecise, on account of the complexity of the legal framework, that they end up feeling unable to do anything, and abandon any further action. The picture as emerging from the above questionnaires is truly disappointing. Although

³ M. Maniadaki, “The Use of European Subsidies as a Tool to Prevent Environmental Crime in Targeted Groups: The Spectacular Decrease of Fires Set in Grazing Lands by Farmers in West Crete”, 5th EU-China Conference on Environmental Law, Ghent, 28-30 August 2018.



91% of informants regard the prosecution of environmental offences as either not at all or only slightly effective (Fig. 1), a mere 9% of participants stated they had taken the initiative to report an instance of environmental degradation (Fig. 2), while citizens appear “confused” as regards who they could report an instance of environmental degradation to, and even show a fairly high lack of trust in Non-Government Organizations (Fig. 3).

So what could be done to overturn this disappointing situation for citizens? Without doubt, the answer begins first and foremost with simplifying (codifying) environmental legislation, so as to render it comprehensible to those called upon to monitor its implementation in the first place, and so that they can then disseminate it to interested parties as environmental information⁴. From the above questionnaires, one distinctive thing emerging in answer to the question “Are you aware of national and European legislation governing the protection of biodiversity and the NATURA 2000 Network?” was that 59% of judges, 90% of lawyers, 88% of employees in the Decentralized Administration of Crete and 94% of investigating officers were either unaware or only slightly aware of it. Of course, codifying environmental legislation is just as urgent as staffing services with specialists, in such a way as to ensure that the right of access to environmental information can be effectively exercised by all ordinary citizens. At the same time, it is a matter of fact that Non-Governmental Organizations could play an extremely important intermediary

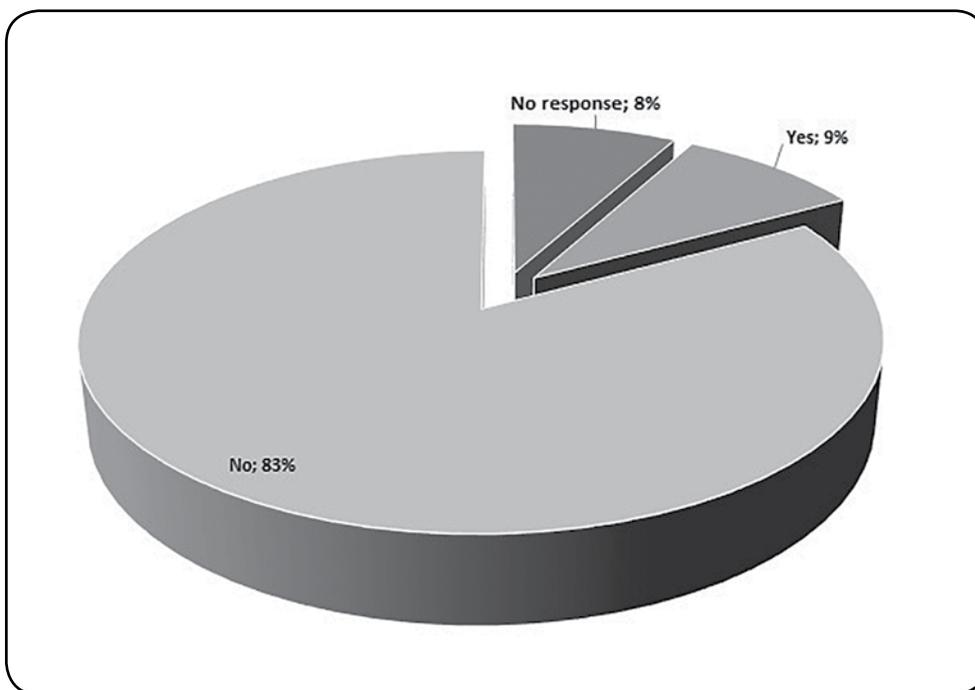


Figure 2: Reporting instances of environmental degradation

role between citizens and public authorities, on both passive and active information fronts. Nevertheless, greater transparency in how NGOs operate is required in establishing such a role, e.g. via a full and updated registry of them, to restore citizens’ confidence in the organizations. Lastly, on the technological level there is a need for the widespread use of Public Environmental Information Systems featuring classification, constant updating, as well as the dissemination of environmental apps for smart devices.⁵

⁴ See article 7, par. 2 of Directive 2003/04/EC regarding the minimum content of environmental information: texts of international treaties, conventions or agreements, and of Community, national, regional or local legislation, on the environment or relating to it, etc.

⁵ The LIFE Natura Themis smart device app is remarkably good and highly effective: <http://www.lifethemis.eu/el/content/appsmartdevices>.

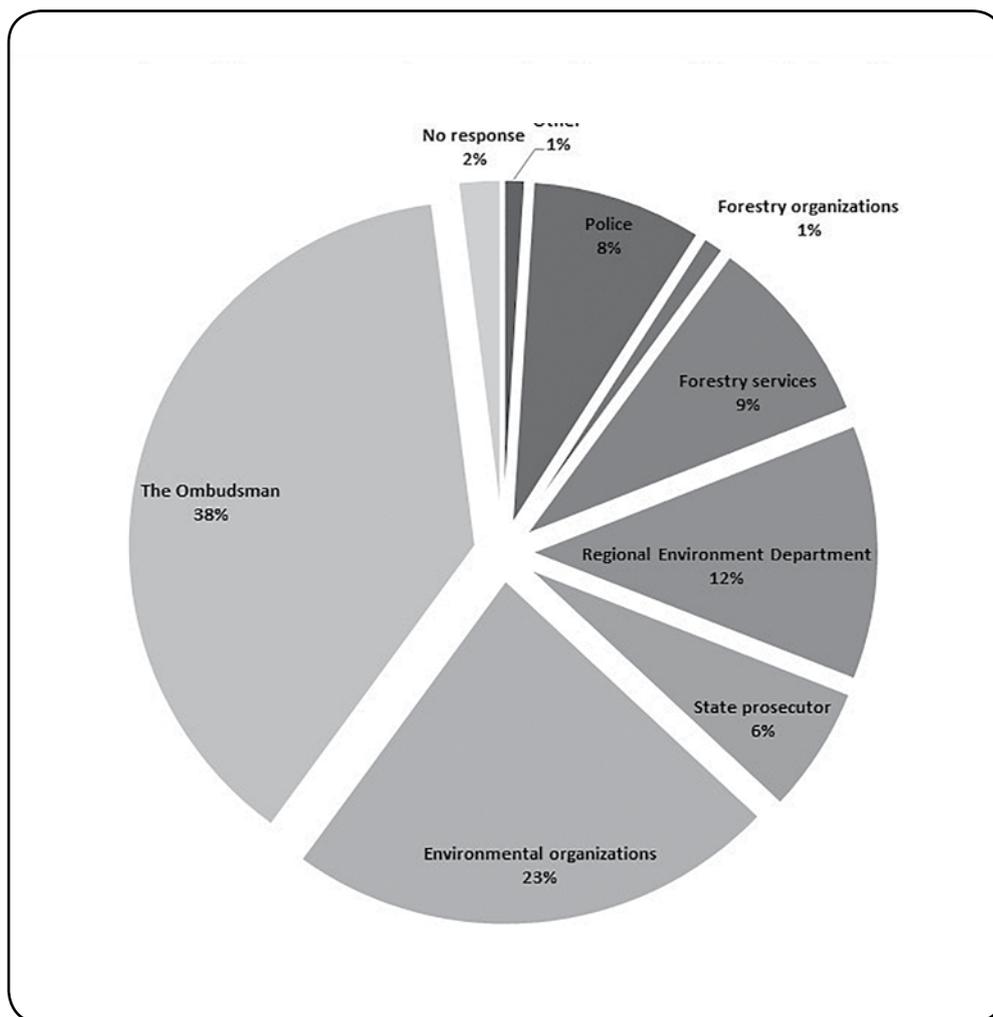


Figure 3: Who citizens consider they could report an instance of environmental degradation to?



LIFE Natura Themis: Preventing wildlife crime by using IT tools.

The LIFE Natura Themis Application

(Abstract)

Christos Georgiadis

Hellenic Society for the Protection of Nature Projects Coordinator, HSPN LIFE Natura Themis Coordinator

The LIFE Natura Themis application for Android and iOS was created within the LIFE14/GIE/GR/000026 – LIFE Natura Themis project, which aims to highlight the poor implementation of Environmental Law as a factor undermining environmental protection and biodiversity conservation. The project also demonstrates that the proper implementation of Environmental Law promotes local development and social prosperity, while ensuring the proper use of natural resources. The LIFE Natura Themis application enables citizens to contribute to the prosecution of environmental crime and environmental damage remediation, while fully guaranteeing the anonymity of user complaints and the protection of personal data.

