



Environmental information in the *Mediterranean*

A journalist's guide to key questions and institutions

Catalina Arévalo and Lourdes Lázaro



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Mediterranean

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About the IUCN Centre for Mediterranean Cooperation

IUCN, International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges. IUCN is the world's oldest and largest global environmental organization, with more than 1,300 government and NGO members and almost 15,000 volunteer experts in some 185 countries. IUCN's work is supported by over 1,000 staff in 45 offices and hundreds of partners in public, NGO and private sectors around the world. The IUCN Centre for Mediterranean Cooperation was opened in October 2001 with the core support of the Spanish Ministry of Environment, the regional Government of Junta de Andalucía and the Spanish Agency for International Development Cooperation (AECID). The Centre's mission is to influence, encourage and assist Mediterranean societies to conserve and use sustainably the natural resources of the region and work with IUCN members and cooperate with all other agencies that share the objectives of the IUCN.

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About AMAN

The Alliance of Mediterranean News Agencies (AMAN) has its origins in the Tunis Declaration, drafted as a result of the international colloquium "The Future of Communication in the Mediterranean", and organized by the Tunisian news agency TAP in 1991. The objectives of AMAN are to facilitate information exchange, especially in those ambits that affect the Mediterranean region and, moreover, to strengthen dialogue, development and cooperation between the agencies which form part of the organization. Members: AA-Anadolu Agency (Turkey), AFP-Agence France Presse (France), AMI-Agence Mauritanienne d'Information (Mauritania), ANA-MPA-Athens News Agency (Greece), ANSA-Agenzia Nazionale Stampa Associata (Italy), APS-Algerie Presse Service (Algeria), ATA-Albanian Telegraphic Agency (Albania), CNA-Cyprus News Agency (Cyprus), EFE (Spain), HINA-Hrvatska Izvjestajna Novinska Agencija (Croatia), LANA-Lybian News Agency (Lybia), LUSA-Agencia de Noticias de Portugal (Portugal), MAP-Agence Maghreb Arabe Presse (Morocco), MENA-Middle East News Agency (Egypt), NNA-National News Agency (Lebanon), SANA-Syrian Arab News Agency (Syria), TANJUG (Serbia), TAP-Agence Tunis Afrique Presse (Tunisia), WAFA-Palestine News Agency (Palestine).

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foreword

Water has memories. The Mediterranean remembers its civilizations, its crossroads, trade, arts and poets. It recalls the adventures of those who voyaged across this closed yet open sea, whose myths are still the inspiration for contemporary culture.



The Mediterranean is still the sea of ports full of beautiful goods. Today, however, the people around this sea are facing critical humanitarian and environmental challenges. There are some that set out on difficult paths, crossing faraway jungles and deserts, ready to beat Poseidon. Ithaca remains the eternal symbolic target, the island that is all islands.

More than 2.5 million square kilometres in area and 46,000 kilometres of coastline – these figures describe the second largest enclosed sea in the world, after the Caribbean. Scientists say time is running out but there is still a chance to save the sea and its people. If the Mediterranean has given so much life and connected so many people throughout history and across continents, it will keep doing so.

'There is no difference between a person from Marseille and a person from Genoa. I am the fig (...). The fig tree is my tree together with the olive tree. And the one that makes me dream is the palm tree, because it is Africa. A Mediterranean person loves thinking about the other shore,' wrote the sculptor Cesar Baldaccini.

There is a clear north-south bond, and also a west-east flow, letting the ocean in: the Mediterranean is a concentrating basin (more water is lost through

evaporation than falls as rain) which means that the Atlantic intake is vital.

The increasing pressure of human activities, both on land and on the high seas, is severely affecting the health of the marine environment and the availability of the natural resources it holds. In the case of the Mediterranean Sea, there are particular problems linked to the freshwater deficit, which alters salinity and leads to species loss and buoyancy changes.

Intensive agriculture and industry, overfishing, invasive species, maritime transport and uncontrolled pollution are added risks. Experts are also starting to observe phenomena linked to the warming of the atmosphere. This is an invaluable help when studying global phenomena. The Mediterranean Sea is regarded as a natural laboratory for studying climate change and other anthropogenic influences.

To contribute to the protection and sustainable use of the biodiversity of this landlocked sea is an urgent mission. The only way such an endeavour can be undertaken is through a participatory approach that integrates the work of key institutions involved in the management, research and conservation of the marine environment, together with communicators and civil society actors in the countries around it.



Penisola del Sinis - Isola di Mal di Ventre Protected Marine Area in Sardegna (Italy). © IUCN

Most of the Mediterranean, however, consists of international waters but the Western basin. National waters reach out only 12 miles, so the rest depends on agreements and joint actions, which are precisely what supranational organizations such as IUCN facilitate and promote.

The governance of the Mediterranean must be based on unconditional support for generating scientific knowledge, because knowledge is an essential tool for making policy. Another crucial pillar is training for disseminators and communicators, who form the unavoidable two-way link between decision makers and the citizens.

Humankind is not immune to changes in the environment, whatever the economic profit obtained. Those journalists devoted to environmental and scientific issues have been describing these problems and trying to make us react for the sake of the health of the Planet. Some came before their time, but others managed to get their topics onto the political agenda and today nature is proving them right. It is time for clocks to be synchronized.

This is a guide to help all those who inform the public along the shores of our three continents and those who are addressing environmental issues in the Mediterranean region.

*“To save the people,
save the sea”*

Antonio Troya

*Director of the IUCN Centre for
Mediterranean Cooperation*

Preface

The Mediterranean has been the 'mother sea' of millions of people around it, in a mosaic of nations, cultures, civilizations, languages, religions and mentalities.

The history of this turbulent region over the centuries has often been one of wars and hatred, even nowadays. Yet, at the same time, this water corridor has acted as a bridge between north and south, connecting peoples and civilizations.

Life, progress and development flourish in this area, alongside death, destruction and poverty. Sometimes the Mediterranean becomes the sea of hope for thousands of people escaping from their motherlands and looking for a better future. But sometimes the dreams of those emigrants and refugees are swallowed up in the deep waters.

I am sorry to say that the protection of the environment has never been a priority of governments, not only in the Mediterranean but also globally. In many countries around the Mediterranean the issue of the environment is actually a non-issue. It is a luxury even to think about it. Authorities pay little or no attention to this crucial issue, or their priorities may even lie in the opposite direction and they destroy it.

Initiatives like this one taken by IUCN, which aim to raise awareness about environmental issues in the Mediterranean are more than welcome and are to be commended.

The 1st Meeting of Environmental Journalists from News Agencies around the Mediterranean, which took place on 17-18 December 2015 in Malaga, Spain, co-organized by IUCN and EFE with contributions from national news agencies belonging to the Alliance of Mediterranean News Agencies (AMAN), was the first concrete step in the right direction, in launching an enlightenment campaign on environmental issues.

The mass participation of AMAN member agencies in the Malaga meeting is proof that Mediterranean news agencies are taking this initiative seriously and are ready and willing to make their contribution. National news agencies are the best tool and means for disseminating information because they have the best networks at home and can influence public opinion and decision makers.

We have to admit that the environment is not the first-and sometimes not even the last-concern of news agencies in particular and the media in general in the region.

That is why the IUCN initiative has come at the right moment, in the hope of reversing this trend and laying the foundations for action now.

We need joint and concerted efforts to overcome inability, inaction and lack of interest, and to put words into deeds.

The Malaga declaration could be a road map for everyone, urging all parties to play their part and make their contribution to a better and sustainable environment in the Mediterranean.

We aspire to see this effort yielding concrete results to the benefit of our countries and future generations in this vulnerable area.

AMAN is an ideal partner in this campaign.

In writing this preface, my wish is for this publication to become a beacon of hope and good-will that will awaken the consciousness of the peoples and governments in the Mediterranean.



George Penintaex

Secretary General

Alliance of Mediterranean News Agencies

Acting Director / Editor-in-Chief

Introduction



3.1. BACKGROUND

This guide, designed as a consultation tool for environmental journalists in the Mediterranean region, is the result of the collaboration agreement signed between the Centre for Mediterranean Cooperation of the International Union for Conservation of Nature (IUCN) and Agencia EFE in Spain, through EFEverde, in June 2015, with the support of the Alliance of Mediterranean News Agencies (AMAN). This steered the organization of the First Forum of Environmental Journalists from Mediterranean News Agencies on 17-18 December 2015 in Malaga (Spain).

The institutions above share the conviction that communication is a keystone in their contribution towards making societies better informed and therefore more demanding with respect to the passing and enforcement of environmental legislation. Furthermore, these societies will be made up of individuals who are aware of their responsibility towards the environment and engage with the sustainability of their actions.

Learning and helping others learn about the data produced by the scientific community and the consequent work of the institutions that govern a region so rich in biodiversity is, no doubt, the first step towards an informed society. The work of environmental and scientific journalists is vital; they have always been the main allies of scientists,

conservationists and others concerned about our environmental heritage and biodiversity who have listened to nature and paid attention to the signs and symptoms that all is not well, and have alerted governors and proposed changes along the path to sustainability.

In this social, historical and environmental context, quick recipes for the success or survival of just a few are no longer valid. This shared, living sea is our great natural capital and the best joint surety against any type of crisis.

This guide aims to contribute to a better understanding of environmental governance processes in the Mediterranean.

3.2. HOW TO USE THIS GUIDE

The content of this guide is the result of a series of interviews with relevant voices from the world of conservation in the Mediterranean region and data from rigorous reports recently prepared by environmental and scientific organizations in the basin.

The guide provides an overview of the main environmental problems facing the Mediterranean



Mediterranean coralligenous reefs in Corsica, France. © Frhojdysz - Dreamstime.com

according to experts from various institutions, and the challenges that those threats pose at present and in the future.

In addition, it deals with the specificities of the legal and governance framework in the region, and provides details of the multilateral agreements affecting the environment and the international conventions influencing its protection. In this regard, there are special sections on the European Union and on the Maghreb and their relationship with the Mediterranean, and a whole list of institutions working on this sea.

The objective is that all this information will provide journalists with as detailed a *picture* as possible of the environmental situation in the Mediterranean to serve as the basis for future press stories to be explored and developed.

Furthermore, a complementary list of the main environmental and scientific institutions at international and national level, the scope of their work and the person to contact in each one, as in a Who's Who, has been included to facilitate the access of journalists to the most relevant sources of information in the region.

Finally, the compilation of press articles by journalists from Mediterranean news agencies also aims to help journalists better understand the work done by their colleagues on other shores, and to serve as new ideas for stories and debate among communication and information professionals.

We hope that this guide, written by journalists for journalists, will help to expand knowledge about the protection of the Mediterranean, because this knowledge is the foundation for conserving the region.

The state of play of the environment



Bridging three continents (Africa, Asia and Europe), home to the most diverse cultures and, above all, boasting enormous natural richness, the Mediterranean region is considered one of the 25 most important biodiversity hotspots in the world. It is characterized by the exceptional value of its flora and fauna, with a large number of endemic species (found nowhere else in the world) and critical levels of habitat loss. Around 10% of the world's vascular plants (25,000 species) can be found in the region and more than half of them are endemic.

Even though the sea itself has one of the highest levels of human impact on the planet, it is also one of the richest in biodiversity. Between 10,000 and 12,000 marine species live in its waters, representing between 4% and 18% of all marine species described by science, depending on the taxonomic group (4.1% of marine invertebrates and 18% of marine mammals), despite the Mediterranean accounting for less than 1% of the world's sea surface.

The fact that this sea is practically landlocked and under more human pressure than any other determines not only its ecology but also the major threats and challenges facing it, as the largest enclosed sea in the world after the Caribbean.

The Mediterranean links more than 20 countries. They have very different socioeconomic situations but have to understand each other because of the waters that bind them together (and sometimes separate them), and upon which the prosperity of their economies and peoples depends.

It is impossible to understand the Mediterranean without comprehending humankind's influence on it over thousands of years, or to imagine its future without taking that influence into account.

We will next deal with the various aspects of the present environmental situation in the Mediterranean Sea/region, at one of the most critical moments for its ecology. Besides suffering multiple direct threats, it is now also facing a silent disease of enormous consequences: climate change.

A POLLUTED SEA

In spite of all the evidence for the significant services provided by the Mediterranean's coastal and marine ecosystems, these are continuously being degraded, according to the 2011 Integrated Assessment of the UNEP/MAP Barcelona Convention.



© EFE

Because it is virtually a closed sea, receiving waste from countless towns and cities down a large number of rivers, and only connecting with a larger water mass through the Strait of Gibraltar, the Mediterranean is one of the most polluted seas on the planet. Pollution comes from land as effluent from wastewater treatment plants, from submarine pipelines as uncontrolled discharges, and from ships in the form of oil spills, bilgewater dumped a few miles from the coast, human waste and discarded fishing gear, among other things.

Whatever its origin, both floating litter and litter that ends up on the sea bottom, such as plastic bottles and bags, is among the main environmental problems.

Plastics, whether macro or micro, are 'particularly worrying', warns Puri Canals, Chair of MedPAN (Network of Marine Protected Area Managers in the Mediterranean). A 2015 study by researchers at the University of Cadiz (UCA) and the Mediterranean Institute for Advanced Studies (IMEDEA) concluded that this sea contains between 1,000 and 3,000 tonnes of plastic waste, equivalent to finding waste every four square kilometres.

Regarding oil pollution, a study by Oceana Europe discovered that the Mediterranean receives between 400,000 and 500,000 tonnes of oil and oily

waste every year from chemical industries located along its coasts.

Water pollution directly affects the marine fauna. Research on marine turtles, the most studied animals in the Mediterranean, revealed that 20% of the individuals caught by longliners in the central Mediterranean had traces of oil and floating litter in their digestive systems.

Oceana Europe noticed that the species highest in the food chain are suffering the most, as they accumulate pollution taken up by their prey species. This is the case of sharks, especially larger species such as the great white, tiger and hammerhead.

They are not the only ones to suffer, however; deep sea species are extremely vulnerable to these pollutants. If they fail to kill, pollutants lead to impaired defences, sexual disruption or even sterile new individuals. The fact is that, once in the sea, pollutants dilute, spread and have a long-term impact on organisms; the affected fauna die little by little, as found by Oceana in their analysis.

Environmental experts agree that most pollution problems in the Mediterranean have to be resolved on land and include, to a great extent, 'building general awareness of what to do with our own waste'.



Municipal and Junta de Andalucía's staff in Getares beach, Algeciras, picking up spill disposal bags from the oil waste tanks that caught fire in Gibraltar that affected six kilometres along the coast including El Rinconcillo, San García and Punta Carnero beaches in Cadiz, two of which have high and medium environmental protection status. EFE/A. Carrasco Ragel.

EXPLORATION AND EXTRACTION OF HYDROCARBONS

At present 43% of the Mediterranean is covered by applications for the exploration and/or extraction of gas or oil, according to Medtrends¹. Estimates are that oil reserves could amount to 9.4 billion tonnes, 4.6% of the world's reserves (Libya, Algeria and Egypt hold 94% of the reserves in the region) according to the Blue Plan (Plan Bleu). Of the permits applied for, 22% have been granted and 21% are being processed. All the Mediterranean countries in the European Union, except Slovenia, have authorized research on the reserves that may be along their coasts.

While scientists warn that the environmental consequences of a potential spill would be catastrophic, since the sea is almost completely enclosed and is the site of considerable seismic activity, ecologists oppose oil exploration in the Mediterranean because they believe that the benefits in economic and employment terms would be 'very slim' in comparison with the risks involved. Environmental damage associated with oil and gas exploration can range from leaks and noise from the equipment and facilities, with negative effects on the marine fauna,

to the infrastructure associated with oil extraction, including refineries.

International organizations like WWF have asked Mediterranean countries not to grant any new permits for exploration and for the sea to be declared extraction-free, especially since it is an area where renewable energies have huge potential.

Although scientific knowledge of the effect of discharges on marine organisms and biological systems is limited, a report by the EU Directorate General for the Environment links them directly to high mortality in numerous marine species, behavioural changes (in feeding, reproduction and migration), a decrease in oxygen concentrations in the water and increasing levels of toxic chemical substances used to disperse oil slicks.

CLIMATE CHANGE: THE INVISIBLE PATIENT

Scientists have proved that the Mediterranean is becoming warmer and more acid at an unprecedented rate, caused primarily by carbon dioxide (CO₂) emissions into the atmosphere from the burning of fossil fuels. More CO₂ leads to warm-

¹ This percentage is highly fluctuating and was calculated in May 2015

ing of the air and the sea, and the acidification of the sea by absorption of carbon dioxide in surface waters. Meanwhile, sea level rise is threatening to drown many coastal areas.

The average temperature in the Mediterranean Sea has increased by 0.67°C in the last 25 years, according to surface temperature data obtained by satellite by the European MedSea project (Mediterranean Sea acidification in a changing climate). Some Mediterranean areas have reached 30°C. The increase in temperature is related to an increase in salinity, which is worrying given that salinity in the Mediterranean is above the world's average.

Acidification

Acidification (or a decrease in pH) occurs when water makes contact with the CO₂ present in the atmosphere. The higher the gas concentration, the lower the pH.

Researchers in the MedSea project, which analyses acidification in the Mediterranean Sea, have pointed out that water acidity has increased by 10% since 1995 and will rise by an additional 30% by 2050 if CO₂ emissions keep increasing at their current rate.



A male short-finned pilot whale (cetacean) holds a dead young in the mouth, an undocumented behaviour to date. The event, observed only among females, was filmed and photographed by Rafael Herrero and Teo Lucas working for the Aquawork company during the shooting of the "Pielagos Project" documentary. EFE/Teo Lucas.

Patrizia Ziveri, a scientist at the Environmental Science and Technology Institute of the Autonomous University of Barcelona and the project coordinator, explains that acidification is changing Mediterranean marine life, affecting highly significant species such as red coral, vermetid reefs protecting against coastal erosion, phytoplankton and zooplankton, seagrass meadows-feeding and breeding grounds for many organisms-and the farming of bivalve molluscs.



The dry bed of the Po River in Boretto, Italy. The Italian Ministry of Environment, the Green Alfonso Pecoraro Scanio, warned that he would prompt the government to declare the state of emergency in the area because of the drought caused by the hottest winter recorded in Italy in the last 200 years. The lowered level of the Po River, the longest in Italy, can seriously affect Italian agriculture and cattle production as its hydrographic basin provides supplies to one-third of the sectors. EFE/Giorgio Benvenuti.

'We knew nothing about the combined effects of warming and acidification in the Mediterranean Sea until this study. Now we are aware that there is a very serious double threat to our marine ecosystems. Furthermore, this threat is affecting the whole of the Mediterranean basin,' the researcher stated.

Scientists have proved that the consequences of Mediterranean warming and acidification are already here, such as the migration of species from the south-east coast towards the north and increased mortality of marine organisms in hotter summers.

The diet of fish larvae will be affected by the decline of phytoplankton, and viruses and bacteria will be less sensitive, although other species like some jellyfish will benefit and spread, according to

the laboratory experiments that were also part of this work.

The scientific study warns about what the socio-economic consequences of sea acidification and warming will involve: on Israel's coast alone, jellyfish blooms would reduce the number of tourists by 3-10.5%, which would mean a yearly economic loss of 6.2 million euros. It also suggests that in the Medes Islands marine protected area on the Costa Brava, Spain, the disappearance of gorgonians, an attraction for diving tourists, would bring about a reduction in diving activities equivalent to 4 million euros a year, together with a further 2 million euros lost because of jellyfish abundance and stings.

Changing migrations

The conservation partnership BirdLife International also highlights the fact that climate change is resulting in bird migrations from south to north across the Mediterranean in search of a fresher environment; mass deaths in the hottest summers, and the successful acclimatization of exotic species from warmer climates. These processes are relatively uniform all over the Mediterranean.

INVASIVE ALIEN SPECIES

Invasive alien species, the second most important cause of biodiversity loss in the world, is one of the most serious environmental problems threatening the Mediterranean. Research conducted by the JRC (Joint Research Centre) at ISPRA, Italy, using a database called EASIN (European Alien Species Information Network) recorded almost 1,000 invasive alien species in the Mediterranean Sea in 2014.

More than half of them (invertebrates and fish) have arrived from the Red Sea through the Suez Canal since it was opened in 1869.

With the expansion of the Canal by the Egyptian Government at the end of summer 2015, experts have signalled that it could let through an even greater flood of alien species, which are changing marine ecosystems, fishing activities and tourism all along the Mediterranean coast, from Israel to Spain.

The presence of some of these species has been confirmed in various parts of the southern Mediterranean. Among them is the toxic jellyfish *Rhopilema nomadica*, originally from the Indo-Pacific, which can block pipelines, make fishing more difficult and force the closing of beaches. The pufferfish is another species that arrived via the Suez Canal and has already been found in the western Mediterranean. Its poison can cause vomiting, respiratory arrests and ultimately death.

Of serious concern in the eastern part of the sea are the herbivorous fish of the genus *Siganus*, particularly *Siganus luridus* and *Siganus rivulatus*, which are 'striping' algae from marine rocks in Turkey and Israel, as Puri Canals, the Chair of MedPAN, points out.

Particularly damaging further west has been the rabbitfish or spinefoot, an extremely voracious feeder on marine plants, which is concentrated in Turkey and Greece at the moment but is also starting to appear along more western coasts (in France to be specific), so marine scientists at the Blanes Centre of Advanced Studies in Catalonia are warning.



Siganus luridus © Roban Kramer 

Other major promoters of the arrival of invasive alien species in the Mediterranean are: climate change (the rising temperature allows tropical species to live in areas where previously they could never have been expected to survive); aquaculture (particularly in the Gulf of Lyon, France, and the northern Adriatic Sea, Italy); the Aswan Dam on the Nile (which has led to increased salinity in the south-eastern Mediterranean); and ballast waters (used to improve balance and stability in merchant ships).

Ballast waters from large ships have, for instance, introduced the invasive coral *Oculina patagonica*, which severely damages the reefs of Mediterranean madre-pore corals. Another example is the tropical alga *Caul-*

erpa racemosa, which is competing locally with the endemic Mediterranean seagrass *Posidonia oceanica*.

The JRC study mentioned above found that the majority of invasive invertebrates arrived in the Mediterranean with maritime transport, while macrophytes - large aquatic plants- come from aquaculture.

To contribute to the identification of invasive alien species, the Centre for Mediterranean Cooperation of the International Union for Conservation of Nature (IUCN-Med) has created a smartphone app to help identify marine invasive species, encourage monitoring programmes and expand control measures.



Natural Park of Camargue (South of France) © Julie Gibbons

MEDITERRANEAN WETLANDS: STATUS, TRENDS AND PROSPECTS

There are 15 to 22 million hectares of wetlands in the Mediterranean Region, a fourth of which are artificial, such as dam reservoirs and fish-farming ponds. Nearly half the surface area of natural wetlands has disappeared since 1900, and the trend is continuing.

There are contrasting trends in **Mediterranean wetland biodiversity**: generally an increase in the western part of the region, but a decline in the eastern part. Waterbird populations in the Mediterranean basin have risen by 70% since 1970, partly due to the protection of the principal wetlands. This increase concerns above all Western Mediterranean countries, where hunting is better regulated and protected areas are numerous.

Mediterranean wetlands are experiencing various kinds of pressure due to human activities. Agriculture has long had the most significant direct impact. In addition, there is now urbanization, mass tourism, and infrastructure development, particularly along the coast and in river valleys. Pressure is increasing due to the growing number of inhabitants on the coast.

Water extraction is the greatest threat to wetlands. Irrigated agriculture is the greatest water consumer in the region, accounting for 2/3 of total consumption

Climate change is also having a growing impact, by amplifying the severity of droughts. The sea level of the Mediterranean rose by 22 cm in the 20th century, with significant effects on coastal wetlands

However, people have started to realize that ecosystems also need water. The first actions in favour of wetlands began during the 1960s. The number of "Wetlands of International Importance" in the Mediterranean Region, declared in the Ramsar list, has more than doubled in the last decade (9 M ha in 2014). The number of protected wetlands is also increasing.

While certain conservation actions already carried out have been effective, they remain insufficient for rapidly reversing the current degradation trend. Among the urgent measures still to be undertaken are improved water management; more assertive political determination for long-term protection; reinforced legislation; extended protection efforts in favor of 'forgotten' wetlands such as temporary marshes and ponds, watercourses, wet meadows, and riparian woodlands.

(Source: Mediterranean wetlands Observatory reports, Tour du Valat, MedWet)

OVERFISHING

The annual report on fishing opportunities for 2015 by the European Commission states that 93% of addressed Mediterranean stocks are overfished. The situation goes beyond alarming and affects 96% of demersal stocks (72 out of 75, e.g. hake, red mullet and swordfish); and 59% of pelagic stocks (e.g. anchovy and sardine).

Oceana Europe and other institutions maintains that some stocks have never been assessed, so the situation could be even worse than described. Data from this organization indicate that eight out of ten fisheries are overexploited, which means that more fish are caught than the natural cycle can replenish.

The problem is made worse, according to some experts, by the lack of fishing quotas. Only the bluefin tuna fishery has quotas in the Mediterranean and data indicate that it has managed to recover since they were introduced.

The bluefin tuna fishery, as an example, used to have a piracy index of 60–90%, but the situation has improved through the better enforcement of regulations, and it is now one of the most tightly controlled fisheries in the world.

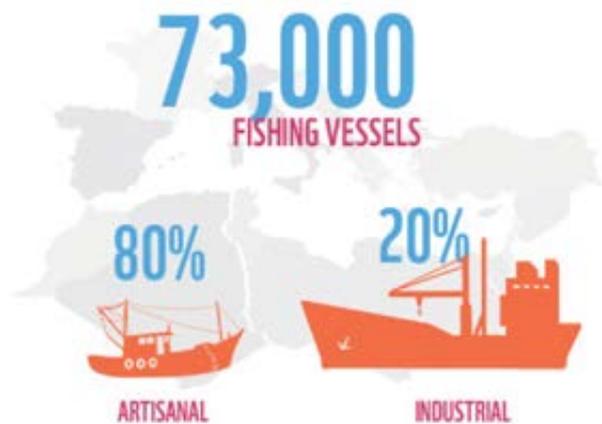


FISH MARKET IN TARIFA (CADIZ, SPAIN), 20-7-2004. Auction and weighing of dozens of tuna fish at the Port of Tarifa Fish Market. EFE/Luís Lavin.

Controls include strict inspections of fish catches on board vessels and by satellite (VMS - Vessel Monitoring System) and forcing countries to dismantle fleets when needed.

Management measures worthy of note include the decision adopted in 2005 by the FAO General Fisheries Commission for the Mediterranean to forbid bottom-trawling beyond a depth of 1,000 metres and the declaration of Restricted Fishing Areas to protect the most sensitive deep habitats.

The MedTrends report (2016) by WWF shows that while the industrial fleet accounts for 20% of vessels and the artisanal, or small-scale, fleet 80%, fish landings turn these numbers around, as not even 20-30% of the fish arriving in port comes from artisanal fishing.



Source: WWF MEDTrends report

WWF warns that fisheries will only have a future in the Mediterranean if quotas consistent with maintaining the ecological balance are imposed. Otherwise, the sector will run out of resources in the near future.

Another environmental problem associated with fisheries is the by-catch of marine birds in fishing gear. This is easy to avoid but requires administrations, activists and fishers to collaborate in implementing measures to minimize this impact. They include modifying the times when the gear can be deployed, minimizing lights aboard, and submerging the gear with weights so that it sinks more quickly, as in the case of longlines.

Artisanal fishing

There are places in the Mediterranean such as the Greek coast where 90% of fishing is small-scale or artisanal. Most of the problems related to these artisanal fisheries are the materials used, which used to be biodegradable but are not any more, so when they fall into the sea, they stay there forever.

Recreational fishing

Leisure fishing is underestimated in the analysis of the environmental situation in the Mediterranean, as in some countries there is no control over the number of people involved or any type of standard licence required.

Despite this, the impact of recreational fishing can be compared to that of artisanal fishing. Furthermore, there are places where this type of fishing makes up 50% of the total catch (as in the Balearic Islands). In many cases, recreational fishers sell their products illegally, to the detriment of professional fishing.

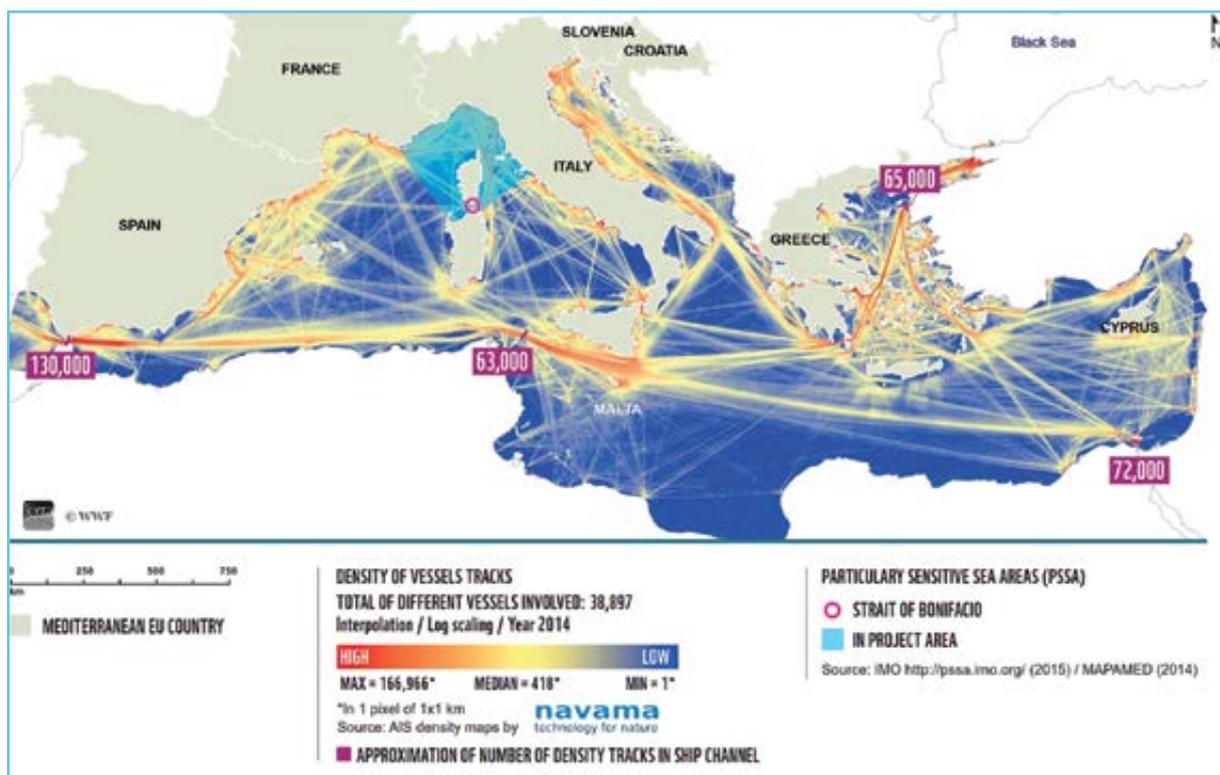
MARITIME TRAFFIC

As the meeting point of three continents, the Mediterranean is one of the seas with the highest levels of maritime traffic in the world. It has more than 600 commercial ports, half of them located in Italy and Greece, according to Plan Bleu. Furthermore, the forecast talks of growth in both the number of routes and the intensity of traffic.

It is estimated that the number of international vessels currently passing through the main access points into the Mediterranean every year is 20,000 through the Suez Canal, 70,000 through the Strait of Gibraltar and 40,000 through the Dardanelles Strait².

The European Union is working on a network of seven large marine highways to redirect traffic in the Mediterranean.

This heavy maritime traffic has a negative impact on marine and coastal ecosystems due to pollution, noise, collisions, sources of marine litter and the introduction of invasive species. The 'black spots' most badly affected by these problems are the Sicilian Channel and the Strait of Gibraltar.



² Source: <http://www.marinevesseltraffic.com/2013/06/mediterranean-sea-marine-traffic.html>

AQUACULTURE

Aquaculture is one of the sectors with the highest growth rates in the Mediterranean, having expanded by approximately 70% between 1997 and 2007. According to FAO data, Egypt is the leading aquaculture country in the Mediterranean, with a yearly production of 815,883 tonnes (2011 data), followed by Greece (138,566 tonnes) and Italy (115,341). The sector employs 120,000 people in the region directly and more than 750,000 indirectly.

Aquaculture tends to look for areas with high quality water located near the coast, which normally means protected waters, where these businesses collide with the interests of conservationists and tourism.

Ecologists are cautious about this activity, given problems such as the pollution caused by the food provided for the fish and their excrement, the introduction of invasive species and changes in the food web, and they are calling for the establishment of control criteria so that aquaculture does not endanger natural values.

MARINE RENEWABLE ENERGIES

The main type of marine renewable energy offered by the Mediterranean is offshore wind, as the low waves and weak tides rule out the use of these kinds of energy.

Offshore windfarms in the Mediterranean at the moment are small projects, located on the coastal shelf in areas no more than 50 metres deep (compared to this sea's average depth of 3,500 metres), though they are expected to reach deeper areas in

MARINE MINING

the near future. The main impact of offshore wind power farms is their interaction with migratory birds. The sea is the latest frontier for the exploration and extraction of natural resources, and that is certainly the case in the Mediterranean, especially since society is demanding technologies based on rare minerals.

There have been many requests for permits to carry out marine mining in the Mediterranean. Although this activity is currently of minor importance, it is expected to grow. The forecast made in



the European Commission's Communication entitled 'Blue Growth' is that 5% of minerals extracted in 2020 will come from the sea floor, a figure that could go up to 10% by 2030.

Marine mining generally takes place at depths of more than a kilometre, which requires the use of

POPULATION GROWTH

pressure technology, ductwork installation and the associated maritime transport. This activity poses a risk of discharges, which is why conservationists fight to increase recycling rates rather than exploit this type of resource.

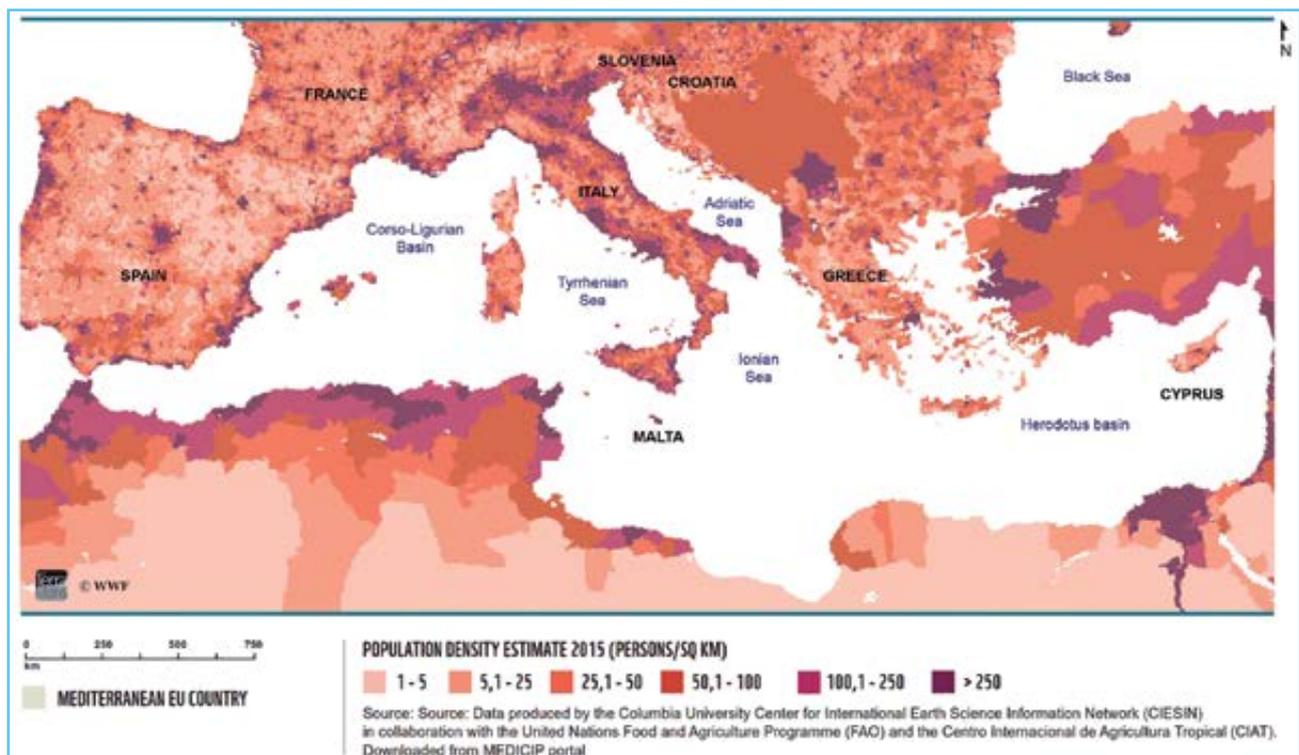
The total population in Mediterranean countries rose from 276 million in 1970 to 412 million in 2000 and 466 million in 2010, according to United Nations Environment Programme/Mediterranean Action Plan (UNEP/MAP). The population is expected to reach 529 million in 2025. More than a third of the people are concentrated along the coast, which accounts for only 12% of the region's area.