The final design of the application was provided by the contractor in August 2017, once all comments sent by the beneficiaries within the development period had been taken into account. The contractor proceeded to build the BETA version of the application, accompanied by the public site. The domain name (app-naturathemis.gr) was secured, and the site has since been developed and made accessible to the public. The domain is managed by administrators authorized to change the status of each complaint, and to inform the relevant authorities regarding the specific content of the complaint by email. At the same time, a message is sent to the user informing him/her of the complaint's status. The administrator also decides whether or not a complaint should be visible on the site's complaint map. Representatives from all beneficiaries have their own passwords and the rights to manage complaints.

The application is expected to increase reporting of environmental damage and/or crime, as citizens are often wary of reporting such matters to the authorities because of the cumbersome and time-consuming procedures involved. The smart device application will enable the prompt reporting of environmental damage and the establishment of a relevant database. The application is already being advertised and promoted via the project's dissemination activities (seminars, workshops, etc.).

The LIFE Natura Themis Application is only available for the Region of Crete, in Greek and English, and enables users to do the following:

1. Enable the geospatial data on the device.
2. Take pictures of the environmental offence (up to 4 photos).
3. Accompany the photos with a short description.
4. Send the complaint to the administrator.
5. If internet access is not available, the application stores the complaint locally and sends it automatically once a connection is established.

After a long and elaborate procedure, the first stage in processing an anonymous citizen's report of an environmental crime submitted via the LIFE Themis app was successfully completed. The report related to the illegal disposal of excavated material and solid waste without environmental authorization on private land owned by a business near Chania, part of which lies within a NATURA 2000 area. On receiving the report, the Hellenic Society for the Protection of Nature forwarded it to the relevant authorities, which in turn conducted an on-site inspection and confirmed the environmental crime. As a result, a 2,000 Euro penalty was imposed on the company manager. This can be taken as proof of the application's success and the fact that it can be used effectively in order to report environmental crimes.

To date the application has been downloaded by 173 users (91 Android and 81 iOS users).

Following downloading, several reports sent via the app have been received by the administrators and passed on to the relevant authorities. LIFE Natura Themis is awaiting an official response, while closely monitoring the app's effective use by citizens.

Panel Discussion on National Experiences

Wildlife Crime in the EU Landscape

EcoLex Life project

(Abstract)

Slovenia, **Lea Tomažič**

EcoLexLife Representative

The Slovenian Criminal Code defines four criminal offences that directly relate to wildlife crime, namely forest destruction, game poaching, fish poaching and the unlawful handling of protected animals and plants. Assessing the scale of wildlife crime is very difficult, and there is practically no case law on this topic at present. Slovenia is striving to improve implementation and the enforcement of existing rules and make the fight against organized wildlife crime more effective. For example:

1. Slovenia participated in the "Hunting tourism" IMPEL Project in 2016 and 2017.
2. Risk profiles regarding to the trade in endangered species of wild fauna and flora have been set out in customs systems.
3. Regarding wildlife trafficking, the Inter-agency Working Group works at the national level (including the police, environmental inspection, customs and management authorities) with the support of the scientific authorities (the Republic of Slovenia Institute for Nature Conservation).

The EcoLex Life project is also trying to protect the environment, including protected plant and animal species and their habitats. It focuses on the Environmental Liability Directive (ELD), the purpose of which is to establish a framework for environmental liability based on the "polluter pays" principle. The project's main objective is to raise awareness of environmental liability and create interactive online tools to help operators identify and manage their risk of causing environmental damage. The EcoLex Life project organizes workshops, international conferences and webinars. The EcoLex portal, inter alia, includes:

1. The first comprehensive online collection of currently applicable environmental legislation in Slovenia.
2. EcoClipping - a weekly personalized emailing notification service on individually selected environmental topics of user interest.
3. An environmental risk assessment tool (in development) for identifying an operator's exposure to the risk of causing environmental damage. The tool will also include a list of possible preventive measures needed to lower the risk of causing environmental damage.
4. A toolkit (in development) with sector-specific rights and obligations, with a 'how to act' section.

Since there is no specific ELD insurance policy on offer in Slovenia, the EcoLex Life project is committed to assisting in the development of such an insurance tool, in cooperation with Triglav Insurance Company.

By promoting better risk management and raising awareness of environmental liability and the consequent obligation to remedy damage, the project places emphasis both on the economical aspect of the ELD and on the direct impact on biodiversity in cases of environmental damage.



Environmental crime. A kind of crime that affects us all

Malta, **Antaia Christou**

Representative of BirdLife Malta

Although **environmental crime** is a kind of crime that affects all of us, a fair number of people either have no idea what it is or how to deal with it, or think of it as being less important than other “serious” crimes. Then again, they may think such things don’t happen in Europe.

The bitter truth is that environmental crimes greatly affect our lives, via the air we breathe, the water we consume and even the food we eat. Sadly, environmental crimes also take many different forms and occur all over the world, even in Europe.

Which laws protect the environment?

Over the course of time, several laws have been passed at both the global and the European level. Among the most important European laws are the Bern Convention and the European Directives on Bird Protection and the Conservation of Wild Fauna and Flora. In this report I shall be focusing on a number of European countries and the wildlife crimes occurring there. In particular, I will be referring to Malta, Hungary and Slovenia.

Malta

Malta, the smallest Mediterranean country with an area of just 316km², faces various kinds of environmental crime. These include illegal development –mainly in protection areas– and illegal pollution. The latter either involves sewage, or racketeers who dump waste and other objects in the sea and countryside or enter protection areas on high-speed motorized vehicles (motorcycles and quad bikes).

Malta is also infamous for the crimes against wildlife committed on the island, involving wild birds. Here I shall focus on illegal trapping and poaching: Bird Life International alone has estimated that roughly 108.000 birds are killed on Malta every year, corresponding to 343 birds per square kilometre! The above numbers include both poaching and illegal trapping. I shall go a little further into the uniqueness of the situation on Malta, where trapping is permitted by national legislation, while clearly prohibited at the EU level. The country has so far received several warnings on the issue.

In Malta there is a long tradition of trapping wild birds such as Goldfinches for the pet trade. After the country entered the European Union in 2004, the Maltese government undertook to put an end to the practice within 5 years, and initially did so. Up until 2009 the practice was illegal; although it continued, there were signs that it was ending, as only the older generation was involved. However, the government newly elected in 2013 implemented a change in the law to allow younger people to take up the practice, consequently lending a new dimension to the issue. The government sought derogations from the European Birds and Habitats Directives, arguing that it was an integral part of the country’s tradition. It then began allowing trapping seasons for Chaffinches and eight further species, such as Goldfinches and Greenfinches, going against the warnings from the European Union and pressure from local non-profit bodies such as Birdlife Malta and CABS (the Committee Against Bird Slaughter). European Union warnings were ignored by the government, and in June 2018 the European Court issued a verdict declaring Malta to be in contravention of its obligations regarding the European Union Birds Directive. As a result, the government did not allow the autumn trapping season for seven bird species to go ahead. Trapping does, however, remain legal (on the basis of national legislation) for two species, despite being in direct conflict with European Union laws. The permitted trapping season is widely used as a pretext for catching species such as the Greenfinch.

In Malta there is also a strong tradition of killing wild birds as trophies for sale, which has rendered the rarest species even more valuable to poachers. The hunting season on Malta is open for a lengthy period and hunting goes on every day. Numerous hunting-related offences have been recorded over recent years in particular, including the targeting of protected species such as the Flamingo, the use of electronic devices, hunting outside permitted hours and areas, as well as hunting during the closed season. In 2018, acting on citizens’ advice BirdLife Malta managed to gather 114 illegally shot birds. They included Flamingos, Storks and Bee-eaters.