Population growth combined with the spread of peri-urban coastal areas are generating multiple

environmental pressures linked to a higher demand for water and energy resources, waste generation, land consumption and habitat degradation. These pressures are amplified by the development of tourism concentrated in coastal zones.

The UNEP/MAP report on the State of the Mediterranean Marine and Coastal Environment (2012) identifies the following key issues requiring the coordination of policy and management measures to reduce the degradation of Mediterranean ecosystems:

- Coastal development and urban growth
- Chemical contamination in sediments and biota
- Eutrophication
- Marine litter
- Overexploitation of marine and coastal resources
- Integrity of the seabed
- Invasive alien species
- Impact of marine noise, particularly on marine mammals
- Change in hydrographic conditions
- Marine food chains affected by fishing pressures
- Unsustainable consumption and production patterns
- Pressure on biodiversity
- Climate change impact.





GREECE-TOURISM: PGE02 PATRAS (GREECE). A couple resting under the sun on Yianiskari beach, near the port city of Patras, Greece. Tourism authorities and businesses in Greece are concerned about the potential decrease of tourism in this Mediterranean country, a main source of their economy, due to the present world economic crisis. EFE/Orestis Panagiotou.

TOURISM

Tourism is the economic engine of the Mediterranean, a sector that generated almost 8.5 million jobs in 2012 and 250 billion euros in income from recreational activities and tourism in coastal areas, according to the Blue Plan. The Mediterranean is the leading sun and sand destination in the world, and it is expected to attract more and more tourists. Cruise shipping and recreational boating are among the types of tourism that have increased the most.

This activity results in a series of significant pressures on the environment and natural resources. The most significant is coastal urbanization for hotels and sport marinas. The most developed coasts in the Mediterranean belong to France, Spain, Italy and Cyprus. According to WWF, more than 40% of the 46,000 kilometres of Mediterranean coast has been lost under a layer of concrete and, at the present rate of urbanization; it will reach 50% by 2025.

Urban growth, transport, energy, industrial infrastructure and intensive agriculture are leading to the loss and fragmentation of Mediterranean land-

scapes. The massive development of tourism and holiday homes is threatening the last remnants of well-conserved coastal areas.

Pollution is another of the most harmful consequences of tourism. Cruise ships alone discharge 800 million litres of contaminated water into the sea every year with no treatment at all. The polluting effect of sport boating is also substantial, though to a lesser extent.

The US Environmental Protection Agency reckons that a cruise ship carrying around 3,000 people generates more than 500,000 litres of waste water per week. The Mediterranean Sea is one of the most important cruising areas in the world. Around 27 million passengers visited Mediterranean ports in 2013, and the number is expected to rise.

A COAST WITHOUT PROTECTION

Experts agree that the most vulnerable part of the Mediterranean Sea from an ecological point of view is the coast. Urban development of the coast and its associated consequences are causing the disappearance and considerable deterioration of its natural systems. Changes affecting wetlands, dune networks, cliffs and plants have left the coast unshielded against natural phenomena such as floods and erosion, in addition to those still to come with climate change, warns Miguel Ángel Losada, the Chair of Engineering at Granada University and director of the Group on Dynamics of Environmental Flows at the Andalusian Centre for the Environment (CEAMA).

BIRD HUNTING AND POACHING

The Mediterranean lies on the migration route for millions of wintering birds and is home to species living only in Europe and western Asia which are slaughtered with illegal techniques. The most recent report³ from BirdLife International on this issue shows that at least 25 million birds die illegally in the Mediterranean every year, including many threatened or declining species.

The illegal killing of birds in the Mediterranean as a whole includes a wide range of offences: shooting, trapping, egg and brood collecting, poisoning and many other banned activities. In addition, many birds are killed or trapped during closed seasons, and protected species may be illegally targeted.

The underlying reasons are varied and are often specific to national or local contexts. Some activities are linked to economic profit and even, in some countries, to organized crime. Others relate to poor education and public awareness.

³ A.-L. Brochet et al., 'Preliminary assessment of the scope and scale of illegal killing and taking of birds in the Mediterranean', published in the scientific journal *Bird Conservation International*, vol. 26, pp. 1-28, March 2016.



Image of the port of Melilla hit by the storm leading to the suspension of maritime communications in 2003. EFE/J. Soria.



Officers of the Services for the Protection on Nature of the Spanish police (SEPRONA-Guardia Civil) in Lebrija, Seville seized more than 1,500 birds of protected species illegally caught by three hunters, which have been brought to justice for an alleged crime against the flora and fauna. EFE/Guardia Civil.

Major environmental challenges in the region



The Mediterranean owes its cultural, human and economic wealth to its valuable ecosystems. That is why experts agree that the most important challenge facing the region today is to manage to keep these systems healthy so that they can continue providing vital services.

These ecosystems safeguard the water balance in more than 20 countries in 3 continents; and protect them against increasingly frequent extreme weather events, including storms, torrential rain and drought.

Scientists claim that there is no better protection barrier for humankind than well-conserved ecosystems, and this is the main challenge confronting the Mediterranean basin in the coming decades.

To respond to Mediterranean environmental challenges, in 2005 riparian countries adopted the **Mediterranean Strategy for Sustainable Development**, which was reviewed during the 19th Conference of Parties to the Barcelona Convention held in February 2016 and will be in force for 2016–2025. It includes an implementation plan for the next six years with priorities and a list of partners, including international organizations, regional governments and economic sectors, to contribute to its deployment in collaboration with the states.

Maintaining the environmental balance in the Mediterranean implies facing the following challenges:

OVERCOMING POLITICAL AND SOCIAL INSTABILITY

The political, economic and social situation is closely linked to the environment, and such is the case in the Mediterranean. Environmental problems are not separate from human problems; a country's instability has an influence on the conservation of resources.

According to Canals there are many Mediterranean countries, such as Libya, Syria and Palestine, in which conservation work cannot take place due to the political situation, and others nearby where the risk of terrorism makes people in some institutions afraid to work there.

In this respect, the differences among riparian countries have created a significant gap between countries in the production of scientific knowledge and advances in environmental protection, which is generally correlated with the North-South geographical division.

Scientists acknowledge, for example, that there is a huge difference in scientific knowledge between



The *Erodium battandierianum* is an endemic plant in the Mediterranean that can be admired in the Gouraya National Park in Algiers, which is also an Important Plant Area for its rare flora on vertical limestone rock faces overlooking the sea. ©IUCN

northern Mediterranean countries and those in the south. The poorest states have barely been able to invest in research, so science has developed mostly in European countries, which, in the opinion of experts, makes it difficult to obtain an overall view of the situation.

Nevertheless, Canals also warns that this gap and this diversity among countries have been used all too often as an excuse for not acting or for avoiding cooperation.

ENHANCING GOVERNANCE IN INTERNATIONAL WATERS

Most territorial waters in the Mediterranean extend just 12 miles from the shore, so most of the sea consists of international waters. To adopt measures and act in these waters, an agreement is required within an international body, which makes decision making more difficult. The governance situation is much more complex than in the Baltic for example, where the sea is divided into national waters.



COP 19 Barcelona Convention in Athens (2015) © UNEP-MAP

INCREASING FUNDING FOR GOOD MANAGEMENT

The two challenges mentioned above -political and social instability and the governance of international waters- makes the Mediterranean one of the most complicated regions of the planet to manage. Not only is it difficult to reach economic agreements to face these challenges, but there is also a lack of the funding needed to implement actions, especially in areas requiring a global approach.

POLLUTION CONTROL

Experts claim that the Mediterranean is wide open to illegal discharges today, with no controls or surveillance in place. This, the biggest environmental problem in the region, is probably the easiest to solve with appropriate measures. Greater control over oil tanker traffic and better monitoring by satellites and aircraft would improve the situation. At the same time, it is urgent to control plastics pollution by planning recycling schemes on land and working with the fishing community to make them use suitable fishing gear made of biodegradable materials.

MORE EFFECTIVE AND EFFICIENT FISHERIES MANAGEMENT

The improvement of fisheries planning in the Mediterranean basically requires four courses of action, according to Oceana Europe. One of them is to identify fish breeding and nursery areas and to protect them by introducing no-catch zones and closed seasons, in particular in areas hosting juvenile populations.

Another course is the adoption of multiannual plans, non-existent to date, to achieve sustainable stock management. More and better scientific information is also needed about the stocks' status in the Mediterranean, and a precautionary approach needs to be adopted until these data become available.

Likewise, establishing fishing quotas based on scientific knowledge to allow fisheries to recover is the key to halting overfishing in the Mediterranean. Quotas have proved to be the best fishery management tool. An example is that their introduction in the Atlantic in the last few years has diminished the proportion of overexploited stocks from 60% to 40%.



Fisherman arriving to a fish farm in the Nile River, in the city of Rashid (Egypt) in 2008. Rashid was renamed Rosetta by the French during the Napoleon Bonaparte's campaign in the country and is located on a military and commercially strategic area, between the Mediterranean and the Eastern shore of the Nile, 65 kilometres east of Alexandria, where historical buildings, hotels and mosques follow a Turkish architecture style. EFE/Khaled El-Fiqi.



Image of a man fishing in the Bosphorus (Turkey). EFE/Sedat Suna

Experts also highlight the need for more control and surveillance of fishing agreements, since they are rarely enforced except in highly regulated cases such as the bluefin tuna fishery.

This failure to control and prosecute illegal fishing, whether professional or recreational, and the excesses of industrial fishing are together exhausting the stocks available for artisanal fishing, which is less harmful in general.

The practical absence of control is notably affecting international waters, which cover most of the Mediterranean and are where most commercial fishing takes place.

There is also a need for further collaboration with the fishing community, especially recreational and artisanal operators, to prevent bird by-catch in fishing gear. By-catch is a threat to biodiversity and a problem for the fishing community in terms of inconvenience and financial loss.

ESTABLISHING A NETWORK OF CONNECTED MARINE PROTECTED AREAS

Scientists and ecologists agree that a network of connected marine protected areas is absolutely vital to safeguard biodiversity, facilitate the recovery of fishing stocks and guarantee the economic prosperity of the Mediterranean in the future.

This network should cover at least 10% of the Mediterranean by 2020, as agreed by the countries at the Biodiversity Summit (COP10) that took place in the Japanese city of Nagoya in 2010. The promise is far from being fulfilled. Today a mere 4.56% of the sea (including the Pelagos Sanctuary shared between France, Italy and Monaco) is protected and the vast majority of these protected areas are in Europe and lie exclusively along the coast, according to MedPAN.

The Barcelona Convention is promoting the establishment of Specially Protected Areas of Mediterranean Importance (SPAMIs) for the protection of coastal and marine areas to guarantee the survival of Mediterranean biodiversity and resources.

MARINE PROTECTED AREAS: Everyone's Business.

Boosting the Marine Protected Areas network for the benefit of the Mediterranean society.

Partners organized by:



Technical partners:



4.56%

Surface under legal protection
(114 566 km²)

- 170 MPAs: 16 965 km²
- 507 Natura 2000 at sea sites: 25 000 km²
- Pelagos marine mammal sanctuary: 67 500 km²

* 8 101 km² if we include overlapping surfaces

1.08%

Surface under legal protection
without the Pelagos Sanctuary

8.22%

Surface under legal protection
in the 12-mile zone

2.7%

Surface under legal protection
beyond the 12-mile zone



Marine Protected Areas Netw

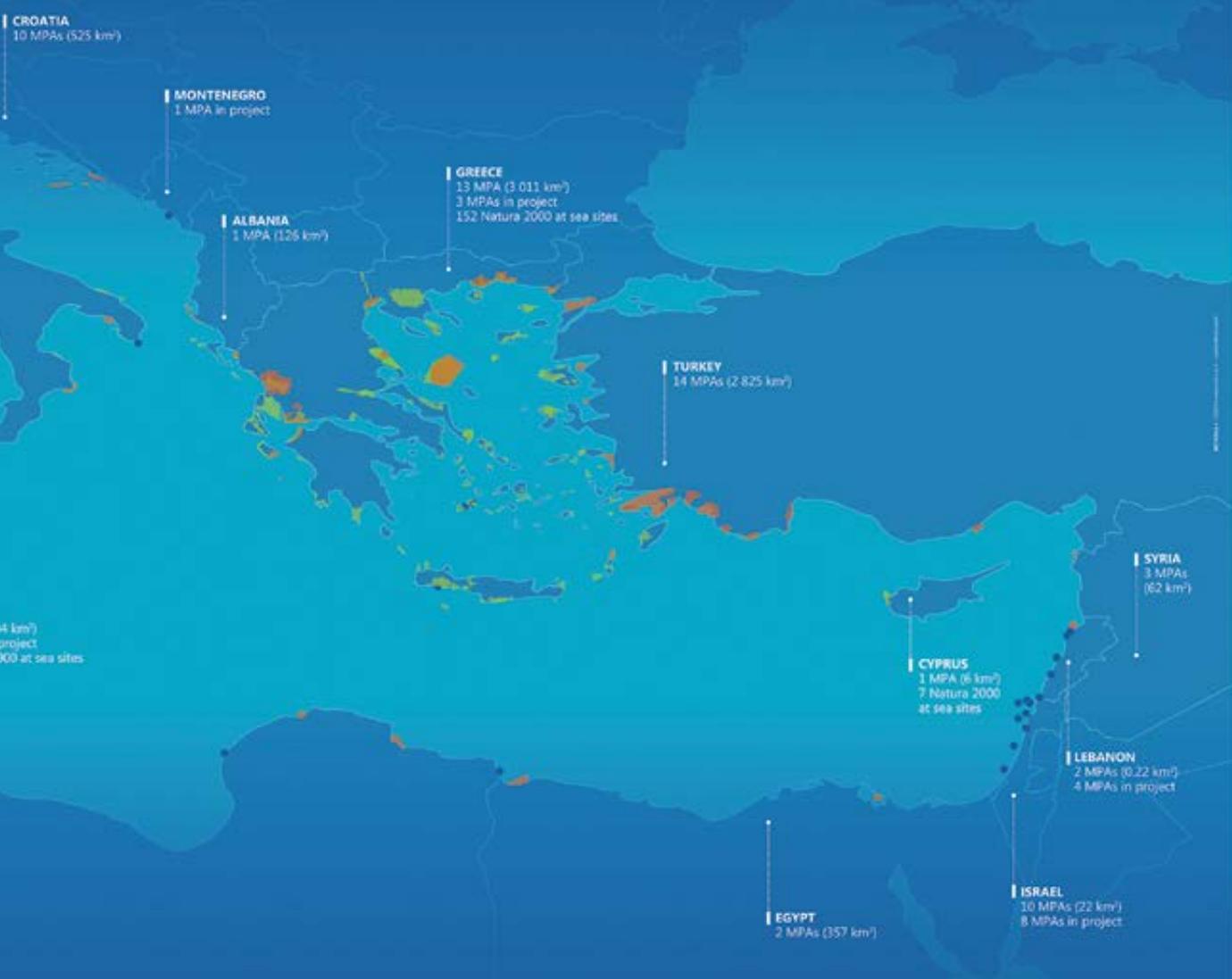


23
MPAs created since 2008
in 10 countries

55
MPAs in project in 10 countries

“The Status of Marine Protected Areas in the Mediterranean Sea” 2012 report **recommends that by 2020:**

- The surface of MPAs under legal protection is expanded
- Management effectiveness is boosted and integration in Marine Spatial Planning policies is enhanced
- The representativity of species and habitats is improved



ork in the Mediterranean Sea 2012

Source: “The Status of Marine Protected Areas in the Mediterranean Sea”. (2012) MedPAN, RAC/SPA.

Similarly, as a basis for the designation of marine protected areas, the latest Biodiversity Summit adopted a set of EBSAs (Ecologically or Biologically Significant Marine Areas), proposed by the member countries. Based on the available scientific knowledge, EBSAs serve as tools for selecting future marine protected areas.

Alongside this official proposal, several conservation organizations in the Mediterranean have designed their own marine protected area networks. One of them is Mednet by Oceana, with 100 sites in the basin covering an area larger than 200,000 square kilometres. If these areas were added to the existing marine protected areas, up to 12% of the Mediterranean could be protected, exceeding the minimum target set by the United Nations Convention on Biological Diversity (CBD).

Additionally, an international scientific study, led by a research team from the Institute of Marine Sciences of Barcelona-Spanish National Research Council (ICM-CSIC) and published in the scientific journal *PLOS ONE* in 2013, identified an area of 250,000 square kilometres in the Mediterranean Sea that required urgent protection because of its biological and natural interest.

IMPLEMENTATION OF EXISTING MARINE PROTECTED AREAS

Ecologists complain that nowadays almost anything is allowed in the existing marine protected areas. In some cases, these areas do not even have management plans appropriate for the conservation of the species whose existence was the reason for protecting the area in the first place. A model to emulate in this respect could be the EU Natura 2000 network.

VESSEL TRAFFIC MANAGEMENT

The Mediterranean requires maritime traffic to be controlled at national level in relation to conservation. This new management system should consider introducing ecological corridors where maritime traffic would be forbidden or forced to slow down to avoid damaging biodiversity.

Another challenge for maritime traffic with regard to a low-carbon future is how to manage the changeover to using renewable energies instead of fossil fuels.

Internationally, experts note that the sector, in collaboration with the International Maritime Organization, needs to prepare better so that traffic can increase safely and cause less impact on the environment.

COASTAL ADAPTATION TO CLIMATE CHANGE

Further scientific knowledge about ecosystems, particularly in the deep sea, is required to better plan their resilience, and also more opportunities are needed to exchange this information among countries.

With this knowledge, coastal planning should be implemented in preparation for sea level rise, more storms and the likely salinization of aquifers.

This problem is aggravated by the little attention paid to the ocean in international negotiations on climate change. There are those who point to the need for a climate change convention only for the oceans in order to prepare for their adaptation and resilience to warming.



Volunteers trying to put out the fire flames threatening the Greek site of Varnavas, some 50 km off Athens (Greece) on 17 July 2010. Several wildfires. EFE/Orestis Panagiotou.

LAW ENFORCEMENT

Most spokespersons working for conservation in the Mediterranean agree that there are already enough laws, regulations and international agreements to protect the region effectively; the problem is that they are not applied. They also warn that the environmental measures already adopted should be accompanied by a monitoring mechanism to assess their effectiveness, and that further collaboration among governments in the region will be needed for this to happen.

HARMONIZATION AND COMPATIBILITY OF PROTECTION AND ECONOMIC ACTIVITY

The Mediterranean urgently needs adequate planning for the main economic sectors (tourism, fishing, aquaculture, oil extraction and mining), taking into account the fact that these sectors will keep growing and will face changing pressures, including water stress caused by climate change.

The Mediterranean will have to accommodate the growth of these sectors, which in most cases (including tourism and aquaculture) require well-preserved ecosystems to survive.

COASTAL DEVELOPMENT PLANNING

Trends show an increase in the urban occupation of the Mediterranean coast, which will also require an increase in infrastructure for the growing population, such as waste water treatment.

The process of integrated coastal zone management (ICZM), promoted by the Barcelona Convention, and the European Union's Marine Spatial Planning initiative are two key instruments for facilitating and encouraging the management of human

activities on the coast. This will also require better integration of different information layers and coordination among the various institutions responsible for coastal and marine issues.

An example of an initiative seeking to integrate relevant data in the management of natural resources at sub-regional level among three countries (Spain, Morocco and Algeria) is the Alboran geoportal, the aim of which is the enhancement of governance in the Alboran Sea.

LIMITING ARRIVALS OF INVASIVE ALIEN SPECIES

Measures to reduce biological invasions and mitigate their ecological and economic impacts include conducting detailed scientific studies of all the pathways and mechanisms of introduction and





SPAIN - PLAYA-HEATWAVE: V3. Valencia, 06/08 / 05.- View of the Malvarrosa beach in Valencia, where as in most of the eastern coast beaches, it is full of people trying to beat the strong heat with a swim in the Mediterranean. EFE/Kai Försterling

taking the necessary steps to decrease the number and intensity of such introductions.

To this end, it is vital to totally reform the present management of recreational fishing, control bottom-trawling, ban the introduction and trade of invasive species in regions with a similar climate and tighten customs surveillance of the traffic in flora and fauna. In addition, greater precautionary and control measures are needed in breeding facilities, and the trade in alien species must be curbed.

Moreover, ships must comply with the agreements of the International Convention for the Control and

Management of Ships' Ballast Water concerning the sterilization and treatment of ballast water and sediments, and protocols are needed for the disposal of ballast water over transoceanic routes to minimize the probability of species introductions.

Another task pending is to facilitate the exchange of up-to-date information on the invasive species situation among concerned organizations in the Mediterranean, and to fund more staff to research, manage and communicate these problems. Educating the general public and especially the socioeconomic sectors most directly involved is also necessary.

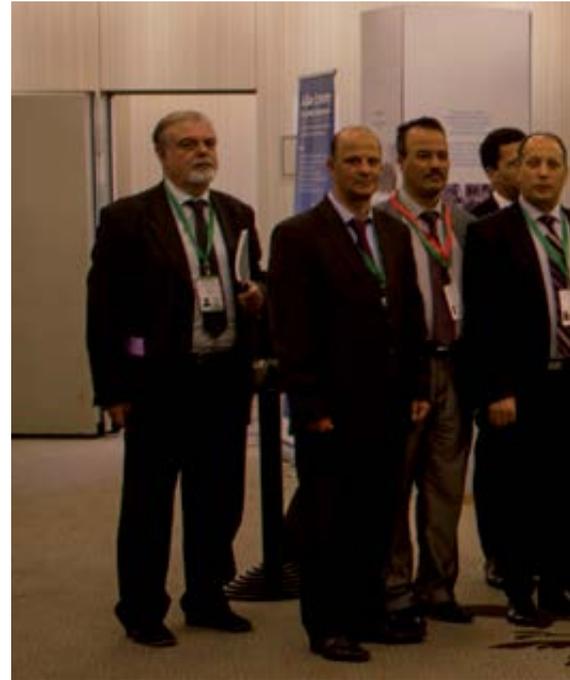
DOWNLOAD OUR APP

IUCN MedMIS

This is an online information system for the monitoring of exotic invading species in Marine Protected Areas. Around 50 identity cards of the most important invading marine species.

@IUCN_Med
www.iucn-medmis.org

Environmental governance in the Mediterranean



The governance of the diverse but scarce natural resources in the Mediterranean region is an increasingly complex challenge. Moreover, in a globalized world context where the management of environmental threats, in particular those transcending political borders like marine pollution and biodiversity loss, calls for broad cooperation, the answers need to be found at regional and national scale with the participation of a wide variety of actors concerned.

Environmental governance in the Mediterranean is also facing institutional problems stemming from the coexistence of various international organizations and convention systems operating in the same geographical area; these include the European Union, the Union for the Mediterranean and the United Nations Plan for the Mediterranean/Mediterranean Action Plan with the Barcelona Convention. Other international and regional environmental conventions and institutions are also pertinent in the Mediterranean, such as the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and the Contiguous Atlantic Area (ACCOBAMS), the Arab Maghreb Union and the African Convention on the Conservation of Nature and Natural Resources.

Programme 21 of the United Nations, adopted at the Earth Summit in 1992, highlights the impor-

tance of implementing international and regional treaties through the enactment and application of laws and regulations at regional, national, state, province, local or municipal level. Compliance with these laws is essential for the enforcement of most international agreements concerning the environment and development. The majority of Mediterranean countries have ratified the Environmental Multilateral Agreements pertinent to the region at global and regional level.

Some experts remark that the problem in the Mediterranean is not the lack of regulations but governance, which is seen more as a necessity for achieving greater homogeneity from shore to shore and informal international mechanisms to help sort out current gaps.

The idea of an informal consultation process in the Mediterranean region was mentioned in Resolution 4066 of the IUCN Forum in 2008, on 'Improving the governance of the Mediterranean Sea'. This resolution suggested that governance in the basin should be based on tools such as the ecosystem approach and marine spatial planning, and it was therefore necessary to encourage crosscutting dialogues among different sectors and institutions and to be action-oriented.



Representatives of 22 contracting parties to Barcelona Convention meet in Athens (2015) © UNEP-MAP

Table 1: Main international and regional conventions adopted by Mediterranean countries

	Barcelona Convention	Ramsar Convention	CITES Convention	Convention on Biological Diversity	Bern Convention	African Convention on the Conservation of Nature and Natural Resources	Bonn Convention	Habitats Directive
Albania								
Algeria								
Bosnia and Herzegovina								
Croatia								
Cyprus								
Egypt								
France								
Greece								
Israel								
Italy								
Jordan								
Lebanon								
Libya								
Malta								
Monaco								
Montenegro								
Morocco								
Palestine Authority								
Serbia					*			
Slovenia								
Spain								
Syria								
Tunisia								
Turkey								
* Currently joining								

Source: IUCN (2015)

6.1. MULTILATERAL ENVIRONMENTAL AGREEMENTS

The multilateral environmental agreements affecting the Mediterranean region are listed below with a brief description of the scope of each one.

6.1.1. International environmental conventions and protocols



Convention on
Biological Diversity

Convention on Biological Diversity (CBD)

Adopted at the Earth Summit in 1992, it entered into force on 29 December 1993 and is based in Montreal (Canada). It is an international legally binding treaty with 193 participating countries and three main objectives: the conservation of biological diversity (ecosystems, species and genetic resources), the sustainable use of its components, and the fair and equitable sharing of benefits deriving from the use of genetic resources. The general aim is to encourage measures leading to a sustainable world.

www.cbd.int



Bonn Convention or Convention on the Conservation of Migratory Species (CMS)

Under the auspices of the United Nations Environment Programme (UNEP), it entered into force in 1983 with the objective of conserving migratory fauna through the adoption of habitat protection and conservation measures, paying particular attention to threatened species. The convention resulted from the need to develop concerted actions by states whose territory is traversed by migratory species at any point in their life cycle.

www.cms.int



United Nations Convention on the Law of the Sea (UNCLOS)

Adopted in 1982 in New York, it is considered 'the Constitution of the Oceans'. It deals with the limits of maritime zones; exclusive economic zones; continental shelf and high seas; navigation rights and straits used for international navigation; archipelagic states; peace and safety on the oceans and seas; conservation and management of living marine resources; protection and preservation of the marine environment; marine scientific research; and procedures for dispute settlement.

www.un.org/depts/los



Convention on Wetlands of International Importance or Ramsar Convention

It was signed in the Iranian city bearing the same name in 1971 and entered into force in 1975. The Convention's mission is 'the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world.' The Convention uses a broad definition of wetlands. It includes all lakes and rivers, underground aquifers, swamps and marshes, wet grasslands, peatlands, oases, estuaries, deltas and tidal flats, mangroves and other coastal areas, coral reefs, and all human-made sites such as fish ponds, rice paddies, reservoirs and salt pans.

www.ramsar.org



MedWet is a regional initiative of the Ramsar Convention in the Mediterranean.

It is a regional intergovernmental network operating within the framework of the Ramsar Convention and also involving other key actors, dedicated to promoting and supporting multi-stakeholder policies and actions on the ground for the conservation, restoration and sustainable use of Mediterranean wetlands.

www.medwet.org

The MedWet Framework for Action 2016–2030

At its 12th meeting (Paris, France, 7–11 February 2016) the Mediterranean Wetlands Committee adopted the Framework for Action 2016–2030 ‘Wetlands for Sustainable Development in the Mediterranean Region’.

This Framework for Action is designed as an early contribution to achieving some of the targets of the Sustainable Development Goals 2016–2030 (SDGs) through a series of concrete actions for the conservation of wetlands and the sustainable use of their resources in the Mediterranean region.

The Framework for Action is intended to achieve its central objective initially through the implementation in the Mediterranean region of the 4th Ramsar Strategic Plan 2016–2024, adopted by the Ramsar Conference of the Contracting Parties held in Uruguay on 1–9 June 2015.



Convention Concerning the Protection of World Cultural and Natural Heritage of the United Nations Educational, Scientific and Cultural Organization (UNESCO)

Adopted in 1972 and ratified by 191 countries, its objective is to encourage the identification, protection and preservation of the world cultural and natural heritage considered of particular value to humankind. It considers heritage in its double cultural and natural aspect, trying to reflect the interaction between man and nature, and the need for both to preserve the balance.

www.en.unesco.org ■ whc.unesco.org/en



International Whaling Commission (IWC)

This is an international body established in 1946 by the International Convention for the Regulation of Whaling, signed in Washington, and was founded with the aim of regulating the hunting and trade of cetaceans. It is headquartered in Brighton, United Kingdom, and holds annual meetings in May or June.

www.iwc.int

African Convention on the Conservation of Nature and Natural Resources

This convention was adopted in Algiers in 1968. It is the instrument for the conservation of nature and natural resources in Africa.

www.tematea.org/?q=node/6415



International Commission for the Conservation of Atlantic Tunas (ICCAT)

This intergovernmental fishing organization has been active since 1969 and is responsible for the conservation of tuna and tuna-like species in the Atlantic and contiguous seas. Almost 30 species are under the direct responsibility of ICCAT: Atlantic bluefin tuna (*Thunnus thynnus thynnus*), skipjack (*Katsuwonus pelamis*), yellowfin (*Thunnus albacares*), white tuna (*Thunnus alalunga*) and bigeye tuna (*Thunnus obesus*); swordfish (*Xiphias gladius*); billfish like the white marlin (*Tetrapturus albidus*), blue marlin (*Makaira nigricans*), sail fish (*Istiophorus albicans*) and longbill spearfish (*Tetrapturus pfluegeri*); mackerels such as spotted Spanish mackerel (*Scomberomorus maculatus*) and king mackerel (*Scomberomorus cavalla*); and small tunas like black skipjack (*Euthynnus alletteratus*), frigate tuna (*Auxis thazard*), and Atlantic bonito (*Sarda sarda*).

www.iccat.int



United Nations Convention to Combat Desertification (UNCCD)

Adopted in 1994 and ratified by 195 states and the European Union, its purpose is to agree international measures against desertification, which is considered one of the most serious problems on a global scale. The aim is to fight desertification and mitigate the effects of drought in countries suffering from severe aridity or desertification, especially in Africa. The secretariat is located in Bonn (Germany).

www.unccd.int



United Nations Framework Convention on Climate Change (UNFCCC)

Adopted in Rio de Janeiro in 1992, it is intended to be the framework for the adoption of international measures to mitigate climate change and adapt to its impacts. Forming part of it are 195 states and the European Union, and its headquarters are located in Bonn (Germany).

www.unfccc.int

6.1.2. Regional environmental conventions and institutions



The Barcelona Convention for the Protection of the Mediterranean Sea

The objectives of the Barcelona Convention and its protocols are environmental protection and enhanced conservation in the Mediterranean as a contribution to sustainable development. One of the goals is to prevent and combat pollution and promote conservation in this sea. It entered into force in 1978 and all countries with a Mediterranean coast are parties to it, together with the European Union.

The five Protocols of the Convention are the following:

1. Protocol for the protection of the Mediterranean Sea against pollution from land-based sources (LBS Protocol). Adopted in 1996, in force since 2008;

2. Protocol concerning protected areas (Geneva, 1982) renamed Protocol on Specially Protected Areas and Biological Diversity in the Mediterranean (SPA Protocol). Adopted in 1995, in force since 1999;
3. Protocol for the protection of the Mediterranean Sea against pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil (Madrid, 1994) (Offshore Protocol). Adopted in 1994, in force since 2011;
4. Convention for the prevention of pollution in the Mediterranean Sea through transboundary movements of hazardous wastes and their disposal (Hazardous Waste Protocol). Adopted in 1996, in force since 2008;
5. Mediterranean Integrated Coastal Zone Management Protocol (Almería, 2008) (ICZM Protocol). Adopted in 2008, in force since 2011.

Headquartered in Athens, the Convention has six Regional Activity Centres (RAC) working on the following specific topics:

- **Blue Plan (BP/RAC), France:** observation, analysis and forecasting centre created in the 70s as part of the Mediterranean Action Plan of the Barcelona Convention.
Director: Anne-France Didier
More information: www.planbleu.org
- **Priority Actions Programme (PAP/RAC), Croatia:** focuses on the integrated management of coastal areas and technical assistance to CAMPs (Coastal Area Management Projects).
Director: Željka Škaričić
More information: www.pap-thecoastcentre.org
- **Specially Protected Areas (RAC/SPA), Tunisia:** deals with everything related to Mediterranean species and habitats.
Director: Khalil Attia
More information: www.rac-spa.org
- **Regional Marine Pollution Emergency Response Centre for the Mediterranean (REM-PEC), Malta:** technical assistance and cooperation in case of accidental marine pollution.

Head of Office: Gabino Gonzalez Deogracia
More information: www.rempec.org

- **Info-RAC, Italy:** aims to provide a data platform and share knowledge, information and knowledge services among the Parties to the Barcelona Convention. It has an information geoportal with access restricted to the Parties.
More information: www.info-rac.org/en

- **Sustainable Consumption and Production (SCP/RAC), Spain:** promotes a decrease in industrial waste generation and disseminates clean production techniques.
Director: Enrique de Villamore
More information: www.cprac.org

Coordinator and Executive Secretary of the Barcelona Convention: Gaetano Leone.
More information: www.unepmap.org

Mediterranean Commission on Sustainable Development (MCSD)

This is the only regional Commission for Sustainable Development of its kind in the world. Established in consistency with the Rio directives, MCSD acts as an advisory body to the Contracting Parties to the Barcelona Convention. Representatives of the Member States and the European Commission, together with civil society, local authorities, economic partners (chambers of commerce, etc.) and environmental NGOs, all participate on equal terms. It is basically a think tank on policies to promote sustainable development in the Mediterranean.

The Mediterranean Action Plan Coordination Unit takes on the role of the MCSD secretariat and coordinates the various working groups on a permanent basis. The MAP Regional Activity Centres and specialized programmes provide technical and organizational support according to their respective fields of responsibility.

More information: www.unepmap.org

Monaco Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS)

Adopted in Monaco in 1996, its objective is to agree on coordinated measures to achieve and maintain a favourable conservation status for cetaceans. To this

end, signatory states prohibit deliberate hunting and agree to maintain a network of specially protected areas for cetacean conservation.

Executive Secretary: Florence Descroix-Comanducci
More information: www.accobams.org

International Commission for the Scientific Exploration of the Mediterranean Sea (CIESM)

The Commission was created at the beginning of the past century to promote research in the Mediterranean and Black Seas. CIESM acts as a focal point for exchanging ideas, communicating scientific information and developing scientific standards for the whole basin. It has increased from 8 founding countries to 23 member states today. It is based in Monaco.

Director General: Frederic Briand
More information: www.ciesm.org

FAO's General Fisheries Commission for the Mediterranean (GFCM)

Established under an agreement signed in Rome on 24 September 1949 and adopted by the FAO Conference in 1949, it entered into force on 20 February 1952. Its objective is to promote the rational development, conservation and exploitation, and better utilization of living marine resources; to assess the economic and social aspects of the fishing industry; and to recommend the adoption of measures for their development.

Secretary General: Abdellah Srour
More information: www.fao.org/gfcm/en

Union for the Mediterranean

The Union for the Mediterranean is an intergovernmental organization made up of 43 countries: 28 EU Member States and 15 countries from the southern and eastern Mediterranean. It was established in 2008 during the Paris Summit for the Mediterranean to strengthen the achievements of the Barcelona Process in 1995. The main objective is to improve regional integration in the Mediterranean in support of socioeconomic development and ensure stability in the region. The scope of its work includes environmental questions, primarily related to water management, energy and urban development and transport.