Hungary

In Hungary, the illegal poisoning of raptors has been a widespread form of wildlife crime in recent years. It is definitely the leading threat to the globally threatened species *Aquila heliaca*, the Imperial Eagle. Over 50% of human-induced deaths of this species are due to deliberate poisoning (by individuals setting baits such as poultry, pigeons and doves) or indiscriminate poisoning (by individuals wishing to kill animals such as wolves or foxes, which they regard as dangerous or as pests). BirdLife Hungary and its associates have taken an active role in reducing the problem, with financial support from the European Union in two successive LIFE projects. Helicon LIFE ran from 2012 to 2016, bringing experts from various sectors together. At the national level it linked up a very wide-ranging team, including hunters, police officers, National Park rangers, vets and other interested parties. Central Europe's first specialist dog team trained to seek out poisons and carcasses was set up within the context of the project. The team serves as a highly effective tool in tracking down incidents of environmental crime against wildlife, but also acts as a poaching deterrent. Sadly however, the problem of poaching does not stop where the country ends, since, like all migratory birds, eagles know no borders. Further collaboration is needed to successfully eradicate the problem in Central Europe. In that spirit, a partnership project with neighbouring countries began in 2016. The partnership is between environmentalists from Austria, the Czech Republic, Slovakia and Serbia, and aims to facilitate the exchange of information and experiences gained via Helicon LIFE, so as to better implement and improve the practices developed under it. The project will create at least 6 further specially trained dog teams in Pannonia to combat illegal wildlife poisoning.

In Hungary there is a law fining any company that causes harm to wildlife (e.g. instances of protected birds being killed or injured by power lines), at a specific amount for each species. For example, the fine for a White Stork is set at 3,000 Euro. Depending on the case, the company may pay a hefty fine, insulate the lines to make them bird-friendly or be forced to change its entire structure by converting to an underground line.

As mentioned above, Hungary has stringent wildlife protection laws which are in general observed, making the country a well-known destination for wildlife watching trips.

Nevertheless, environmental crimes and their 'yields' create black market demand. Poachers thus exploit wildlife-rich countries, killing wild animals for trade in Western European countries such as Italy, where there is a demand. One well-known instance in the country involved an Italian poacher who attempted to smuggle 22 protected wild birds, including 17 European Rollers tied in a briefcase with sticky tape. The authorities tracked him down and a hefty fine was imposed. Four of the birds had already died, but the remaining ones were rescued and then released. Additionally, several hunting associations in Western Europe organize trips to Hungary to shoot Quails and Crested Larks, but often show no respect for national laws.

Slovenia

As in Hungary, wildlife and habitats are well protected by law in Slovenia. For instance, the Slovenian Penal Code defines four criminal offences directly relating to crimes against wildlife. They are forest destruction, poaching, and illegal trade in protected plants and animals. Just as in Hungary, however, the country faces problems on account of its abundant wildlife and a lack of public knowledge on what environmental crime is.

BirdLife Slovenia works hard to combat the illegal trade in dead birds through the country, collaborating with the German organization EuroNatur on the "Safe Haven for Wild Birds" project.

Organizations have recorded that in terms of numbers, the illegal black market trade in wild birds has fallen since 2013. All the same, they warn that this does not necessarily represent a true reduction in crime, since it may well be due to the fact that there are no customs checks and thus fewer seizures. Although the true extent of illegal trade via Slovenia in recent years remains unknown, it is clear that the country is one of the key through-routes for birds caught in eastern and southeastern Europe that are destined for western Europe.

For instance, last November an enormous illegal cargo of dead birds originating from Romania was discovered in Slovenia. Detailed inspection revealed that the boxes seized contained 1,349 dead birds, including 1,023 Red-throated Pipits and 209 White Wagtails.

Demand for these species is particularly high on the Italian black market, which caters for the needs of restaurants serving illegal "delicacies".



Slovenia is trying to improve the implementation and enforcement of existing rules, and to combat organized crime against wildlife in the most effective way. For example, in tackling the black market trade in wild fauna and flora via the EcoLexLife project, efforts have been made to brief customs posts, with protected and endangered species being incorporated into customs systems.

With regard to the wildlife trade, there are also groups of competent authorities working at the national level, including local police, the environmental inspectorate and customs. All of these services co-operate with the country's scientific departments to conserve nature.

If you are wondering how you can help this cause, get up to speed and inform those around you. Contact the local NGO working on these issues. All of us can pitch in to protect the environment and our shared heritage. It's an issue that concerns all of us.



Review of the wildlife crime situation in Cyprus

(Excerpts from recorded presentations)

Cyprus, Nikolaos Kassinis

Representative of the Republic of Cyprus Ministry of the Interior Game and Fauna Service

This presentation will review the wildlife crime situation in Cyprus, determining its extent and efforts to control it. The biodiversity of Cyprus is rich, in addition to the fact that it is one of the world's top Endemic Bird Areas. Around 30% of bird species on the island are known to have bred there at least once, though the majority recorded are migratory species, stopping over during their migration between Europe and Africa in the spring and autumn. Many of these are of European and global significance, and are protected under national and international legislation.

Wildlife crime in Cyprus can be divided into six broad categories. The first and biggest problem is the large-scale trapping of migratory and wintering passerines. The illegal poisoning of wildlife comes second, targeting foxes and stray dogs in order to reduce livestock depredation and game mortality. The problem is that non-target species such as Griffon Vultures and other protected raptors pay the price. Game poaching and the shooting of protected species are also common. Apart from that, we ought to mention poaching of the endemic Cyprus Mouflon, which is a protected species. Additionally, there is still the live trapping of songbirds for sale in pet shops, and egg theft from large raptor nests.

A range of international legal instruments and frameworks have thus been adopted to monitor and conserve wild bird populations. Wildlife crime prevention and control efforts are the following:

- Prevention and control of poaching by 24/7 GFS patrolling.
- Organized campaigns against the illegal trapping of migratory birds via targeted patrols in cooperation with CYPOL.
- Protection of the Cyprus Mouflon from poachers by patrolling and relevant management practices in the Pafos forest (controlling access to secondary forest tracks).
- Protection of wildlife conservation areas from poachers, and hunting control during the hunting season.
- Hunter education (mandatory for new hunters and wildlife law violators).
- Awareness raising on issues such as poisoning, illegal shooting, biodiversity and wildlife conservation, respect for wildlife and promoting the non-consumptive values of wildlife.

Legislation on the conservation of game and wild birds (Law 152.1 of 2003), transposing the EU Birds Directive was further amended in 2017, with hefty on-the-spot fines being imposed for each wildlife violation. Since their implementation in the summer of 2017, two hundred and forty-two (242) such fines have been issued. This legislative change has led to a significant decrease in trapping activity.

Issues such as poaching and the illegal wildlife trade are multidimensional and driven by complex social, cultural and economic factors. There is still a need to adopt a more holistic approach, so that local communities in areas of high poaching intensity are involved in the protection and sustainable management of wildlife resources. Efforts need to be continuous and never lose momentum.



Illegal raptor poisonings in Hungary: experiences of the Helicon and PannonEagle LIFE projects

(Abstract)

Hungary, **Lilla Barabas**

Representative of PannonEagle LIFE

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Illegal raptor poisoning has been a widespread type of wildlife crime in Hungary over the past few decades. It is certainly the most prevalent threat to the globally threatened Eastern Imperial Eagle (*Aquila heliaca*), as more than 50% of human-induced mortalities are due to deliberate or accidental poisonings. BirdLife Hungary and its partners have played an active role in reducing the problem, with financial support from two consecutive LIFE projects.

The so-called Helicon LIFE project (***Heliaca* conservation**) ran between 2012 and 2016 and brought together a very diverse nationwide partnership, including hunters, policemen, national park officers and veterinarians among other stakeholders.

In the framework of this project, the first specialized dog unit in Central Europe was trained to search for poisons and carcasses. The dog unit proved to be a highly effective tool in detecting wildlife crime incidents and also, to some extent, in deterring perpetrators. However, neither the eagles nor the problem stop at the country's borders, so in 2016 regional cooperation was initiated with the involvement of Austrian, Czech, Slovakian and Serbian conservationists, so as to implement the best practices that we had learnt more widely. Soon there will be at least six times the number of dogs specially trained to combat illegal wildlife poisoning in the Pannonian region.



Wildlife Crime in Greece: The role of NGOs

Hippocrates 2500 Years (NGO)

(Abstract)

Dr Irimi Vallianatou

Biologist. Hellenic Society for the Protection of Nature

Our country constitutes one of the most important biodiversity hotspots in Europe, while simultaneously being the most important hotspot for endemism in Europe and the Mediterranean. As far as Greek flora is concerned, it consists of 6,705 species and subspecies of plants, 1,491 of which are endemic to Greece.

Due to environmental conditions many of our plants resort to the production of secondary metabolites, i.e. natural substances which, beyond other common uses, may serve as medicines, aromatic essences, insect repellents, food preservatives, etc., and were used for those purposes by the ancients (almost 300 medicinal plant species are mentioned in the writings of Hippocrates). As a result, many plant taxa are at present in danger of overcollection.