Secretary General: Fathallah Sijilmassi
More information: www.ufmsecretariat.org

6.2. LEGAL FRAMEWORK OF THE MEDITERRANEAN SEA: FROM COASTAL MARITIME ZONES TO THE HIGH SEAS

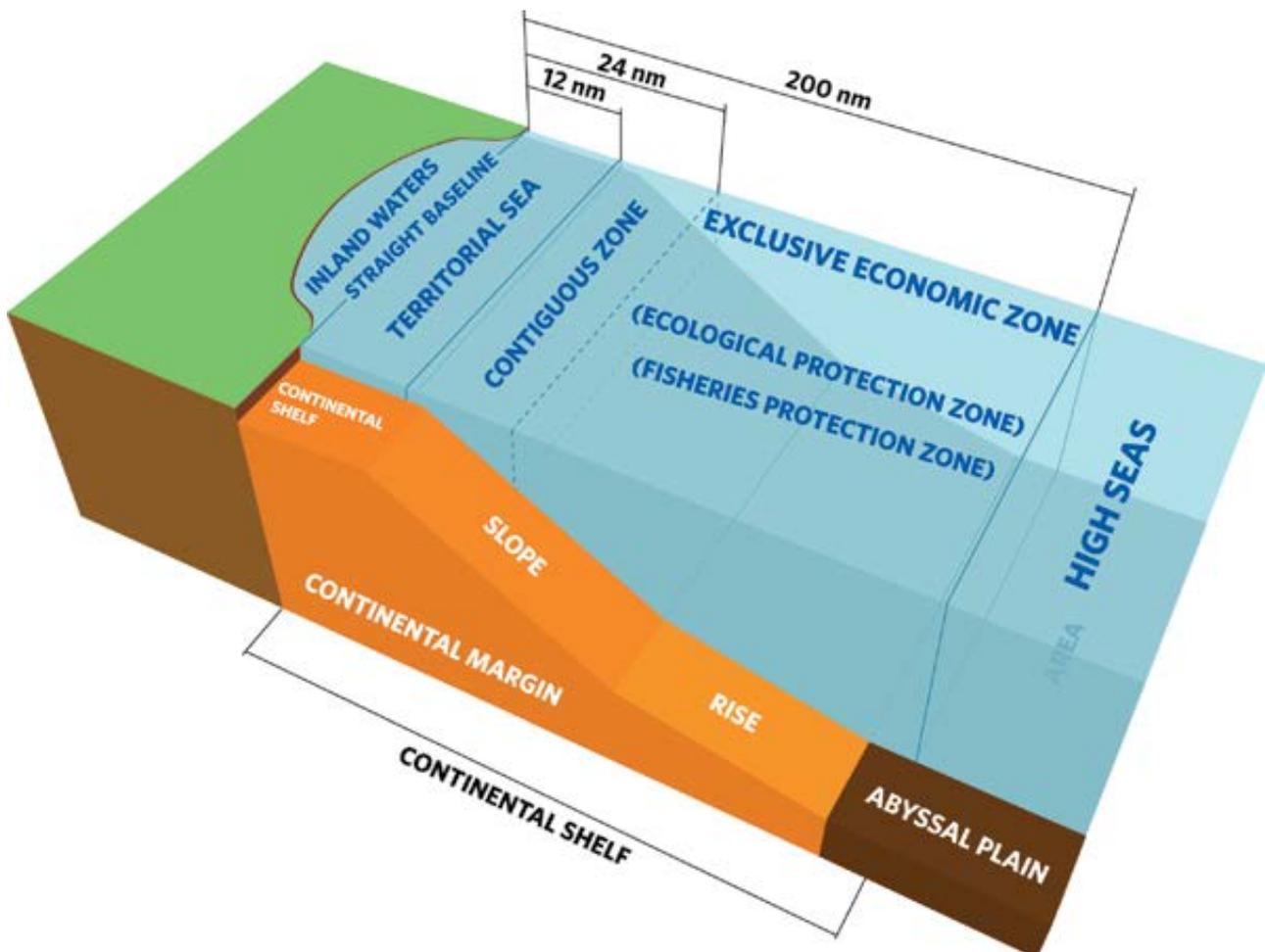
The Mediterranean spreads over 2.5 million square kilometres, is 3,860 kilometres long from east to west, and has a maximum width of 1,600 kilometres, though the distance between countries on opposite shores (including islands) is never more than 720 kilometres (400 nautical miles).

The sovereignty of states bordering the sea has been limited, historically, to a zone 12 miles wide; in some cases, territorial waters have extended out to only 6 miles. Consequently, and in contrast to the

situation in other semi-enclosed seas, most Mediterranean waters are international waters.

The United Nations Convention on the Law of the Sea (UNCLOS, 1982) provides the legal framework that structures maritime space around the world. The majority of Mediterranean riparian states have signed and ratified the Convention, and those that have not yet done so have adapted their national laws to international criteria.

The most important territorial concepts corresponding to the national jurisdiction of maritime space as defined by UNCLOS are: inland waters, territorial sea, contiguous zone, continental shelf and exclusive economic zone (EEZ).



Lying beyond individual countries' jurisdictions are the 'high seas', those marine areas not included in the delimitation of riparian and archipelagic states, which are free for all states to use provided it is 'for peaceful purposes' only.

Outside of the Convention, and without declaring EEZs, states bordering the Mediterranean Sea have also established fisheries, ecological and archaeological protection zones. Mediterranean countries have been generally reluctant to allocate EEZs to preserve navigation and access to resources. As a matter of fact, no country would be able to take an exclusive economic or fishery zone to the maximum limit of 200 miles, as there is no place in the Mediterranean wider than 400 miles.

The northern and southern shores are sometimes very close together in this sea: the opposite coast is even within sight in some places, although distances in terms of socioeconomic, demographic and cultural aspects are larger.

Some 16% of the Mediterranean marine space is made up of territorial waters and 31% of the various maritime zones. It is remarkable that around 50% of its waters are still high seas, in other words outside national jurisdictions.

The variety of types of ecological protection areas, for fisheries and other purposes, creates a jurisdictional asymmetry due to the heterogeneity of legal regimes governing adjoining areas. For instance, in the Mediterranean, one EEZ may border on another EEZ or on a fisheries protection zone, or an EEZ may even overlap a protection zone.

Marine Protected Areas beyond national jurisdiction

In view of the geographical features of the Mediterranean Sea, maritime governance demands a high level of cooperation. As Professor Suárez de Vivero has said: 'As maritimization of the economy intensifies and environmental impacts become more acute, the more an intervention in the activities and the protection of ecosystems and resources is needed.' UNCLOS attributes to semi-enclosed sea states the duty of cooperating through suprana-

tional institutions such as the International Maritime Organization or FAO, and also regional and sub-regional ones.

One of the major challenges in the Mediterranean is the designation of marine protected areas in open waters. In 2007 UNEP/MAP launched an initiative for the creation of a network of marine protected areas in Mediterranean open waters, including the seabed. To date, 12 potential Specially Protected Areas of Mediterranean Importance (SPAMIs) have been identified.

In parallel, the CBD is currently in the process of identifying Ecologically and Biologically Significant Areas (EBSAs) at a global level in order to facilitate collaboration among governments and scientists to improve knowledge and the protection of marine biodiversity in high-seas and deep-water habitats, mostly beyond national jurisdiction. For the Mediterranean, the Secretariat of the CBD, in collaboration with UNEP/MAP, organized a workshop in Malaga in 2014 at which 11 EBSAs were identified.

An important task for the future will be to establish good practices for the design, adoption and implementation of management plans for those SPAMIs and EBSAs in open waters.

6.3. THE EUROPEAN UNION AND THE MEDITERRANEAN

The European Union is a key actor in the Mediterranean. In fact, it was one of the promoters of the Barcelona Process, which resulted in the Barcelona Convention, the most important governance framework in the Mediterranean. The EU is therefore a party to the Barcelona Convention and the Union for the Mediterranean. Along the same lines, in 2006 the European Commission established the **Environment Strategy for the Mediterranean**, intended to strengthen coastal and maritime protection in the Mediterranean, targeting a decrease in pollution by 2020.

This regional Strategy is structured around Mediterranean countries where the European Neighbourhood Policy (ENP) applies, whereas EU Member (or potential Member) States must enforce the Community's legislative provisions on the environment. Some of the Strategy's objectives are to: assist partner countries to establish appropriate institutions, design policies and set up a legal framework to allow the integration of environmental aspects in sectoral policies; reduce pollution levels and the impact of uncontrolled activities; promote capacity building among regional administrations to be able to respond to emergency situations; encourage a more sustainable use of terrestrial and maritime areas; improve the provision of information for the general public and encourage their participation; and bring about regional cooperation among partner countries.

The ENP is implemented through the European Neighbourhood Instrument (ENI), the financial umbrella of the policy, for the programming period 2014–2020. Under the ENI, four types of programme are supported:

- Bilateral programmes for Neighbourhood countries;
- Regional programmes for the East and the South;
- An ENP-wide programme mainly funding Erasmus for All, the Neighbourhood Investment Facility and the Umbrella programmes;
- Cross-Border Cooperation (CBC) programmes between Member States and Neighbourhood countries.

Among the CBC initiatives stands the Mediterranean Sea Basin Programme, covering the whole basin. Its new Joint Operational Programme Strategy focuses, among other pillars, on cooperation initiatives in the field of environmental protection, with particular regard to waste and water management, renewable energy and energy efficiency, and integrated coastal zone management.

The new ENI CBC Mediterranean Sea Basin Programme, which is managed by the Autonomous Region of Sardinia, is expected to launch a first call for proposals by the end of 2016. More information can be found at www.enpicbcmed.eu

Another essential pillar of the Strategy is the Horizon 2020 (H2020) Initiative, which was ratified during the Ministerial Conference on the Environment in Cairo in November 2006. This is a key initiative supported by the Union for the Mediterranean.

H2020 measures are grouped into four types of action:

- Projects to reduce pollution, focusing mainly on municipal waste, urban sewage and industrial emissions;
- Capacity-building measures, in particular development of legislation and creation of institutions, as well as assistance to local and civil society communities;
- Research, into health, food, agriculture, energy, climate change, soil and transport;
- Monitoring and management of the initiative.

It is noteworthy that the mid-term review of the H2020 initiative and the declaration of the Ministerial meeting of the Union for the Mediterranean in Athens, Greece, in May 2014 led to significant progress in investment in infrastructure, staff training and the inclusion of environmental aspects in other policies.

For Europe, a continent with 1,200 ports and the largest merchant fleet in the world, caring for the inland sea is vital. Hence the importance of including the environmental component in the EU maritime policy, integrating fisheries, employment, transport, research, energy on the high seas and tourism. All these aspects are now linked to the fight against terrorism and the complex challenges of migration and human trafficking and, consequently, of how to safeguard the human rights and physical integrity of people travelling on the Mediterranean.

More information on the Horizon 2020 Initiative may be found at: www.h2020.net

6.4. THE ARAB MAGHREB UNION AND THE MEDITERRANEAN

Another actor in the fate of the Mediterranean is the Arab Maghreb Union, comprising Morocco, Algeria, Tunisia, Libya and Mauritania. This trading agreement was signed in 1989, but the big integrating project for North Africa is still far from succeeding, and the push of the treaty only lasted until the beginning of the 1990s due to open differences among the partners. The relaunching of the Barcelona Process brought some hope at the time of finding common ground again, thanks to the Mediterranean.

At the moment, North African analysts regard the Barcelona Process as suffering from an asymmetry of

expectations. They see an architecture of unbalanced links between countries on the northern shore of the Mediterranean and those on the south. These imbalances become more evident when bilateral relations are established between each individual developing country and the European Union as a whole, the largest trading power in the world.

The Union for the Mediterranean was certainly the result of a desire to boost the Barcelona Process by means of structuring cooperation projects, such as depolluting the Mediterranean, creating maritime and terrestrial highways, developing solar energy, promoting training and research, enhancing civil protection or developing small and medium-sized enterprises. In fact, the founding declaration of the Union expressed its ambition to soften the unilateralism of the Barcelona Process and ensure more public visibility and the effective participation of civil society.

The different expectations of the Arab Maghreb Union partners about what the EU expects from them regarding agricultural trade exchanges, migration policies, energy conversion, technology transfer and the promotion of renewable energy are still an impediment to their moving together towards establishing a broad area that takes a sustainable and respectful approach to its natural resources.

Secretary General: Habib Ben Yahia

More information: www.maghrebarabe.org



Fisherman in Al-Hoceima National Park (Morocco). © IUCN

Governmental and non-governmental environmental and scientific organizations in the region



With the collaboration of AMAN journalists, a select list has been compiled of governmental and non-governmental environmental and scientific institutions, regionally and by country, insofar as they are relevant to any journalist who wants to explore environmental and scientific issues in the Mediterranean region. It is not intended to be exhaustive but rather is an indicative list, since there are many more relevant institutions for journalists that are not included in this initial selection.

7.1. INTERNATIONAL ORGANIZATIONS

International Union for Conservation of Nature-Centre for Mediterranean Cooperation (IUCN-Med)

IUCN, the International Union for Conservation of Nature, is the oldest and largest environmental organization in the world, with more than 1,300 governmental and non-governmental members and 15,000 volunteer experts in nearly 185 countries. The IUCN Centre for Mediterranean Cooperation opened in 2001 with the support of the Spanish Ministry of the Environment, the Andalusian Regional Government and the Spanish Agency for International Cooperation and Development (AECID). During its 15 years of existence, the Centre's mission has been to influence, encourage and assist Mediterranean societies

in achieving the conservation and sustainable use of natural resources as well as sustainable development in the Mediterranean region.

IUCN-Med is based in Malaga (Spain)

Director: Antonio Troya

www.iucn.org/mediterranean

MedWet

Established in 1991, the Mediterranean Wetlands Initiative brings together 26 Mediterranean and peri-Mediterranean countries that are Parties to the Wetlands Convention (Ramsar, Iran, 1971). Palestine and a number of organizations and wetland centres are also part of the MedWet Initiative.

MedWet is a regional intergovernmental network operating within the framework of the Ramsar Convention and also involving other key actors. It is dedicated to promoting and supporting multi-stakeholder policies and actions on the ground for the conservation, restoration and sustainable use of Mediterranean wetlands. The MedWet mission is to ensure and support the effective conservation of the functions and values of Mediterranean wetlands and the sustainable use of their resources and services.

Headquarters in Arles (France)

Coordinator: Delmar Blasco

www.medwet.org



Barcelona Port © Andy Mitchell

Network of Managers of Marine Protected Areas in the Mediterranean (MedPAN)

MedPAN brings together nearly 100 institutions and non-governmental organizations directly responsible for the management of marine protected areas (MPAs) or involved in the development of new MPAs. They manage a total of 90 MPAs in 18 Mediterranean countries.

Headquarters in Marseilles (France)

Executive Secretary: Marie Romani

www.medpan.org

Oceana

Oceana, founded in 2001, is the largest international NGO exclusively focusing on ocean conservation. It has various delegations all over the world working together in strategic campaigns aiming to achieve tangible results to help recover the health and biodiversity of the ocean. There is a programme for Europe that includes the protection of Mediterranean habitats and the fight against destructive and illegal fishing practices, pollution and other threats.

Oceana Europe is based in Madrid (Spain).

Project and Research Director: Ricardo Aguilar

eu.Oceana.org/en

Tour du Valat/Mediterranean Wetlands Observatory

Founded more than 50 years ago by Luc Hoffmann, the Tour du Valat has since then developed its research activities for the conservation of Mediterranean wetlands, focusing primarily on gaining a better understanding of wetlands for better management. Tour du Valat carries out research into the conservation of Mediterranean wetlands and encourages exchanges among wetland users and scientists. It is also a unique information resource centre specializing in wetland ecology, ornithology, zoology, mammal biology, ichthyology, herpetology, and botany.

Headquarters in the heart of the Camargue (France).

Director General: Jean Jalbert

www.tourduvalat.org

WWF Mediterranean Programme

The WWF Mediterranean Programme focuses mainly on fostering sustainable fisheries, conserving forest, freshwater and marine ecosystems and promoting marine protected areas, developing measures to combat pollution and assisting the development of environmental NGOs.

Headquarters in Rome (Italy), with satellite offices in Tunisia, Barcelona and Morocco and coordination with WWF national offices in France, Greece, Italy, Spain and Turkey.

Director: Paolo Lombardi
www.mediterranean.panda.org

Other institutions with relevant environmental programmes:

Anna Lindh Foundation

The Foundation is an intergovernmental institution that has developed a network of more than 4,000 civil society organizations, with which it encourages an intercultural strategy for the Euro-Mediterranean region, promoting recommendations to policy makers and institutions, as well as common values of respect among cultures, including the environment. It is cofinanced by the Union for the Mediterranean countries and the EU.

Headquarters in Alexandria (Egypt)
President: Elisabeth Guigou (France)
Executive Director: Hatem Atallah (Tunisia)
www.annalindhfoundation.org

Euro-Mediterranean Local and Regional Assembly (ARLEM)

This is the assembly of local and regional representatives of the European Union and their Mediterranean partners. ARLEM was established in 2010 by the European Committee of the Regions, the political assembly of regional and local government representatives of the European Union.

It covers the same territory as the Union for the Mediterranean, which allows those elected on the three shores of the Mediterranean Sea to politically represent local and regional authorities, contributing to political dialogue and promoting interregional cooperation.

For the period 2015–2017, the Assembly has two co-presidents: Markku Markkula, the mayor of Espoo (Finland), and Abdelmasih Al-Hayek, the mayor of Beit Sahour (Palestine).

cor.europa.eu/es/activities/arlem/Pages/arlem.aspx

Eco-union

Eco-union is a not-for-profit association established in 2005 that generates, supports and brings together agents of change from across society to



Nile Pier, El Cairo (Egypt). EFE

catalyse the transition towards sustainability, especially in Europe and the Mediterranean region.

Headquarters in Barcelona (Spain)

President: Jeremie Fosse

www.ecounion.eu

Mediterranean Regional Office of the European Forest Institute (EFIMED)

The Mediterranean office opened in 2007 and consists of a network of forest research and training institutions which is open to scientists interested in forest issues in the Mediterranean basin. It is a founding member of the Collaborative Partnership on Mediterranean Forests launched in 2010 and collaborates in building the capacity of *Silva Mediterranea* country members.

Headquarters in Barcelona (Spain)

Head of Office: Inazio Martinez de Arano

Press Officer: Sarah Adams

www.efimed.efi.int

Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE)

This is a federation of non-governmental organizations in the Mediterranean for the environment and sustainable development. MIO-ECSDE acts as a technical and political platform for NGO opinions and actions in the Mediterranean arch.