The uninterrupted human habitation of Greece since ancient times has left its mark on nature. Plato described the destruction of forests around Athens occurring even in his own era. In ancient Greece, laws forbade logging in sacred forests and ordered that animals be left to run free within them. In Hellenic thought, where man, nature and gods create harmony, destruction lead to “Υβρις” = Disrespect, causing “Νέμεσις” = Divine Punishment.

In present-day Greece there are numerous laws concerning nature and wildlife conservation. Unfortunately, however, the overall legal framework is complicated and insufficient. For instance, Presidential Decree 67/81 protecting plant and animal taxa needs to be updated in accordance with Law 3937/2011. Another example is that the directives of many local forestry authorities allow up to one kilo of rare aromatic, medicinal or apiarian plant species to be collected for personal use per person per day! Other forestry authorities have yet to announce any directive. Sometimes the state is the one in contravention of the law. The perennial problem is that law enforcement goes unmonitored.

Legislation and control over the enforcement of laws and regulations are duties of the state. To prevent wildlife crimes, NGOs dealing with wildlife conservation must be actively involved in the following key areas:

- Environmental interventions with public services and various governmental agencies regarding violations of national or European environmental regulations and laws, or serious threats to the environment. This is achieved via direct contact, letters or press releases, or, in cases of serious law infringements, via legal action usually in the Council of State, the Supreme Administrative Court of Greece (e.g. HSPN cases against the State over illegalities in the Acheloos and Nestos river water-diversion projects, non-compliance with EU regulations requiring the creation of a forest registry, controlling the illegal use of poisoned baits, effective protection of specific NATURA 2000 sites, etc., often in cooperation with other NGOs).
- Interventions pushing for environmental legislation (e.g. HSPN proposals for specific area or species protection).
- Public awareness raising on environmental issues, laws and regulations (e.g. “Hippocrates 2500 Years”; education and training of locals in the North Pindos mountains regarding the law on wild herb gathering; disseminating proposals on the cultivation of wild medicinal-aromatic plants; HSPN implementation of the Blue Flag Programme).
- Environmental education (e.g. the five HSPN networks in Greek schools).
- Nature conservation projects, which also offer the opportunity to raise public awareness, promote environmental education and both prevent and punish wildlife crimes (e.g. the HSPN LIFE project titled “ForOpenForests”; pressing charges against those damaging priority conservation habitats with off-road vehicles; the ICON project intervening to effectively protect Orchidaceae).

The role of environmental NGOs in preventing and/or combating wildlife crime can be multifaceted and complements the duty of authorities, but should not be regarded as substituting the role of the State.



Fighting wildlife crime for the sake of the Egyptian Vulture: LIFE projects to the rescue!

(Abstract)

Victoria Saravia

Egyptian vulture LIFE project Conservation Officer. Hellenic Ornithological Society (HOS – BirdLife Greece)

The Egyptian Vulture is the most endangered of the four vulture species found in the Balkans. Its status in the region is critical, especially in Greece, where only five breeding pairs remained in 2018. Although species decline can be attributed to a combination of threats such as changes in traditional livestock farming and habitat loss, wildlife crime has also played a major role in the species' population crash; the illegal use of poison baits can be identified as the single most important threat affecting Egyptian Vultures over recent decades, while poaching for taxidermy and egg taking have also increased the toll. The impact of wildlife crime on the species is even greater if we consider the threats in the flyway and wintering grounds: direct persecution, poisoning (again!) and illegal trade for belief-based practices.

Two LIFE projects have tried to address threats to the species, with particular regard to wildlife crime. The first, LIFE "The Return of the Neophron" (2011-2016), implemented actions in Bulgaria and Greece, focusing mainly on wildlife poisoning and nest robbing for the illegal trade in eggs or specimens. Actions carried out were of preventive, enforcement and capacity building character: nest guarding, awareness raising in local communities, training seminars for law enforcement officers (forestry wardens, police, customs officers, law representatives), anti-poison dog units, the creation of a land users' network against poison baits, etc.

During the current LIFE project, titled "New LIFE for the Egyptian Vulture" (2017-2022) —a natural continuation of the previous project— actions have been extended to include countries in the Middle East and Africa where the species migrates and overwinters. Apart from continuing anti-poison actions in the Balkans, actions implemented in these two new regions address the identified wildlife crime threats via awareness raising and capacity building of law enforcement authorities, as well as testing and promoting alternatives to strychnine as a stray dog population control method.

Environmental Law Enforcement in Greece.

Experiences from the Long-term Efforts to Conserve the Mediterranean Monk Seal

(Excerpts from recorded presentations)

Dr Panagiotis Dendrinou

President of the MOM Board of Directors. Hellenic Society for the Study and Protection of the Monk Seal (MOM)

The Mediterranean Monk Seal is considered endangered by the International Union for the Conservation of Nature (IUCN, 2018). It is of community interest to the European Union, and is listed as a priority species on Annex II of the European Union Council Directive 92/43 of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitat Directive). In addition, it is legally protected by:

- The Bonn Convention on Migratory Species (1979);
- The Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979);
- The Barcelona Convention for the Protection of the Mediterranean Sea against Pollution (1977);
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES, 1973);
- The 1995 Protocol Concerning Mediterranean Specially Protected Areas and Biological Diversity in the Mediterranean;
- In Greece, the Mediterranean Monk Seal is included as an endangered species in the Red Data Book of Greece and is protected by Presidential Decree 67/1981.

Distribution of the species: a historical overview

In the recent past, populations of Mediterranean Monk Seals could be found throughout the entire Black and Mediterranean Seas, the north-western coasts of North Africa and the island of the Azores, Madeira and Cape Verde. Continued exploitation of the species in the past two centuries led to the disappearance of the Mediterranean Monk Seal from the Black Sea and many countries in the Mediterranean Basin. Mediterranean Monk Seals are still widely distributed in Greece. Detailed information on the presence of the species throughout the country has been collected by MOM via operation of the national Rescue and Information Network (RINT) and on-site surveys/monitoring of local sub-populations. MOM's mission is: "the conservation of the marine environment, through the protection of the Mediterranean Monk Seal".

RINT: Rescue and Information network

Established by MOM in 1991, the RINT was developed to monitor the overall status of the Mediterranean Monk Seal in Greece. Since its establishment, RINT has served as an extremely valuable conservation tool in monitoring the status and health of the Greek Monk Seal population, identifying major changes in the distribution of the species in Greece and involving local fishing communities in conservation efforts for the species. Among other things, the network identifies important areas for the species and proposes conservation measures, acting immediately when needed in cases of live animals needing treatment, and performing necropsies on dead animals. Operation of the RINT is based on continuous communication with more than 2,000 "network members" (authorities and inhabitants of coastal and islands communities), who provide information on Monk Seal sightings.

The Mediterranean Monk Seal: Threats

The main current threats to the Mediterranean Monk Seal in Greece are as follows: the deliberate killing of animals (the most common cause of death in adults [54%]); entanglement in fishing gear (the most common cause in subadults [47%]); habitat destruction (increased and unregulated tourism development on coastlines, increased boat traffic and pollution, decreased fish stocks); and "natural" factors (disease spread, natural disasters, climate change).



Necropsies

356 dead animals have been reported to date; MOm has performed 143 necropsies on them. The major causes of death established by necropsy were deliberate killing, accidental death, natural death and unknown causes.

- Pups: 90% of the pups died of natural causes, mainly bacterial and parasite infections (36.6%) and premature birth (16.6%)
- Sub-adults: the main cause of death was drowning due to entanglement in fishing nets
- Adults: the main cause of death is deliberate killing

In the course of this effort there have been some difficulties in completing legal procedures in cases of deliberate killings. No penalties have been handed down for Monk Seal harassment to date, while Protected Area [PA] Management Bodies and their guards lack sufficient authority (even within the framework of new Law 4519/2018).

Some suggested solutions to the above problems might involve the extensive education of competent authorities on environmental protection law issues, increasing authority of Protection Area Management Bodies and guards, and reorganizing the Nature Rangers Service to combine all existing guarding schemes (hunting guards, forestry guards, PA guarding staff).

ANIMA – Wildlife Conservation Society

(Abstract)

Anna Kazazou

Zoologist

ANIMA is an NGO focused on the rehabilitation of wild animals, operating the main First Aid Station for wildlife in Greece. Each year ANIMA rehabilitates 3,000 – 6,000 wild animals, responds to thousands of citizens on issues concerning wildlife, collaborates with authorities, NGOs and stakeholders in order to address threats to wildlife, and mobilizes hundreds of volunteers.