Headquarters in Athens (Greece)

President: Michael Scoullou

www.mio-ecsde.org

7.2. NATIONAL ORGANIZATIONS

ALBANIA

Institute for Nature Conservation in Albania (INCA)

www.inca-al.org

Ministry of Environment, Forestry and Water Administration

www.mjedisi.gov.al

Preservation and Protection of Natural Environment in Albania (PPNEA)

www.ppnea.org

ALGERIA

Marine Bioresources Laboratory, Annaba

lbm.univ-annaba.dz

Association for the Protection of Nature and the Environment (APNE)

Ministry of Water Resources and Environment

www.mre.dz

CROATIA

Center for Marine Research, Rovinj

www.irb.hr/eng/Research/Divisions-and-Centers/Center-for-Marine-Research

Croatian Environment Agency

www.azo.hr/English

Eko Kvarner

www.ekokvarner.hr

Friends of the Earth Croatia

zelena-akcija.hr

Green Istria

www.zelena-istra.hr/?q=en

Institute of Oceanography and Fisheries, Split

www.izor.hr/web/guest

Ministry of Environmental and Nature Protection

www.mzoip.hr/en/ministry.html

Ruđer Bošković Institute

www.irb.hr/eng

State Institute for Nature Protection Croatia

www.dzpz.hr/eng

CYPRUS

AKTI Project and Research Centre

www.akti.org.cy

Cyprus International Institute for Environmental and Public Health

www.cut.ac.cy/cii

Cyprus Marine Environment Protection Association

www.cymepa.net/en

Environmental Commissioner
www.ec.gov.cy/environment/environment.nsf/index_gr/index_gr?opendocument

Ministry of Agriculture, Rural Development and Environment
www.moa.gov.cy

The Cyprus Institute
www.cyi.ac.cy

The Federation of Environmental Organizations of Cyprus
www.oikologiafeeo.org/index.php?option=com_content&task=view&id=25&Itemid=43

EGYPT

Arab Office for Youth and Environment
www.aoye.org

Egyptian Association for Energy and Environment
www.eaee-eg.com

Egyptian Environmental Affairs Agency (EEAA)
www.eeaa.gov.eg

Egyptian Society for Environmental Sciences
www.eses-catrina.com

National Institute of Oceanography and Fisheries, Alexandria
www.nodc-egypt.org/en

FRANCE

Coastal Protection Agency
www.conservatoire-du-littoral.fr

Commission for Independent Research and Information about Radiation (CRIIRAD)
www.criirad.org

Environment and Health Network (RES)
www.reseau-environnement-sante.fr

France Nature Environment (FNE)
www.fne.asso.fr

French Agency for Food, Environmental and Occupational Health & Safety (ANSES)
www.anses.fr

French Biodiversity Agency (AFB)
www.agence-francaise-biodiversite.fr

French Environment and Energy Management Agency (ADEME)
www.ademe.fr

National Centre for Scientific Research (CNRS)
www.cnrs.fr

Ifremer
www.ifremer.fr

Institute of Research for Development (IRD)
www.ird.fr

IUCN National Committee
www.uicn.fr

Ministry of the Environment, Energy and the Sea
www.developpement-durable.gouv.fr

National Natural History Museum (MNHN)
www.mnhn.fr

Water Agencies
www.lesagencesdeleau.fr

GREECE

Biopolitics International Organisation (BIO)
www.biopolitics.gr/biowp

Elliniki Etairia Society for the Environment and Cultural Heritage
www.ellet.gr

Hellenic Centre for Marine Research
www.hcmr.gr/en

Hellenic Botanical Society
www.eepf.gr/el

Ministry of Environment and Energy
www.ypeka.gr

National Agricultural Research Foundation, Kavala
www.nagref.gr/index_uk.htm

University of Patras
www.upatras.gr

WWF Greece
www.wwf.gr

ISRAEL

Agricultural Research Organization, Volcani Center
www.agri.gov.il

Israel Institute for Biological Research
www.iibr.gov.il

Israel Ministry of Environmental Protection
www.sviva.gov.il

Nature and National Parks Authority
www.parks.org.il

Society for the Protection of Nature in Israel
www.teva.org.il

The National Institute of Oceanography, Haifa
www.ocean.org.il

The Natural Resources and Environmental Research Center (NRERC)
www.nrerc.haifa.ac.il

ITALY

Carabinieri Unit for the Protection of the Environment
www.minambiente.it/pagina/comando-carabinieri-la-tutela-dellambiente

Greenpeace Italy
www.greenpeace.org/italy/it

Higher Institute for Environmental Protection and Research (ISPRA)
www.isprambiente.gov.it/it

Italian Federation of Parks and Nature Reserves (Federparchi)
www.parks.it/federparchi

Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA)
www.enea.it

IUCN National Committee
www.iucn.it

Legambiente
www.legambiente.it

Marine Environment Department (RAM) of the Port Authority
www.minambiente.it/pagina/reparto-ambientale-marino-del-corpo-della-capitanerie-di-porto

Ministry of the Environment and Protection of the Land and Sea
www.minambiente.it

National Research Council (CNR)
www.cnr.it

State Forestry Corps
www.corpoforestale.it

WWF
www.wwf.it

LEBANON

Al Shouf Cedar Society
www.shoufcedar.org

American University of Beirut
www.aub.edu.lb

Ministry of Environment
www.moe.gov.lb

National Centre for Marine Sciences
www.cnrs.edu.lb/research/marinesciences.html

Seeds International
www.seeds-intl.com

Society for the Protection of Nature in Lebanon (SPNL)
www.spnl.org

MONACO

Marine Environmental Studies Laboratory (MESL)
www.iaea.org/monaco/page.php?page=2120

Prince Albert II of Monaco Foundation
www.fpa2.com

Scientific Centre of Monaco
www.centrescientifique.mc/fr

MONTENEGRO

Center for Protection and Research of Birds of Montenegro (CZIP)
www.birdwatchingmn.org

Institute for Marine Biology, Kotor
www.ibmk.org

Ministry of Sustainable Development and Tourism
www.mrt.gov.me/en/ministry

Public Enterprise for National Parks of Montenegro
www.nparkovi.me/sajt

MOROCCO

High Commission for Water, Forests and Combating Desertification (HCEFLCD)
www.eauxetforets.gov.ma

Mediterranean Centre for Environment and Development (CMED)
www.association-cmed.com/fr

Ministry of Environment
www.environnement.gov.ma/fr

Mohammed VI Foundation for Environmental Protection (FM6E)
www.fm6e.org/en

National Institute of Fisheries Research, Casablanca
www.inrh.ma

Research Group for the Protection of Birds in Morocco (Grepom)
www.grepom.org

Research Institute for Development, Rabat
www.maroc.ird.fr

Royal Institute for Strategic Studies (IRES)
www.ires.ma/en

Society for the Protection of Animals and Nature (SPANNA)
www.spana.org.ma

PALESTINE

Land Research Center
www.lrcj.org

Ministry of Environmental Affairs
www.mena.gov.ps/

Palestine Wildlife Society
www.wildlife-pal.org/r

The Palestinian Hydrology Group for Water and Environmental Resources Development
www.phg.org

PORTUGAL

Institute for Nature and Forest Conservation
www.icnf.pt/portal

League for the Protection of Nature
www.lpn.pt

Portuguese Environment Agency (APA)
www.apambiente.pt

Quercus National Association for Nature Conservation
www.quercus.pt

SERBIA

Institute for Nature Conservation in Serbia (ZZPS)
www.zzps.rs

Ministry of Agriculture and Environmental Protection of the Republic of Serbia
www.ekoplan.gov.rs

The Institute for Nature Conservation of Vojvodina Province (PZZP)
www.pzzp.rs

SLOVENIA

Ecologists Without Borders
www.ebm.si/en

Ministry of Agriculture, Forestry and Food
www.mkgp.gov.si/en

Piran Marine Biology Station
www.nib.si/mbp/en

SPAIN

Autonomous Authority for National Parks (OAPN)
www.magrama.gob.es/es/parques-nacionales-oapn/default.aspx

Centre for Energy, Environment and Technological Research
www.ciemat.es

Ecologists in Action
www.ecologistasenaccion.org

Greenpeace Spain
www.greenpeace.org/espana/es

Higher Council for Scientific Research (CSIC)
www.csic.es

IUCN National Committee
www.uicn.es

Mediterranean Institute for Advanced Studies (IMEDEA)
www.imedea.uib-csic.es

Ministry of Agriculture, Food and Environment (MAGRAMA)
www.magrama.gob.es/es

National Centre for Environmental Education
www.magrama.gob.es/es/ceneam

SEO/BirdLife (Spanish Ornithological Society)
www.seo.org

Spanish Institute of Oceanography (IEO)
www.ieo.es

WWF Spain
www.wwf.es



Coastal waters of Cabrera island in Baleares, Spain. © UICN

SYRIAN ARAB REPUBLIC

High Institute for Environmental Research

Syrian Association for the Protection of Water and Environment

Syrian Center for Policy Research (SCPR)
www.scpr-syria.org/en

Syrian Society for the Conservation of Wildlife
www.sscw-syria.org

TUNISIA

Friends of Birds Association
www.aao.org.tn

Higher Institute of Environmental Sciences and Technologies
www.isste.rnu.tn

Ministry of the Environment and Sustainable Development
www.environnement.gov.tn

National Institute of Marine Sciences and Technology
www.instm.agrinet.tn

Tunisian Association for the Protection of Nature and the Environment
www.atpne-tunisie.com

Tuniso-Mediterranean Association for the Environment
www.sfax-annuaire.com/savoirplus.php?ref=2685

TURKEY

BirdLife Turkey
www.dogadernegi.org

Foundation for the Protection and Promotion of the Environment and Cultural Heritage

www.cekulvakfi.org.tr
Ministry of Environment and Urbanization
www.csb.gov.tr

Ministry of Energy and Natural Resources
www.enerji.gov.tr

Ministry of Forestry and Water Affairs
www.ormansu.gov.tr

Ministry of Science, Industry and Technology
www.sanayi.gov.tr

Scientific and Technological Research Council of Turkey
www.tubitak.gov.tr

Turkish Academy of Sciences
www.tuba.gov.tr

Turkish Foundation for Combating Soil Erosion, Reforestation and the Protection of Natural Habitats
www.tema.org.tr

Turkish Marine Environment Protection Association
www.turmepa.org.tr



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Journalists and environmental information in the Mediterranean



REPORTING ON THE SPANISH MEDITERRANEAN ENVIRONMENT

Arturo Larena

Director, EFEverde, in EFE, Spain

The Mediterranean Sea, its coast and the basin are vital ecosystems in Spain, and within them is where the present cultural identity, history, society and economy lie. Their conservation is vital for the future not only from a biological point of view, but because the economic development of millions of Spaniards depends on their good condition.

The most important environmental problems to solve in the Spanish Mediterranean are related to

sea pollution, particularly in areas like the Strait of Gibraltar, one of the areas most fouled by oil discharges in the world. And also by plastics or, even worse, microplastics.

The Spanish Mediterranean is overfished and there is a tremendous depletion of fish stocks from Andalusia to Catalonia. There is insufficient control over fishing times and the practices used. Bad practices have consequences for highly threatened species such as loggerhead turtles.

There are also positive examples of artisanal and sustainable fisheries, and of how appropriate quotas have helped in the recovery of fish stocks that were previously in a very bad state, as in the case of the bluefin tuna.

One of the most sensitive sites in the Spanish Mediterranean is the already mentioned Strait of Gibraltar, a priceless biodiversity corridor but also an area of very intense commercial shipping where most precautions should be taken.

Illegal fishing still occurs in the Spanish Mediterranean, and among some of the species caught is red coral for jewellery. Although coral collectors are punished, the penalties are so small and the market price so high that they still find the activity profitable.

Urban occupation of the coast is another of the big pressures facing this ecosystem around the Iberian

“One difficulty to address in reporting on the Mediterranean is that it is like trying to drink water from a fireman’s hose”

Peninsula, with its associated waste production, invasion of natural areas and consumption of resources. Flagship species in the Spanish Mediterranean such as shearwaters, particularly the Balearic and Cory’s shearwaters, are losing their nesting sites to urban sprawl and their populations are seriously endangered.

Invasive species are the other Achilles heel, a problem that is particularly acute in the Ebro Delta, where the spread of the channelled apple snail could harm the conservation of the whole Mediterranean.

Climate change is making things worse. In the Spanish part of the Mediterranean basin this has been noticed mostly through the scarcity of water resources, with a 14% decrease in available fresh water over the last 20 years, according to the report by the Spanish NGO Ecologists in Action.

At sea, pollution, acidification and increasing temperatures are the ingredients for an explosive cocktail that every summer shows up as jellyfish blooms that, among other things, damage a major industry in Spain: the service sector associated with tourism.

One difficulty to address in reporting on the Mediterranean is that it is like trying to drink water from a fireman’s hose: it requires an understanding of many things -science, economics, ecology and so forth. It is important to listen and to give a voice to all sources because they all have their own motiva-

tions and points of view; it is also important to try to make the topics interesting for the audience by explaining how they are affected, avoiding doom and gloom scenarios and highlighting solutions.

A piece of advice for a young environmental journalist is to specialize and learn as much as possible about the Mediterranean before writing about it; travel to the place where the story is happening (if possible), talk with all the parties involved and try to use simple language and a positive tone to give readers the impression that something can be done for things to change.

I am convinced that we journalists, with our capacity to communicate and disseminate ideas and information, can together do a lot for this unique Mediterranean ecosystem, upon which our quality of life and the future of the coming generations depend.



ENVIRONMENTAL REPORTING IN TURKEY

Dilara Küçükdoğan

Anadolu News Agency, Turkey

The primary cause of environmental problems is not exclusive to Turkey or to the Mediterranean region but is present in all countries, and it is the lack of environmental awareness. Population growth and industrialization may improve people's education, but environmental awareness and regulations lag behind.

The main problems in Turkey and the Mediterranean region are air, soil and water pollution. In particular, chemicals and wastes containing these chemicals are released into nature in an inappropriate manner. Specifically, the most important environmental problems of Turkey and the Turkish Mediterranean coast are:

- Coal, calculated to be responsible for about one-third of carbon dioxide emissions, is seen as a major cause of environmental pollution in Turkey. According to a European Climate Action Network report referring to a survey of more than 30 European countries, other countries had on average only two coal-fired power station projects, whereas Turkey alone had more than twice the total number of projects of all the other countries together.
- Water pollution is another important environmental issue in Turkey. Domestic waste waters, pesticide and fertilizer use, municipal solid waste, industrial waste and animal waste from aquaculture are listed as the main causes of water pollution. Transport in the Aegean Sea and the Sea of Marmara is also one of the major causes of water pollution in the region. The failure to establish water treatment plants in the provinces due to lack of funds makes these problems difficult to solve.
- Most of the problems caused by air pollution in Turkey are due to domestic heating. This is followed by manufacturing enterprises and the air pollution created by traffic and thermal power plants. The main air pollution problems to remedy are linked to low purchasing power, low quality of fuel, lack of awareness, lack of surveillance and meteorological factors.

“News about the environment unfortunately attract little attention, unless related to political debate”

- Environmental pollution due to waste is another agenda topic for Turkey. The main source of this type of pollution is the irregular disposal of household waste and the lack of landfill sites. In particular, the lack of recycling facilities in areas where industrialization is very dense, low awareness levels and a lack of local management practices constitute an obstacle to solving the problem. Overall, recycling and re-use practices to solve the waste problem do not seem to be very common in Turkey.
- Erosion, across Turkey, is a problem in urban areas. But it remains in the shadow of other environmental problems. The reckless construction of buildings near river beds subject to landslides in urban areas poses a serious risk for the environment and human life.

Overall, the greatest difficulty in reporting environmental news in Turkey is related to political debates. Usually political debates take precedence over environmental issues. News about the environment unfortunately attract little attention, unless related to a political debate. In such cases, environmental problems are sometimes plucked from their context and used to oppose or support the government. En-

vironmental issues are always at risk where there is potential for a political debate. And it is really hard to get people’s attention and talk about the environment when what they are really worrying about is their own lives under the threat of terrorist attacks and bombings.

Young journalists who want to work in science and technology need to continue their education and attend seminars on the career goals they draw up in this area, and make sure they read national and international publications. They should keep in touch with NGOs working in the environmental and scientific fields, as well as other formal and informal organizations working on the environment. Questioning and scepticism should be displayed. The effects of environmental issues on human beings should be particularly explained without jargon, in simple language: the effects on daily life should be clear in news reporting.



**THE MEDITERRANEAN: 'A SEA OF ILLUSIONS'
'SO YOU THINK YOU CAN TELL HEAVEN FROM
HELL?'**

Elias Palialexis

Athens-Macedonian News Agency

The Mediterranean has never been a peaceful sea. Its peoples have always suffered from wars, natural disasters and insecurity. Main causes? Large-scale and violent migration, conflicts for the control of the land, the sea, natural resources and trade; the arrogance and greed of the political and religious powers; extreme natural phenomena, natural disasters and climate change. Kingdoms, empires and civilizations have declined, fallen into chaos and disappeared, leaving ruins behind.

At the same time, the Mediterranean has since pre-historic times been an astonishingly rich and gifted area, a cradle of world civilization. The reasons are obvious: its important geo-strategic position, its benign climate, its natural, historical and cultural wealth, and its legendary beauties and charms: its people. People who, behaviourally, intellectually and emotionally, with all their flaws and qualities, are so

similar, like brothers born of the same Mother, the blessed Mediterranean. A blessing that unfortunately turns into a curse over time, when this Mother is claimed exclusively by a few against the many, and when the many are isolated and unprepared against common dangers.

Despite technological progress, only a few decades after two devastating World Wars and under the threat of a third, risks are escalating dangerously for the near future: political instability, conflict, poverty, unemployment, inequality, exploitation, systematic environmental degradation, external powers of enforcement and intervention, climate and environmental threats. If we add on top of these the rising and potentially unsatisfied needs of a growing population of 500 million people, the irregular and inhumane migration of families due to insecurity and violence, the Mediterranean seems like a 'boiling' sea. Today, it has already become a grave for human souls. Just in 2015, almost 4,000 people drowned in search of a better future. At the same time, the Mediterranean is becoming a contaminated soup with more plastic than fish. A soup which meets with the misery and failure of modern society on the coast. The consequences of climate change will at the same time exacerbate and accelerate the diseases of our civilization.

“With large-scale investment in the extensive use of renewable energy, the Mediterranean can gradually, but soon, stop its dependence on fossil fuels and achieve the decarbonization of its economy”

Historically the only -and relatively short- periods when people in the Mediterranean were able to forget their differences, live in peace and create civilization were when they developed equal relationships to facilitate mutually beneficial trade, and also when they allied themselves against common enemies. Nowadays, based on historical experience, if countries join forces once more against common enemies such as climate change, environmental degradation, poverty, exploitation, and corruption, they will be able to build strong ties of cooperation on the basis of sustainable development, with mutual benefits for all. Then, and only then, could the Mediterranean curse become a blessing.

The Paris Agreement on Climate Change has shown that tackling climate change is probably the only strong point of contact that the the global community can agree and urgently cooperate upon. Agenda 2030 and the Sustainable Development Goals have named the common problems and triggered a sound dialogue in the public and political sphere. Both agreements are of historic importance and would have made a difference to life on our planet if they had been made 20 years ago. Now we need to rush ahead with them, although it is highly uncertain that we will manage to see a brighter future. The odds are against us, but never-

theless the outcome of the war has not been decided. The Mediterranean region can act at once by using its comparative advantages: the sun, the air and the water. With large-scale investment in the extensive use of renewable energy, the Mediterranean can gradually, but soon, stop its dependence on fossil fuels and achieve the decarbonization of its economy. The Mediterranean can become a focal point for stable energy, providing significant amounts of clean energy in the region. At the same time, it can effectively face energy poverty while increasing the living standards of its peoples. Successfully coping with the challenge of producing clean energy is essential to the environmental, economic and social survival of the peoples of the Mediterranean.