ANIMA participates in the fight against wildlife crime, being involved in organized raids on illegal open markets. It also has an active role in raising awareness mainly through: a) social media and events (ANIMA has more than 69,000 followers on Facebook); b) training volunteers in first aid; c) lobbying public authorities and stakeholders; d) analysing and publishing relevant data; e) urging citizens to get involved in “paratiro” (= “watch”, a citizens’ science project); f) dealing with reports of wildlife crime.

The victims of wildlife crime are mainly associated with illegal hunting and trading, as well as poisoning.

Regarding illegal hunting, the vast majority of incidents occur during the legal hunting season. Few victims are game animals. The most frequently shot bird species are birds of prey (e.g. around 84% of shot birds admitted to the First Aid Station in 2010 were birds of prey). The rate of shot bird admissions increases along with greater hunting intensity. Numbers drop during the closed season, when it is significantly more likely for offenders to be arrested.

Regarding illegal trade, ANIMA collaborates with Forestry Departments, the Hellenic Ornithological Society, and the Hellenic Hunters Confederation in confiscating birds (mostly songbirds) trapped and sold illegally at the illegal open market at Schisto in Attica, and at dozens of pet shops. Those that cannot be immediately released are cared for by the organization until their full recovery. ANIMA receives dozens of complaints and notifies the relevant authorities about illegal trapping and sales in pet-shops, open markets, as well as via online and newspaper advertisements.

Regarding poisoning, the majority of incidents involve scavengers and birds of prey poisoned by baits.

ANIMA operates PARATIRO, a citizen science project aimed at collecting data on incidents involving dead or injured wild animals throughout Greece. It aims to establish a national, reliable recording and monitoring system for wildlife mortality due to anthropogenic causes. PARATIRO operates via a digital platform and an Android/iOS application.



Is sea turtle law being implemented on Crete?

Panagiota Theodorou

Conservation Coordinator. ARCHELON Sea Turtle Protection Society of Greece

As a consequence of the environmental education programmes run over the years by the ARCHELON Sea Turtle Protection Society, sea turtles are well established in the minds of Greek citizens as protected species. In other words, the sea turtle has become a flagship species closely bound up with environmental conservation. National, European and international legislation has of course also helped in this direction, by introducing a large number of conservation provisions not only for the animals themselves, but also for their habitats (breeding areas and feeding grounds); for decades now, there has been scientific evidence of a marked decline in populations of all seven sea turtle species swimming in the world's oceans¹, as a consequence of intense human-induced pressures and threats.

Three species of sea turtle are found in the Mediterranean: the Leatherback (*Derموchelys coriacea*), the Green Turtle (*Chelonia mydas*) and the Loggerhead (*Caretta caretta*). Of the three, only the Loggerhead lays eggs in Greece, and our country hosts around 47% of the breeding population in the Mediterranean, accounting for roughly 90% throughout the European Union. It is thus clear that there is an urgent need for a series of conservation measures to be implemented in our country if effective species management and conservation is to be achieved at the European level.

In Greece, the first laws concerning sea turtle conservation were passed in the early 1980's². To meet the country's European and international obligations, a series of European laws and international treaties classifying sea turtles among species in need of conservation were incorporated into Greek legal order over subsequent years. Specifically, these were: the Washington Conventions (on international trade in threatened flora and fauna species, Appendix I-1973)³; the Barcelona Convention (on the conservation of special protection areas and biodiversity, Appendix II-1976)⁴; the Bern Convention (on the conservation of European wildlife and natural habitats, Appendix II-1979)⁵; the Bonn Convention (on the conservation of migratory species of wild animals, Appendix I & II-1979)⁶; and of course the European Habitats Directive (92/43/EEC, Annexes II & IV-1992)⁷, the European Union's key instrument in protecting, managing and possibly restoring biodiversity and habitat types within the borders of member countries, via the creation of the NATURA 2000 ecological network.

The years 1986 and 2011 stand out as milestones for environmental protection in Greece, with the passing, respectively, of Law 1650/1986 (creating a framework for establishing protection status in areas of outstanding ecological interest, such as National Parks) and Law 3937/2011 (creating a framework for actions relating to biodiversity maintenance). In line with the provisions of those laws (1650 and 3937), the two largest Loggerhead breeding habitats –Zante and the Bay of Kyparissia– acquired a specific conservation framework and, via Presidential Decrees, have been designated a National Marine Park⁸ and a Nature Conservation Area respectively. The remaining breeding sites for the species have yet to gain any statutory conservation framework with a designation and specific conservation orders, but have almost entirely been incorporated into the NATURA 2000 ecological network (hence the provisions of EU Directive 92/43/EEC relating to the management of those areas

¹ All 7 species of sea turtle have been placed on the IUCN Red List of Threatened Species.

² On the basis of which it is against the law to catch sea turtles, to collect or destroy eggs and hatchlings throughout Greece, and Presidential Decree 67/81 (Government Gazette [GG] 23 A/30.01.1981 & 43 A/18.02.1981), which designates the Loggerhead, the Green Turtle and the Leatherback as protected species and bans the killing, abuse, trade, capture and export of them.

³ Law 2055/1992.

⁴ Law 1634/1986.

⁵ Law 1335/1983.

⁶ Law 2719/1999.

⁷ JMD 33318/3028/11-12-98 (GG B 1289/28.12.1998) and MD 14849/853/6103 (GG B 645/11.4.2008).

⁸ GG Δ 906/20.12.1999.



and the obligation to prevent their deterioration applies)⁹. It is also worth noting that Special Environmental Studies (SES), Presidential Decrees and Management Plans for all of our country's NATURA 2000 sites are to be completed over the coming two years, while a year ago all NATURA 2000 areas were placed under the jurisdiction of the 36 Protected Area Management Bodies¹⁰.

Laws which at first glance do not appear relevant to the Loggerhead have also contributed to conservation of the species in areas lacking a statutory framework, such as the Joint Ministerial Decision (JMD) on the allotment of shoreline and beaches to cater for bathers¹¹, as it includes a special appendix with the minimum management practices to be observed by businesspeople and local authorities so as to minimize disturbance to the animal's breeding process. These practices are: placing sun umbrellas at least 3 metres apart, refraining from installing wooden pathways, securing a 5-metre free zone at the top of the beach and, of course, removing beach furniture (sunbeds) at nighttime, so that animals trying to make nests do not encounter any obstacles. Additionally, there is a legal ban on vehicles and beach parties, light pollution on the beachfront from public or private light sources, a ban on beach cleaning with heavy vehicles from 1st May (onset of the egg-laying season) to 31st October (end of hatching).

Most people have come to associate the sea turtle with areas in our country such as Zante and the Bay of Kyparissia, possibly on account of the aforementioned Presidential Decrees. By contrast, few think of sea turtles in relation to Crete. And yet, as ARCHELON established in the early '90s, Crete hosts some of the largest Loggerhead breeding sites in Greece¹² – and what's more, they are systematically monitored by us. More specifically, turtles lay eggs in the Bays of Rethymnon, Chania and Messara, one noteworthy fact being that the Cretan subpopulation appears to be genetically differentiated from the other egg-laying populations in Greece¹³. In other words, it is unique. Unfortunately, as long-term record-keeping by ARCHELON shows, this unique Cretan population is in steep decline. In particular, in the Bay of Rethymnon¹⁴ the mean annual number of nests from 2000-2018 (203 nests per year) is roughly 47.5% lower than the equivalent figure for 1990-1999 (387 nests per year). In the Bay of Chania¹⁵ the mean annual number of nests from 2003-2018 (64 nests per year) is around 42% lower than the equivalent figure for 1992-2002 (110 nests per year)¹⁶. Lastly, no upward or downward trend is observable in the Bay of Messara.

One obvious question arising from the above is why the sea turtles of Crete are in such steep decline, despite the admitted abundance of existing legislation. Is it perhaps yet another instance of legal provisions remaining on paper and never being implemented? To answer that question, two important parameters need to be borne in mind. On the one hand, despite the fact that sea turtles are a marine species, their life cycle is directly bound with the land, given that during the egg-laying season, from May to August each year, adult females come ashore at nighttime to lay their eggs. These take around 55 days to hatch (the hatching period runs from July to October). On the other hand, there is the fact that, for years now, the beaches of Crete have ranked among the principal holiday

⁹ GG Δ 391/2.10.2018 and GG Δ 414/12.10.2018.

¹⁰ Law 4519/2018, according to which the Natura areas in the Bay of Chania came under the brief of the Samaria and West Crete National Park Management Agency, while those in the Bays of Rethymnon and Messara came under the fledgling Central and Eastern Crete Protected Areas Management Agency.

¹¹ JMD ΔΔΠ0007378/0454/BEΞ2017 (GG B 1636/12-5-2017 and GG B 1970/7-6-2017).

¹² Margaritoulis D., Dretakis M., Kotitsas A.1995. Discovering new nesting areas of *Caretta caretta* in Greece. Pages 214-217 in Proceedings of the 12th Annual Workshop on Sea Turtle Biology and Conservation. Jekyll Island, Georgia, 25-29 February 1992. NOAA Technical Memorandum NMFS-SEFSC-361. National Marine Fisheries Service, Southeast Fisheries Science Center, Miami, USA.

¹³ Carreras C., Pascual M., Cardona L., Aguilar A., Margaritoulis D., Rees A., Turkozan O., Levy Y., Gasith A., Aureggi M., Khalil M.2007. The genetic structure of the loggerhead sea turtle (*Caretta caretta*) in the Mediterranean as revealed by nuclear and mitochondrial DNA and its conservation implications. *Conservation Genetics* 8:761–775.

¹⁴ Margaritoulis D., Rees A.F., Dean C., Panagopoulou A.2010.The demise of the loggerhead population of Rethymno, Greece, as recorded from 18-year nesting data (1990-2007), pp. 175-6 in Proceedings of the 28th Annual Symposium on Sea Turtle Biology and Conservation. Loreto, Baja California Sur, Mexico, 22-26 January 2008. NOAA Technical Memorandum NMFS-SEFSC-602. National Marine Fisheries Service, Southeast Fisheries Science Center, Miami, USA. 272 pp.

¹⁵ Margaritoulis D., Rees A.F., Dean C., Panagopoulou A. 2013. Another declining loggerhead population in the Mediterranean: Bay of Chania, Greece. Page 144 in Proceedings of the 30th Annual Symposium on Sea Turtle Biology and Conservation (compilers: J. Blumenthal, A. Panagopoulou, A.F. Rees). Goa, India, 27-29 April 2010. NOAA Technical Memorandum NMFS-SEFSC-640. National Marine Fisheries Service, Southeast Fisheries Science Center, Miami, USA. 177 pp.

¹⁶ ARCHELON annual report to the European Commission, November 2018, p.4.



destinations in the Mediterranean, with over three million visitors per year, resulting in significant deterioration from intense human-induced pressures together with intensive, unregulated shoreline building and development. Given that the animal's breeding process coincides with the tourist season, it is easy to grasp why the Loggerhead comes under such intense human-induced pressures and threats on the shores of North Crete. It is worth noting that, from early as 1992-1994, having realized the significant pressures faced by shoreline ecosystems in North Crete, ARCHELON prepared and set about implementing the first management plan. Its recommendations aimed to safeguard the Loggerhead's breeding process, in collaboration with local authorities and businesspeople established in those areas. Nevertheless, intensive building and uncontrolled tourism development in the areas behind the beaches continued over the ensuing years, and thus the management plan was never implemented. To aid reader understanding of the situation, these are data from the 2018 egg-laying season.

In this season ARCHELON located and protected 446 Loggerhead nests at the species' three breeding areas on Crete, i.e. in the Bays of Rethymnon, Chania and Messara.

At the same time, in the 2018 summer season ARCHELON volunteers recorded 9,338 sunbeds over the 11km of Loggerhead habitat in the Bay of Rethymnon. Together with sports installations and watersports equipment, they occupied around 52% of available egg-laying space. The equivalent figure in the Bay of Chania amounted to 7,474 sunbeds over the 14.8km of habitat, occupying around 39% of available egg-laying space. Lastly, 730 sunbeds were recorded over 8km in the Bay of Messara, occupying 11% of available egg-laying space¹⁷. As far as implementation of the management practices in the JMD on the allotment of shoreline was concerned, roughly 68% of the businesses in Rethymnon, 70% of those in Chania and 75% in Messara were in compliance with the management practice of removing beach furniture at nighttime, so as to allow free space for adult female turtles to make their nests. That being said, the percentage of businesses failing to co-operate remained high, meaning that over the summer season the total number of sunbeds recorded on the beach at night came to 283,615 in the Bay of Rethymnon, 104,240 in the Bay of Chania and 21,890 in the Bay of Messara.

Minimizing light pollution remains a problem, given that artificial lights frighten adult animals and prevent them from laying eggs, while also disorienting hatchlings in such a way that they do not head towards the sea. In 2018, light pollution emanating both from private and public lights affected 63% of the nests in the Bay of Rethymnon, as well as 58% and 29% of those in the Bays of Chania and Messara respectively. It follows that if ARCHELON had not shaded the nests as a protective measure, the young turtles from over half of the nests in the Bays of Rethymnon and Chania would never have made their way to the sea. Light pollution is becoming a particularly acute phenomenon in combination with extensive noise pollution, increased vibrations and human presence on the beach due to the large number of beach businesses operating as nighttime entertainment venues.

The threats still faced by sea turtles on Crete include the washing of beach furniture on the beach (water can cause eggs to rot); heavy beach cleaning vehicles and motorized vehicles (jeeps, motorcycles etc., which one the one hand compact the sand, rendering it unsuitable for egg laying, and on the other increase the risk of nest destruction by vibration); and speedboats, which travel at high speeds over the sea (and are thus at high risk of colliding with adult female animals remaining on the sea surface near the egg-laying beach, between the three to four visits to land for egg-laying they make during the laying season).

Added to the above is the extremely serious problem of beach erosion in North Crete resulting from human interventions in the protected natural coastal vegetation (sand dunes). Intensive building and the construction of beach roads in the dune zone plus the building of ill-conceived harbour works are just some examples of large-scale interventions that take place, disturbing natural processes and resulting in a constant reduction of beach width, thus limiting the available space for egg-laying.

In conclusion, recent years have seen significant efforts to implement the JMD shoreline allotment practices.

17 ARCHELON annual report to the European Commission, November 2018, pp. 7-8.



The Crete Region Environment and Planning Directorate (via the Environment and Water Management Departments in the Regional Units) has made a valuable contribution to that end, by holding information days and carrying out frequent inspections at the egg-laying beaches. These efforts are also actively assisted by the Municipalities of Rethymnon, Chania, Platanias and Phaistos, as well as by the Port Police. Sadly, the Loggerhead breeding sites in northern Crete remain in a poor state of preservation, on account of human interventions and deficient, piecemeal implementation of the law, a fact directly linked to the declining trend in the number of the species' nests. The next challenge thus concerns tackling the problems described above. A contribution in that direction may be made by the Special Environmental Studies (SES), Presidential Decrees and forthcoming Management Plans for the NATURA 2000 areas in our country.

NOTE: Warm thanks to the volunteers on the Crete Programme and to Programme Director Mr. Odysseas Paxinos, for the invaluable data collection following thousands of hours of volunteering, and of course to the ARCHELON Scientific Committee for evaluating and processing the data cited in the article.





Reflections for the Future and Final Conclusions

Final words and future actions

In his closing remarks, the President of the Hellenic Society for the Protection of Nature, Nikos Petrou, stated the following:

The main goal of our conference has been achieved via an exchange of information and knowledge between us. We have had presentations starting with the broad picture of the European environmental legislation, with some very thoughtful insights into the political implications at that level, and what they mean for actual implementation. There were also very interesting thoughts on the lack of certain legislation and the inefficiencies of the European Commission. We had presentations focusing at the level of the individual judge, and we heard about initiatives from European Bodies like IMPEL and ENPE. Then at the national level, we heard about what is happening in Greece from the people on the ground, from all of you. The things that come up repeatedly, highlighting the main categories of crime, are the poisoning and collateral killing of other species, the illegal gathering of plants, and trafficking. We can also sum up in closing that environmental crime is not taken very seriously, and is not considered an important crime. Furthermore, there is a very obvious lack of political will, as well as poor enforcement and monitoring of existing legislation.

All presentations indicated that we need to increase awareness among the general public. There is also a need to address the authorities, given the obvious lack of knowledge and awareness at that level too. Finally, we have to engage with people and local communities across the board, as well as to exert pressure on the relevant authorities. That brings us to the most important thing, which is synergies and cooperation; the only way we can achieve the results we hope for is by working together.