Furthermore, quantifying and rapidly implementing the Declaration of Athens in the context of the Barcelona Convention and its protocols, and connecting it with the UN Sustainable Development Goals are a *sine qua non*. In this way, and with the use of appropriate financial tools, environmental policies could enter into the hard core of a long-term political agenda. Prioritizing at the highest political level the value of biodiversity, natural resources and the preservation of marine, coastal and terrestrial ecosystems for stable and sustainable growth is a fundamental prerequisite for the common good.

The facts are inexorable: the water renewal rate in the Mediterranean is extremely low; invasions of alien species are ongoing; the management of waste products, 80% of which come from land-based sources, is ineffective and has become destructive; environmental alteration due to human activities jeopardizes wetlands, forests, fisheries and agriculture. Just in the EU, 60% of protected species and 77% of habitats are endangered. About 430,000 premature deaths are attributed to air pollution. If we add to these figures the 500 million tourists expected annually by 2030, the fact that 95% of fish species are being overfished, the reckless coastal construction, the pollution, and the degradation of the terrestrial ecosystems, soils, water resources and cities of Mediterranean countries, then it is easy to understand that the stress limits of the area are going to be exceeded very soon, with incalculable consequences. On top of all this, it is still not possible to predict natural disasters and the long-term impact of climate change.

Enforcing policies for adapting to climate change by finding and leveraging financial resources from national budgets, the private sector and the Green Fund can not only help avert a disastrous environmental crisis, but also mitigate the humanitarian crisis which has already been going on for decades. The funds should be used to focus on the causes and the core problems that lead societies and the environment into danger, not as compensation or charity, but as an incentive and a means to undertaking further joint responsibility in tackling common problems with the peoples of the rest of the world and further strengthening international alliances.

In order not to find ourselves at point zero, we have to change the patterns of production and consumption of products and services within the context of the circular economy, at every level: from the daily life of every citizen -for example, by recycling or reducing overconsumption- to the operation of the financial sector, by tackling tax havens, achieving a fair and responsible distribution of wealth, and introducing fair and retributive taxation. In these areas the Mediterranean, as a common physical, economic and social body, could actively participate and play a leading role in the public debate, as a region that has suffered and is set to suffer even more from the absence of good practices.

People and the environment should not be left hopeless within an economic and political system which allows the simultaneous existence of extreme hunger, poverty and unemployment with 1% of the population holding 50% of global wealth. The Mediterranean cannot account for 30% of world maritime trade and at the same time have people living in poverty.

The explicit commitment to undertaking joint efforts to address ongoing and emerging natural and socio-economic challenges, such as climate change and increased migration flows in the Mediterranean, in order to better protect the environment and increase its resilience is not enough if not followed by immediate action. Every human being feels safe when in everyday life they see results that can guarantee and ensure a better tomorrow. That's what boosts their self-esteem, optimism and creativity for the future. Big words without action intensify fear, insecurity, a sense of deception, anger, intolerance, violence and war.

“Journalists must fearlessly, respectfully and courteously ask the crucial questions in order to extract the most meaningful and binding answers possible”

It is argued that you cannot control and address a phenomenon if you can't measure it. A correct diagnosis is the beginning of the cure. The academic community, the institutions, NGOs, the private sector and politicians need to categorize, analyse, quantify, connect and propose workable solutions to the environmental, economic and social challenges for the benefit of all and especially the vulnerable. The role of journalism is very important in this area. The role of the reporter is to ask the right questions. Through the responses given to them, the public will be informed and the debate will be enriched. This process creates the necessary pressure in the direction of finding solutions and proposals. The task of journalism is to link the themes with the reality of the average citizen, and especially the weak, without falling into the trap of populism or propaganda. The underfunding of media or their funding from sources serving very specific interests, as well as the lack of control over the allocation of resources, are not only key issues in covering sustainable development topics, but aggravate and increase dependency, manipulation and their deterioration.

Journalists must fearlessly, respectfully and courteously ask the crucial questions in order to extract the most meaningful and binding answers possible. The environment does not limit their field or subject. On the contrary, it expands it and can become the key to unlocking a variety of issues, such as politics, society and the economy. Journalists' greatest responsibility has to do with self-restraint and self-censorship. Ignorance, lack of adequate training, pride or low self-esteem, but most of all their fears and expectations towards both the interviewee and the media

ownership are their greatest enemies. Reporters have to have integrity and a good knowledge of the subject within the context of the general political, economic and social situation.

They are required to verify their information and use the soundest sources to ensure its reliability and their own. There are no questions that are out of bounds, but the answers need to be given. Finally, reporters need to remember that they are not judges or police officers. They are intermediaries between the truth and the citizen. Nobody holds the absolute truth. Everybody searches for a grain of it each day. That given, journalism is responsible for this truth being either blurred or made clear and precise.

The Mediterranean, not only in terms of its natural beauty, but also for quality reporting, is a heaven on earth. But, in many cases, as in the everyday life of the average citizen, for journalists it may become a hell in terms of work ethics, freedom, working conditions and safety. If journalists are strengthened and become more responsible, reliable, efficient and productive, the results can only be positive. For everyone. At a time when one can easily lose one's soul, publication can become the soul of democracy. The issue is to face reality with courage, however hard that may be. For thousands of years we have been living with the illusion that the enemies lie beside us. The enemies are common and live within us. To paraphrase the Greek Nobel Prize-winning poet Odysseas Elytis: It is time for the Mediterranean to stop being 'a sea of illusions'. The media will report, until history shows the proof.



ENVIRONMENTAL REPORTING IN TUNISIA

Faten Barouni

Tunisia News Agency

In the face of enormous socioeconomic and political challenges, Tunisia is sacrificing the environment and putting environmental questions at the bottom of the priorities list, which is why such problems are increasing and multiplying.

Insufficient water resources are among the main environmental problems. With water availability at 470 m³ per inhabitant per year -less than half the average chronic shortage threshold (1,000 m³/inhabitant/year)- Tunisia has to meet considerable challenges to ensure water security.

A study by the World Resources Institute shows Tunisia as one of the 33 countries most likely to experience water shortage by 2040. Tunisia could lose more than 80% of its natural water resources by 2040.

Tunisia must also face up to the problem of desertification and degradation of the soil and agricultural land in particular, which affects approximately 75%

of the country according to the National Council for Combating Desertification.

The loss of agricultural land caused by desertification and degradation, estimated to be more than 20,000 ha/year (GTZ, 2010), generates severe deficits in agricultural production every year, seriously impairing the viability of agricultural activities.

Moreover, erosion has today degraded almost 93% of the land suitable for cultivation in the country and more than 13 million hectares of exploitable agricultural lands (out of a total 15.6 million hectares) are directly exposed to erosion problems, according to a report on soil degradation in Tunisia prepared by the Directorate General for the Environment and Quality of Life.

Pollution is perhaps the most noticeable phenomenon at all levels, especially industrial pollution, with more than 1,200 companies and factories being considered major polluters.

Industrial activity is a significant source of pollution of the air, the land and the sea. It is also a root cause of the degraded health and quality of life of factory workers and people living near production sites.

“In the face of enormous socioeconomic and political challenges, Tunisia is sacrificing the environment and putting environmental questions at the bottom of the priorities list, which is why such problems are increasing and multiplying”

The factories that transform phosphate into phosphoric acid and fertilizers in Gabès, Sfax and Gafsa are a good example.

Access to information

Journalists in Tunisia have difficulties in finding reliable figures on environmental topics. The figures provided by the Ministry of the Environment often contradict those published by NGOs.

There are environmental issues that are taboo and also a total absence of databases. Young journalists should gather as much information about environmental issues as they can and attend some of the many training courses and workshops dealing with them. Furthermore, they should develop a network of contacts and learn from researchers and scientists in order to disseminate environmental information.

The lack of civic education -particularly in schools- public awareness and clear, complete and appropriate legislation is among the initial obstacles to overcome in meeting environmental challenges in Tunisia. Above all, future generations need to be made

more aware, a public debate on the environment launched, and the capacity of Tunisian associations enhanced.

Citizens need to be informed so that they understand the critical situation looming in the coming decades and they should be encouraged to take care of nature to ensure a better life for themselves and their children.



ACCURACY AND PERSEVERANCE

Isabelle Wesselingh

Agence France-Presse, based at the Middle East/North Africa office in Nicosia.

Shorebirds and gulls escort them when they leave at dawn. When they arrive at the old port of Rethymon in Crete or Marseille in France, they unload some sea bream and sea bass from their small boat, under the avid look of customers waiting for them and cats ready to ambush. From Lebanon to Spain, from Cyprus to Croatia, from Greece to the south of France, the charm of Mediterranean ports is intimately linked to small artisanal fishing. However the development of another type of fisheries -industrial, on a huge scale and basically for export- is placing the future of Mediterranean fish in danger and therefore the fishing community's too.

The Mediterranean is presently overexploited: 1.5 million tonnes of fish are caught every year and 89% of the stocks are depleted, according to a report published in September 2015 by WWF, the environmental protection NGO. This overfishing, for which they are not responsible, is directly threat-

ening the future livelihoods of the traditional fishermen so closely linked to the Mediterranean way of life. One of the main challenges to protecting the Mediterranean and what it represents in terms of civilization is to decide how and to what extent we want to catch fish and consume it.

This balance between human activities and the protection of the environment around us that feeds us has to be found also in the realm of tourism and urban development. The Mediterranean coast attracts an increasing number of tourists and inhabitants, seduced by the sun and the sea. More and more natural areas are destroyed to make room for buildings, which has an effect on the climate. Since 1900, 50% of Mediterranean wetlands (lakes, deltas, river banks and coastal lagoons) have disappeared, according to MedWet, the institution in charge of protecting these areas. Yet wetlands can store water in groundwater reserves, minimizing the effects of floods, and also act as carbon sinks, limiting climate change. In France, when urbanization was threatening to swallow up the coast, a coastal protection agency (Conservatoire du Littoral) was created in 1975 to acquire and protect natural areas. In this way, 12.2% of the coast has been protected. But the Conservatoire is the only organization of its kind in

“Whether in the Mediterranean or in any other region in the world, the difficulty of environmental news reporting is to avoid dividing up the issues only by country”

the Mediterranean. Urbanization, tourism and intensive agriculture also have consequences for the discharge of wastewater into the semi-enclosed sea that is the Mediterranean.

In reporting on environmental issues, AFP, one of the most important international press agencies with information services in six languages, has the immense advantage of having journalists in the field in all countries bordering the Mediterranean. In their offices, local journalists work with colleagues of different nationalities, fostering diversity in perspectives and approaches.

Aware of the fact that the environment has often been neglected by the mass media although it has been interesting more and more people, AFP decided several years ago to highlight the issue. The editorial board therefore encouraged the agency journalists to develop content related to the environment. The environmental department was strengthened in the Paris headquarters.

Whether in the Mediterranean or in any other region in the world, the difficulty of environmental news reporting is to avoid dividing up the issues only by country. Of course, particular examples in a country

or a region must be used, but it is also interesting to talk about regional level phenomena: What is being done to fight forest fires and degradation in the Mediterranean? And to protect wetlands? How is the monopolization of water resources in one country impacting on the neighbouring states and populations? How is wastewater discharge in one country affecting one or more others? These issues need a good network of journalists and sources and also experts with a view at a regional scale.

As a coordinator of environmental issues in the Balkans and Eastern Europe for five years, I have been able to see how important it is to have people in the field and develop trustworthy and independent sources. When you touch on an environmental problem related to big economic projects, the governments and companies concerned often try not to answer the questions at all, or sometimes they give an answer but not to the questions asked or they distort reality. Sometimes, certain companies exert pressure or make undercover threats. Hence the importance of being in the field to experience it yourself, taking the time to listen to all the actors and being extremely accurate in what you write.

For all these reasons, my advice to young journalists

reporting on environmental issues is to research a lot themselves. This first step of information gathering is essential. It is also about creating your own network of contacts, not only to work on a particular topic, but in a general way too: meet and talk to scientists, lecturers in the faculty of environmental sciences, and public and private environmental bodies. Then, when working on a particular issue, do not arrive with preconceptions and take the time to interview all the actors -governments, environmentalists, citizens, companies- bearing in mind each one's vested interests, as they can influence their presentation of facts. And seek the support of scientific advice. Ensuring the independence of these scientists is fundamental to avoid conflicts of interest.

In a matter concerning a controversial gold mine project I wrote about, the mining company paid off historians and a number of scientists to claim that the project was not harming the environment or the heritage. These scientists did not mention openly that they were being paid by the company, even though it was not difficult to find out with a bit of research. Their opinion contradicted that of the majority of the scientific community. Research, accuracy and perseverance are the keys to a good environmental report. If your editor does not seem

interested, remind him or her that the environment is often at the core of the economy and of political and social changes too.

American scientists¹ say that the record heat and drought hitting Syria from 2007 to 2010 may have been one factor (not the only one obviously) influencing the war in this country. In Turkey, the authorities' project to destroy Gezi Park in Istanbul and build a shopping centre triggered the anger of ecologists before generating a wide movement of protest against the methods used by the people in power.

¹ Research published in the *Proceedings of the National Academy of Sciences* in March 2015.



An impressive bivalve, (*Pinna nobilis*) in Corsica (France). This species is endemic from the Mediterranean Sea and its size can exceed one metre. It can be found in the *Posidonia oceanica* meadows which are also protected. ©Arnaud Abadie



ENVIRONMENTAL AND SCIENCE JOURNALISM IN CROATIA

Ivo Lučić

Croatian News Agency, Hina

- Covering environmental issues is mostly associated with the key problems of the environment itself.
- The biggest environmental problems in Croatia are connected with the political transition: Croatia's environmental management system is poorly developed; however, the desire for profit hits nature hard.

Organization and position of journalists

Environmental and scientific journalists in Croatia have been organized into two sections in the Croatian Journalists' Association (CJA): the Section of Environmental Journalists, which is more active, and the Section of Scientific Journalists, which has kept quiet and been transformed into an independent association.

Environmental and scientific topics are not very influential in Croatia's mainstream media, except when they enter the domain of political conflict, natural disasters or media shows. Thus the most important aspects of the environment and science rarely appear.

A few years ago, a survey on the perception of environmental journalists was conducted among CJA journalists; 31 journalists received questionnaires, but only nine of them replied, most of them working in the public services of radio and television.

It can be concluded that this type of journalism is not sufficiently specialized, i.e. most environmental journalists cover other fields too. Within the editorial staff, the position of environmental journalists is rather marginalized. Some journalists begin to work in the environmental sector and, once they have proved themselves, they are usually transferred to the policy section.

Most of them complain that they lack support from the editorial board and society at large, and that they do not have access to important information. Some of them complain that the Environmental Ministry confuses them and hides information rather than revealing it. They show great awareness of the im-

“Environmental and scientific topics are not very influential in Croatia’s mainstream media, except when they enter the domain of political conflict, natural disasters or media shows. Thus the most important aspects of the environment and science rarely appear”

portance of environmental journalism. They write on environmental issues because they think it is the most important thing they can do in journalism.

Major difficulties with covering environmental issues in Croatia

Covering environmental issues is mostly associated with the key problems of the environment itself. Among the most important of these is the environmental management system itself: some parts of the environment and nature are poorly researched and documented. For example, Croatia has not drafted its environmental vulnerability study yet, and even certain sanitary protected zones have not been delineated. In addition, the environmental impact assessment process is quite unreliable, because corruption has a strong influence on it. Environmental impact assessment studies are commissioned and paid for by the investor. As a result, journalists have difficulty in getting the right information, and the officials that should give the information sometimes hardly understand the problem.

Last year I requested the right to access information in four countries: Croatia, Bosnia and Herzegovina, Montenegro and Serbia. There had been an attempt

to apply for the transnational Dinaric karst to be included on the UNESCO list. Some of those countries were obviously obstructing the attempt. The authorities usually take a long time to respond or sometimes give generalized answers, so I have not yet succeeded in my request.

Some problems are related to the fact that in Croatia there is no academic education for environmental journalists. None of the Croatian journalism degrees has an environmental course, and among their teachers it is hard to find someone who is able to interpret environmental problems. There are several courses of study on environmental protection, but they do not address the media aspects. In some social studies courses there is social ecology as a subject, which to some extent fills the gap.

Two journalism degree courses include a course in science communication, but without covering environmental matters.

The most important environmental issues in Croatia

Environmental themes that reflect conflicts between powerful social actors, as well as topics that discuss

human suffering associated with the environment and natural disasters usually attract the biggest media attention.

An example of the first is the exploration of the Adriatic seabed for exploitation of hydrocarbons, for which the Croatian government granted a concession last year which did not comply with the regulations. Croatian civil society associations managed to stop the project, but in the neighbouring state of Montenegro, from where sea currents are bringing strong environmental influences to Croatia, explorations are still being prepared.

The prevention of the privatization of water resources also attracted great media attention. This is an extremely far-reaching event in Croatia, and is also interesting because of the successful and very rare cooperation between non-governmental environmental organizations and the Catholic Church in Croatia, which holds considerable political power.

The best example of another strong media topic was the great floods of the Sava River in summer 2014. Several villages with their arable land were flooded for months, and the clean-up lasted more than a year.

The biggest environmental problems in Croatia are connected with the political transition: Croatia's environmental management system is poorly developed; however, the desire for profit hits nature hard. The waste management systems and an outdated energy system are particularly weak spots. Croatian policy still enforces outmoded energy approaches: hydroelectric power plants that radically alter the

habitat over large areas, coal-fired power plants, which significantly add to CO₂ emissions and pollute the air, and so on.

An especially pressing problem is leisure space, mostly for tourism projects on the Adriatic coast. The Croatian environment is also burdened by major transport operations: a land area of 50,000 square kilometres has received about 1,250 km of highways that cut through many habitats and living communities.

How do the Croatian media see the environment and nature?

A brief analysis of the content of Croatian newspapers dealing with nature and the environment shows the following:

- Nature terms are used mainly in their applied meanings, whether referring to natural resources or aesthetic values, without deeper meanings.
- The term nature is mostly used in reporting on natural disasters (floods, earthquakes, drought, heat) and tourism.
- The frequency of the words nature and the environment is 3-6 times lower than that of the words corruption, politics or sex.
- Word-of-mouth explanations given by people hit by natural catastrophes have been better represented than explanations given by experts.