Annex I: CVs of Presenters

Nikos Petrou

Nikos Petrou is a well-known naturalist, nature photographer and author. Since the late 1980s he has worked as a nature and wildlife photographer, travelling extensively throughout Greece and other countries. To date he has published 15 major books, the result of long years of research and fieldwork on their subject matter. He also regularly publishes articles, mostly on current environmental issues, and is a frequent speaker at seminars, conventions and symposia in Greece and abroad. Over the same period he has also been involved in conservation, mainly with the Hellenic Society for the Protection of Nature. Since 2005 he has been a member of the HSPN Board of Directors, serving as continuously elected President since 2009, with additional responsibility for the overall coordination of HSPN European and international projects. Since 2016 he has been a member of the Board of Directors of the international Foundation for Environmental Education (FEE).

Georgios Protopapas

Georgios Protopapas is an Architect (March DESA), having graduated from the Ecole Spéciale d' Architecture-Paris in 1982, with postgraduate studies (DEA) in Urban and Regional Planning/Geography-Development at the University of Paris IV- Sorbonne-Paris (1983). Since 1986 he has worked in the Greek Ministry of Environment and Energy. In 2010 he was appointed national representative as a Committee Member and contact point for the LIFE program, the European Union financial instrument for the environment. In 2012 he began working in the Green Fund, serving as Director since December 2016. The Green Fund finances projects aimed at conserving, enhancing and restoring the environment.

Dr Michalis Probonas

Michalis Probonas, PhD (Physics), is a graduate of the Physics Department in the School of Sciences at the National and Kapodistrian University of Athens. From 1987 to 1991 he was a doctoral fellow at the Environmental Radiation Laboratory in the Nuclear Technology - Radiation Protection Institute at the DEMOKRITOS National Centre of Scientific Research, and in 1992 obtained his PhD from the National and Kapodistrian University of Athens School of Medicine. He has been working at the University of Crete – Natural History Museum of Crete (UoC – NHMC) since 1998, and is Scientific Coordinator for the NHMC Ecology and Environmental Management Laboratory. From 2001 to 2013 he served as a Scientific Associate in the Social Work Department at the Technological Educational Institute of Crete (TEI Crete). Dr Probonas has published a series of scientific and popular articles in newspapers, magazines, conference proceedings and books, and participated in many environmental programmes. He has authored and edited several books, and given many lectures on a range of environmental issues in Greece and abroad.

Joseph van der Stegen

Joseph van der Stegen is graduated from the Université Catholique de Louvain, diploma in Engineer in Agronomy – Forestry, master degree in Forestry and Ecology. He is a policy officer in DG Environment dealing with nature conservation issues in the Nature Unit in charge of the nature conservation policy of the EU, in particular of the NATURA 2000 Network. More specifically contribution to the elaboration of tools aimed at implementing the EU legislation, to the development of policy initiatives, to the assessment of possible infringement cases, etc. Main work areas: bird protection, hunting, NATURA 2000 and forests, enforcement of EU nature legislation, and NATURA 2000 in France and Belgium.

Ludwig Krämer

Ludwig Krämer served as a judge at the Landgericht Kiel from 1969 to 2004, and as an official in the European Commission Department of the Environment from 1972 to 2004. He is now director of the Derecho y Medio Ambiente environmental law consultancy in Madrid, specializing in EU environmental law.



Dr Valerie Fogleman

Valerie Fogleman is a Professor of Law at Cardiff University School of Law and Politics and a Consultant at Stevens & Bolton LLP. Valerie is listed as a leading environmental lawyer in the Chambers UK legal directory, the Legal 500, Legal Experts, and the International Who's Who of Environment Lawyers. She has written three books and co-authored others, as well as writing many articles and giving presentations on environmental law in the UK, continental Europe and the USA. Valerie is a member of the Law Society of England and Wales, the Texas State Bar, and the Law Society of Ireland, as well as many professional organizations.

Dr Matthias Keller

Dr Keller graduated and received his PhD in Administrative Law from the University of Würzburg. From 1999 to 2003 he was a lecturer in the European Commission Robert-Schuman-Project, and subsequently Presiding Judge at the Administrative Law Court in Aachen, where he acts as Judge-Mediator. In 2011 he was appointed Lecturer in Environmental Law, EU Law and Administrative Law. Dr Keller is a member of numerous law associations and institutes, such as the European Law Institute, the chairman of Forum ad Mosam and a member of the EU Expert Group of Academics on Access to Justice in Environmental matters. He has authored and co-authored law books, articles and conference proceedings.

Jan Van de Berghe

Jan Van de Berghe was a lawyer specializing in environmental cases from 1985 to 1991. That year he was nominated Judge at the Court of First Instance in Ghent, where he mainly deals with criminal environmental cases. Since 2002 he has been Vice-president of what is now the Court of First Instance in East Flanders. From 2008-2016 he was member of the Belgian High Council of Justice. He is a founding member of TMR, the Flemish Environmental Law Review publishing on environmental law, and has been a member of EUFJE since its establishment. Starting in 1995, he has organized environmental law training programs open to judges, prosecutors, inspectors and the police at the Belgian Judicial Training Institute.

John Visbeen

John Visbeen is expert team leader on nature protection and an IMPEL Board member. He started his career as a police officer in Rotterdam in the Netherlands, where he became an environmental crime specialist. Working as the manager of enforcement departments in the provinces of Flevoland and Utrecht, he was also responsible for nature conservation and wildlife crime inspections. His current position in the province of Flevoland is as Manager for nature conservation, culture, recreation, tourism and sports. His core tasks include developing policy and strategy for nature protection areas (in combination with tourism), establishing a new National Park and coordinating advice and licensing in line with nature protection law. Within IMPEL, Visbeen led a project on intensive pig farming and landfills. He also established and co-organized the four-network conference In Utrecht and Oxford. Current projects under his expert team focus on hunting tourism, information exchange on the illegal killing of birds (IMPEL-ESIX), peer review, prioritization enforcement in nature protected areas and wildlife trafficking.

Dr George Almpouras

Dr George Almpouras is a senior Judge, serving today at the Appellate Court of Athens, which adjudicates criminal and civil cases. He has completed postgraduate studies in Public, European and Criminal law and environmental health, and holds a PhD in criminal environmental law. He is active in judicial, humanitarian and environmental issues, and has a long-standing and varied record of involvement in them in Greece and abroad. He teaches law at both undergraduate and postgraduate levels. Dr Almpouras is married and has two children, to whom he hopes to pass on a better world.

Stavroula Pouli

Mrs Pouli has a background in environmental science and public administration and has worked at the Hellenic Ministry for Environment and Energy since 2001. In 2011 she was appointed Head of COIEL, the competent authority for implementing environmental liability, and has been an environmental inspector since 2016. She has drafted



circulars on ELD implementation, organized ELD training seminars for officials at national and regional level, and as a member of the national committee on ELD participates in the European Commission national expert group. Mrs Pouli has participated in various environmental protection projects on sustainable development, environmental impact assessment, the NATURA 2000 network and environmental performance reviews. She is team leader on behalf of the Hellenic Ministry for the Environment for the LIFE Natura Themis project on “Promoting awareness of wildlife crime prosecution and liability for biodiversity damage in NATURA 2000 areas in Crete”, within the partnership framework with the University of Crete – Natural History Museum of Crete.

Dr Angelika Kallia-Antoniou

Dr Kallia-Antoniou is an Attorney at Law at the Supreme Court of Greece (the Areios Pagos), a member of the Thessaloniki Bar Association, and a European Environmental Law Expert with a Master’s Degree in International and Comparative Law and a PhD in European Environmental Law. She is Professor of European and Hellenic Environmental Law at the National School of Public Administration, and at the Hellenic International University. In addition, she is a former member of both the National Council of Land Planning and Sustainable Development and the Administrative Council of the National Organization for the Alternative Management of Packaging and Other Waste. As a founding member of the Environmental Law Association, Dr Kallia-Antoniou worked for twenty years as an expert on European Environmental Legislation in the European Institutions (the European Commission and the European Parliament) in Brussels, collaborating with various teams of experts from all EU member states as well as non-Europeans. She is the author of over a hundred publications on EU Policy and Law, in particular institutional law, environmental law, international law and comparative law.

Konstantina Ntemiri

Konstantina Ntemiri studied Environmental Science and holds an MSc in the sustainable management of protected areas. Since 2014 she has worked as Policy Officer for the Hellenic Ornithological Society/Birdlife Greece, handling countless cases on environmental crime and bird crime in particular. She is also the coordinator of the Anti-Poison Task Force, consisting of seven environmental NGOs and bodies. The force’s main joint objective is to promote proposals and institutional changes to eradicate the killing of wildlife by poisoned baits, and to highlight the extent of this conservation problem at the local and national level.

Dr Georgios Sbokos

Dr Georgios Sbokos holds a grant for the EU LIFE Natura Themis project in cooperation with the Natural History Museum of Crete. As head of the Heraklion Bar Association Environmental Committee he is a LIFE Themis coordinator. Dr Sbokos has taught environmental law as a private lecturer at the University of Crete since 2012. In 2014 he addressed the Supreme Court of Greece (the Areios Pagos) in a formal claim against the hydrolysis of Syrian chemical weapons. The following year he was invited by the Greek Parliament to serve as a consultant on environmental monitoring and protection mechanisms. He has published two books and over fifty articles on environmental law and political ecology. He graduated from Cologne Law School, attended a postgraduate course in Koblenz and received his PhD in Athens.

Maria Maniadaki

Maria Maniadaki was born and raised in Chania, Crete, Greece. Having graduated from the University of Athens School of Law, she completed postgraduate studies in European Law at the University of Hanover School of Law, and holds the title of Magister Legum Europae (MLE). She has lived and worked as a lawyer in Chania since 2004. From 2003 to 2011 she served as a teaching assistant in the School of Natural Resources and the Environment at the Chania branch of the Technological Educational Institute of Crete, teaching courses in Environmental Law. In addition to being an active lawyer, since 2016 she has worked as coordinator for the West Crete Environmental Law Observatory, within the framework of European Programme LIFE14/GIE/GR/000026, entitled “Promoting awareness of wildlife crime prosecution and liability for biodiversity damage in NATURA 2000 areas in Crete”.



Christos Georgiadis

Christos Georgiadis is a graduate in Agriculture Engineering from the Aristotle University of Thessaloniki and holds an MSc in Sustainable Development from the Faculty of Biology at the same institution. His scientific and research interests include sustainable development, species population analysis and the ecology of species, GIS and spatial analysis. He has worked for over fifteen years as Project Manager for several EU-funded environmental conservation projects (LIFE+ programmes, ARCHIMED, INTERREG, etc.), and has coordinated EU-funded projects on sustainable tourism development in several Mediterranean countries, such as “MERSIN DRAMA municipalities’ cooperation on accessible tourism”, within the framework of “Promoting Civil Society Dialogue Between the EU and Turkey”, “Mediterranean Standard for Sustainable Tourism” under the terms of the INTERREG IIIC Archimed programme, etc.

Lea Tomažič

Lea Tomažič graduated from the Faculty of Law at the University of Maribor in Slovenia, and started her professional career as a judicial trainee at the Higher Court of Ljubljana. After passing the bar exam, she worked as an attorney candidate for the well-known Slovenian law firm Zidar Klemenčič. In early 2016 she moved to New Zealand and gained additional experience by working in the leading Australasian law firm Chapman Tripp. She joined EcoLex Life team in July 2018 as a Content Manager, where she is focusing on improving implementation of the Environmental Liability Directive in Slovenia.

Antaia Christou

Antaia grew up in Cyprus, studied Geography in London and then continued her postgraduate studies at UCL on Biodiversity, Evolution and Conservation. She has since volunteered with many NGOs on environmental protection and conservation. She also worked for BirdLife Malta as a Conservation Assistant and Fundraising Officer. Her main tasks were related to wildlife crime, wild bird rehabilitation and fundraising. Her main areas of expertise are wildlife crime and environmental conservation.

Nicolaos Kassinis

Nicolaos Kassinis is a wildlife biologist working as a senior Game and Wildlife Officer in the Cyprus Game and Fauna Service since 1994. He received his professional education in the United States with a BSc in Biochemistry and an MSc in Range and Wildlife Management. He is currently head of the Fauna Service’s research and Mouflon conservation sector. Other duties include European Union issues such as reporting for the Birds and Habitats Directives. His research interests span from Mouflon population dynamics, island-wide land bird and game species monitoring and monthly wetland monitoring to resident raptor nesting ecology. He is responsible for the establishment, management and monitoring of an extensive network of nesting boxes for Barn Owls in agricultural areas. He has authored several publications in scientific journals, including the Journal of Wildlife Management.

Dr Lilla Barabas

Lilla Barabas holds a postgraduate diploma in Applied Zoology with specialization in Ecology and Conservation Biology, and a PhD in Wildlife Management. Lilla has worked and studied in Hungary, the US and Costa Rica, spending the last 6 years working as LIFE project coordinator at MME/BirdLife Hungary - the biggest nature conservation NGO in the country. Lilla’s previous position was as coordinator of EU LIFE PannonEagle, a large initiative involving eleven organizations from five different countries, aimed at reducing human-induced mortalities of the Imperial Eagle population in the region (www.imperialeagle.eu). This November Lilla will be taking on a similar role in the “LIFE Against Bird Crime” project at BirdLife Europe & Central Asia.

Dr Irini Vallianatou

Dr Irini Vallianatou is a biologist, systematic botanist and phytosociologist. From 1993 to June 2017 she worked as a curator in the Julia & Alexander N. Diomides Botanic Garden at the University of Athens. She was a primary researcher for the “Natura 2000” Greek habitat project, and other projects on the recording and monitoring of the conservation status of flora species and habitat types of community interest, as well as mapping the latter.



Dr Vallianatou has participated in dozens of national and international conferences and published extensively in international scientific journals. She collaborates with Environmental Education Centres all over Greece, and had a significant hand in creating Hippocratic Botanical Gardens in Greece as a Board member and garden curator for the Hippocrates 2500 Years non-profit organization. She has been a member of the Hellenic Society for the Protection of Nature for over 30 years.

Victoria Saravia

Victoria Saravia was born in Madrid, where she studied Environmental Science. Having collaborated in various conservation projects around the world she settled in Greece, where she has been working as a Project Coordinator and Conservation Officer for the Hellenic Ornithological Society/Birdlife Greece since 2007. From 2012 onwards her work has mainly concentrated on conservation of the last pairs of Egyptian Vultures in Greece and the Balkans, dedicating considerable effort to tackling the problem of the illegal use of poison baits in particular. In this line, she has also recently become a trained handler of one of HOS' detection dogs for poison baits.

Panagiotis Dendrinis

Panagiotis Dendrinis completed his undergraduate and postgraduate studies at the University of Athens. His doctoral thesis was on studying the biology and ecology of the endangered Mediterranean Monk Seal, using state-of-the-art photo and video techniques. He is a founding member and President of the Board of Directors of MOM, the Hellenic Society for the Study and Protection of the Monk Seal (www.mom.gr). During his long-lasting involvement in marine environment conservation efforts, he has travelled extensively throughout most of coastal and insular Greece in search of the elusive Monk Seal and has designed and coordinated numerous scientific and nature conservation projects. At the same time, Dr Dendrinis has successfully engaged in professional photography and reportage, and is one of the first photographers in Greece to use innovative photography and filming techniques, including the use of drones and light-sport aircraft in aerial photography. Numerous photographs and articles by him have been published in national and international magazines. In addition, he has co-authored over 45 scientific journal articles. Panagiotis Dendrinis is a member of the International Marine Mammal Association, the Hellenic Zoological Society, the Union of Press Photographers of Greece and the Phoebus Organization for the Collective Management and Protection of Photographer Copyrights.

Anna Kazazou

Anna Kazazou earned a bachelor's degree from the Faculty of Forestry and Natural Environment at the Aristotle University of Thessaloniki, and holds a master's degree in Biodiversity Conservation from the Faculty of Biology at the University of Barcelona. She currently works as a bird curator at Attica Zoological park and is a member of the scientific board and animal management consulting team at ANIMA. She has ten years' experience in wildlife rehabilitation.

Panagiota Theodorou

Conservation Coordinator, ARCHELON, the Sea Turtle Protection Society of Greece

Panagiota Theodorou is a lawyer with over six years of experience in shaping and implementing environmental policy, with an emphasis on coastal and marine ecosystems and the protection of sea turtles. She has a strong background in environmental legislation (national, European and international conventions, etc.), managing and encouraging multi-ethnic teams (staff and volunteers), as well as organizing and implementing fieldwork, research-based and European projects. Moreover, she has significant experience in co-operating, putting pressure on and lobbying authorities, while also steering local communities and other stakeholders towards sustainable management of the natural environment. Since 2016 she has been the NGO representative on the Board of Directors for the National Marine Park of Zakynthos Management Agency. She has practiced law in the Athens and Chalkis Bar Associations, having studied law in Greece and Germany.





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