“For the environmental journalists in Croatia one of the most important tasks is to connect media, science and civil society and to help transfer knowledge from the world of science to the general public”

Some attempts at improvement

Various actions have been tried by the CJA, as the central professional organization of journalists, to encourage a better understanding of the environment and science news. A series of round tables, forums and field trips have been held with the assistance of leading Croatian scientists.

Two books have been published as a result of these efforts. The first is the collected papers entitled *Media and Science* (2011), which in a broad sense detects common interests and points of misunderstanding between scholars and journalists.

The second is a popular science monograph, *Karst without frontiers* (2007), which in a simple and graphically attractive way portrays the natural values of the Dinaric karst, fragile areas on the eastern and northern sides of the Adriatic Sea, which form the largest karst area in Europe, high in geological and biodiversity value.

It is hard to say how these efforts have contributed to our goals. However, some of the subjects covered by these books have become hot topics due to activists' environmental campaigns. This is the case with the concept of karst, for instance, which previously carried an exclusively pejorative meaning, and the notion of biodiversity, which was previously quite insignificant.

My personal experience has convinced me that each of the three fields I deal with -research, journalism and activism- influence and contribute to each other and facilitate my work. Additionally, the development of some social events, the introduction of leg-

islation associated with Croatia's entry into the EU and checks on the reliability of information that lay behind certain measures greatly helped too.

For the environmental journalists in Croatia one of the most important tasks is to connect media, science and civil society and to help transfer knowledge from the world of science to the general public. In that way we can help to raise awareness of the human right to a healthy environment and life, and break stereotyped views about environmental protection as a block to economic development.

Not so useful suggestions to young journalists

At the moment, my young colleagues in Croatia and in some neighbouring countries do not have too many reasons to feel satisfied and happy. In the last decade several important public media have disappeared and the number of unemployed journalists has increased. However, the fighting spirit that is inherent to young journalists, as well as persistence and luck, will get them exactly to where they would like to be. In the public media there is still a significant space set aside for science and the environment. In addition, there are some small, non-profit portals, where everyone can hone their craft. In Croatia, as has been said, there is no academic course on which they can study environmental journalism. Young reporters are left to learn from older colleagues, especially from the world media. They must be strongly focused, and they must believe in themselves. They will be welcomed with open arms to help initiate a new wave of environmental journalism in Croatia.



HUGE AMOUNTS OF CYPRUS'S MUNICIPAL WASTE ENDS UP IN LANDFILLS

Kyriaki Christodoulou

Cyprus News Agency (CNA)

One of the major environmental issues Cyprus is faced with is the rampant operation of various landfills around the island, which make the target of waste reduction extremely difficult. One of the biggest landfills in the outskirts of Nicosia (the capital of Cyprus) will finally begin to close this year and the closure is expected to be completed within the next 2-3 years.

Minister of Agriculture, Rural Development and Environment Nikos Kougiyalis has many times said that solid household waste management is an issue, pointing out that Cyprus will seek cooperation with the private sector as well as EU funds.

The Minister has said that Cyprus will soon start implementing its household waste management strategy.

According to the Environment Commissioner, Cyprus will not meet the EU's proposed targets for

waste reduction if it continues at the same pace. Ioanna Panayiotou said that the national targets were 'vague' and had to be accompanied by practical measures and tight timetables.

The measures include revised legislative proposals on waste, providing, among other things, for a common EU target of recycling 65% of municipal waste and 75% of packaging waste by 2030. They also include a binding target to reduce landfill to a maximum of 10% of all waste by 2030.

According to the Commissioner, these targets are not feasible for all Member States, including Cyprus if we continue at the present pace.

Around 75% of the total amount of municipal solid waste generated in Cyprus in 2014 was disposed of in landfills, while the country has one of the highest percentages of per capita waste generation in the EU, the Statistical Service of Cyprus announced recently.

The Statistical Service estimates that the total amount of municipal solid waste generated in Cyprus in 2014 stood at 534,000 tonnes compared to 542,000 tonnes in 2013, recording a decrease of 1.5%.

“The journalist’s level of engagement is not often matched by the officials’, thus making it hard to get the information out and, most importantly, to get the answersto your questions”

Of the total amount generated in 2014, 75% was disposed of in landfills, 12% was sorted for composting and the remaining 13% is estimated to have been sorted for recycling.

During 2013 (data for 2014 are not yet available), the amount of municipal solid waste generated per inhabitant in the European Union was 481 kg. In Cyprus, the per capita generation of municipal solid waste in 2013 reached 629 kg and is one of the highest among the Member States of the EU. At similarly high levels as Cyprus are Denmark (747 kg), Luxembourg (653 kg) and Germany (617 kg).

Covering environmental issues

Raising public awareness about environmental issues in a country like Cyprus is quite difficult. The public has begun showing an interest only in recent years but still there is lot that needs to be done and the road ahead is difficult. The same applies to public and local authorities. They are swamped with a lot of different issues, from drafting legislation and dealing with EU principles and bills to trying to assist the public. The main difficulty in trying to get information or be briefed about certain issues lies in the

fact that many different ministries and departments are involved and thus there is a lot of bureaucracy.

The journalist’s level of engagement is not often matched by the officials’, thus making it hard to get the information out and, most importantly, to get the answers to your questions.

The media are doing their best in promoting these issues but we need to be persistent and consistent. In addition, what has happened in Cyprus over the past few years and shifted public opinion is that, following the financial crisis, people began to think of alternative ways to save money via recycling, reusing, resorting to renewable energy sources, etc. Again, we as journalists are trying to get the story out to the public but the ones who are willing to speak the most are NGOs. However the story needs to have the other angle as well, the angle of the government.

For young journalists who would like to cover environmental/scientific issues, they will need to be sure that there is an area to work on. Otherwise their expertise will go to waste. That is my sole advice.



THE ENVIRONMENT IN FRANCE: BETWEEN NUCLEAR AND NITRATES

Magali Reinert

Environmental journalist, member of the French Association of Science Journalists (AJSPI)

Without intending to summarize the environmental challenges in France in a single paragraph, I would point out two flagship national examples: nuclear energy and water pollution of agricultural origin.

Nuclear power, which produces 75% of France's electricity, raises major environmental questions. All the more so as production costs are soaring and the ageing of facilities is increasing the risks. The strategic importance of nuclear power also has an impact on the whole French energy policy, particularly renewable energies. They contribute at least 10% of the energy consumed in France, a proportion lower than in Spain (15%) or Italy (17%), to use Mediterranean examples.

Turning to environmental degradation, water is certainly one of the most sensitive issues in France. The significant pollution of watercourses and groundwa-

ters due to agricultural activities (with nitrates and pesticides) has attracted criticism from the European Commission on several occasions. In France, the joint management of agriculture policy by the Ministry of Agriculture and farmers' representatives makes it difficult to carry out environmental protection measures. The various national plans to reduce the use of agricultural inputs have failed to date.

Some environmental topics are obviously more difficult to write about than others, particularly due to national or industrial strategic challenges. Nevertheless, there is considerable public and private (mostly NGO) expertise accessible to journalists.

Personally, I work particularly on the health and ecological consequences of pollutants such as waste from chemical products, which is found in all organisms and the environment. It is a difficult issue, because the impact of diffuse pollution is a controversial question. The chemical industry, which does not look kindly on the increasing number of studies on the danger of their products, in fact uses the difficulty of defining diffuse toxic actions (such as the toxic effects of pesticides on bees, for example) to maintain a strategy of doubt and uncertainty. To put forward factual and unchallengeable arguments, I simultane-

“Some environmental topics are obviously more difficult to write about than others, particularly due to national or industrial strategic challenges”

ously need scientific baggage and contacts with good expertise. I support my work with public data from research centres or ANSES (French Agency for Food, Environmental and Occupational Health & Safety), together with the expertise of several organizations like the Environment and Health Network.

The pressure from industry on public decisions today, in my view, requires journalists to be particu-

larly vigilant. In addition to traditional lobbying, the creation of scientific controversy despite broad consensus on research has proved to be very effective. Several works and surveys have revealed the strategies developed by the tobacco and oil industries, for example, to deny their responsibility for cancer and climate change, respectively (*Merchants of Doubt*, N. Oreskes & E. M. Conway, 2010; *La Fabrique du mensonge*, S. Foucart, 2013).



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ENVIRONMENTAL REPORTING IN SPAIN

María García de la Fuente

Spanish Association of Environmental Journalists (APIA)

As Spain is a Mediterranean country, one of the most important environmental issues is water. Water is a key factor in environmental, social and economic matters. In some Spanish regions there is shortage of water and this is a serious problem for agriculture, tourism, the people and, of course, the environment.

Another important issue is biodiversity. Spain is one of the richest countries in biodiversity, but although this is very good news, it also needs a lot of effort and investment in conservation.

Climate change is also a key matter in Spain as temperatures are increasing and sea level rise is a threat.

As journalists, we encounter certain difficulties when we cover environmental issues. As an example, access to good sources of information is not always possible as there are many obstacles to overcome, such as preliminary email questionnaires or

“Access to good sources of information is not always possible as there are many obstacles to overcome, such as preliminary email questionnaires or press conferences via video link with no real people speaking”

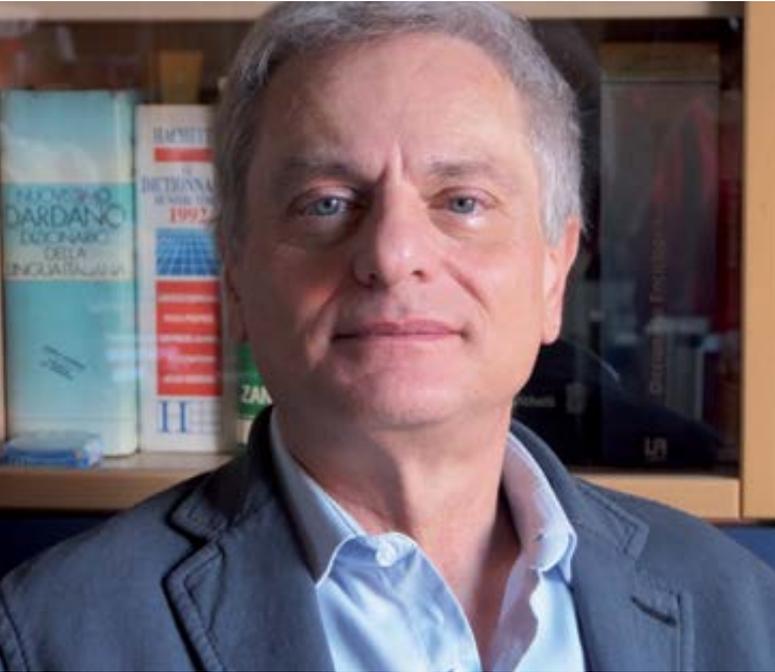
press conferences via video link with no real people speaking.

In APIA we have the Via APIA and Via Crucis awards each year to reward the best practices in communication and highlight the worst.

For young journalists who would like to cover environmental/scientific issues, we recommend they specialize. In APIA we promote specialization in environmental journalism with media scholarships in summer. We think that training is key and is best learnt from senior specialist journalists like the ones in our association; that is why our scholarships are in those media in which we have one of our journalists working. And also the apprentice has to be associated with APIA.



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ENVIRONMENTAL AND SCIENCE REPORTING IN ITALY

Mario Salomone

President, Italian Federation of Environmental Media (FIMA)

Italy, like other countries in the Mediterranean region, is affected by the consequences of climate change (as explained by the UNFCCC) and by many problems that have resulted throughout history from the country's development model and from its geographical position in the centre of a region so complex that one should talk about 'Mediterraneans' rather than 'the Mediterranean'. As Edgar Morin once said: 'Conceive the Mediterranean? Wouldn't it be a delusion to look today for a common feature that is not exclusively geoclimatic on the three shores, in Africa, Asia and Europe?'

'Indeed, to comprehend the Mediterranean one has to conceive unity, diversity and oppositions simultaneously; one needs to think non-linearly, grasping at the same time complementarities and antagonisms. Yes, the Mediterranean is the sea of communication and conflict, the sea of polytheisms and monothe-

isms, the sea of fanaticism and tolerance, and, what a wonder, the sea where conflict, finally regulated, in the little Athens of the fifth century, turned into a democratic debate and a philosophical debate.' (*Thinking the Mediterranean and Mediterraneanizing thinking*).

Development in Italy (the second manufacturing power in Europe after Germany) is based on increasing inequities between the North and the South (where 'cathedrals in the desert' have been built in the past: large, extremely polluting facilities such as refineries or steelworks, as in the city of Taranto with the establishment of Ilva).

The characteristic shape of Italy, a 'boot' in the sea, makes it a bridge between Europe, Africa and the Middle East. Let us say that Italy and the three seas around it (Tyrrhenian, Ionian and Adriatic) lie in the path of a considerable portion of world trade in passengers, oil and goods, with their procession of pollution and accidents, in addition to the significant flow of migrants running away from wars, poverty, drought and the loss of land and resources.

“The mainstream media and political decision makers have a culture that is totally unable to comprehend the importance of the physical basis of human life and the limits to growth”

So, in brief, three environmental questions are priority:

1. Biodiversity loss, desertification (21% of the land is at risk, according to the National Research Council) and the consumption of fertile land by (bad) urbanization almost everywhere, in the North, the Centre and the South;
2. The anthropization of the coast, where in addition a remarkable number of towns do not possess water treatment services and where some regions, mostly in the South of Italy, have very low levels of waste sorting for recycling (only 7,335,000 tonnes of waste were recycled in 2013 out of 29,573,000; in the South the proportion was 28.8% against 54.4% in the North, according to ISPRA 2015); the sea close to the shore is threatened by oil drilling platforms, maritime traffic of ferries, merchant vessels, recreational craft, tankers, etc.;
3. Air pollution in cities, as Italian transport policy has encouraged cars and heavy goods vehicles for freight transport rather than public services (underground, tramways, buses, trains), which are insufficient, to use a euphemism; according to the European Environment Agency, Italy holds the sad record for deaths on the roads;

Fortunately, Italy also excels in areas such as renewable energy, innovation, organic farming and new materials, thanks to the public sector (in which the research agency ENEA works) and the private sector too: the fast-developing, research-based green economy is the hope for a more sustainable future for the country.

Information

Hindrances to environmental information derive from this model of concrete-highways-oil that builds an industry of speculation-corruption-mafias (illegality is a serious threat to the environment, counteracted by police forces such as the Carabinieri Unit for the Protection of the Environment, the State Forestry Corps and the Marine Environment Department (RAM) of the Port Authority), in a country that has squandered part of its ancient beauty yet is still attractive to tourists, thanks more to monuments, archaeological sites and museums than to nature.

The mainstream media and political decision makers have a culture that is totally unable to comprehend the importance of the physical basis of human

life and the limits to growth. Even the message of the Pope in his Encyclical *Laudato si'* got less attention in Italy than abroad.

Information all too often is the succubus of strong powers and lobbies, advertising agencies and the pusillanimous, who have an antiquated mentality that basically minimizes environmental problems or is openly in denial.

In addition to all that, the media crisis is cutting jobs and investment and the investigative journalism that is sorely needed. Non-governmental organizations such as WWF, Legambiente, Greenpeace Italy and many others, big and small, work towards raising public awareness and improving this situation.

What advice can I give to young journalists?

Keep a close eye on the new emerging social media and networks encompassing more and more initiatives: green businesses, sustainable lifestyles and the huge growth of organic farming are practices covered by a large number of blogs, social networks, websites and online newspapers. Social practices and new information and communication experi-

ences are becoming more and more entwined, widespread and penetrating. They also provide potential job opportunities in a context of precariousness and low salaries.



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ENVIRONMENTAL PROBLEMS IN MOROCCO

Omar Er-Rouch

Maghreb Arabe Presse, Morocco

The environmental problems of Morocco are not exclusive to this North African country, but to the whole Mediterranean region. Both natural and human factors affect the vulnerability of the regional environmental balance. The most important environmental problems of Morocco are as follows:

1. Land degradation/desertification:

Population pressures have led to soil erosion and desertification as marginal lands are farmed and the ground cover is destroyed by overgrazing. Morocco has a low rate of deforestation in relation to other African countries, however, with only 0.04% of its forests destroyed each year (1990-2000). Forests cover 6.8% of the country's area (2000).

2. Water supplies contaminated by raw sewage:

The country uses more than 90% of its freshwater for agricultural production. Available drinking water has been further limited by pollution of

freshwater sources with raw sewage and industrial waste. Periodic droughts contribute to water shortages in some areas of the country, and the problem of water scarcity is expected to worsen as Morocco's population continues to grow.

3. Siltation of reservoirs:

The reservoirs of Morocco are suffering from siltation because of the increased runoff caused by soil erosion.

Morocco is also far below the global target of having 10% of its land protected. In fact, its reserves and national parks covered only 0.7% of the country's total land area in 1997, and it is home to 39 threatened animal species. To protect its environment, Morocco has ratified international agreements protecting biodiversity, endangered species, wetlands and the ozone layer. The country has also signed treaties limiting hazardous waste and marine dumping.

Covering environmental issues in Morocco

As in the majority of emerging countries, covering environmental issues in Morocco is not an easy task. Lack of information, awareness and interest

“Environmental issues find their way into Moroccan media only for political or tourism purposes”

makes it hard for a journalist to write on an environmental issue or to find space in a newspaper, as media outlets give priority to politics, sports, entertainment and crime.

Environmental issues find their way into Moroccan media only for political or tourism purposes. A

politician or a political party may use the media to highlight an environmental crisis to throw the blame onto a political opponent. The media is also interested in the environment and nature to show the beauty of a specific region as a tourist attraction.



Trois Fourches Cape, North Morocco Coast. © Miguel 



ENVIRONMENTAL AND ECOLOGICAL ISSUES IN THE LEBANESE PRESS

Sanaa Nehme

National News Agency (NNA), Lebanon

Lebanon is currently facing many environmental problems and challenges. Foremost among them is the garbage crisis. After shutting down the landfill of Naameh, Beirut was covered by waste and trash for many weeks, which spurred Lebanese civil society to call for a quick solution to this ecological catastrophe. A catastrophe that the Lebanese government is much too divided to solve!

However, environmental issues are far from being limited to the waste crisis. Deforestation is a phenomenal problem across the country, which is now only covered by an estimated 11% of forests, out of a total of 10,452 square kilometres! This deforestation is basically due to urbanization, wood cutting and fires that have erupted over the years, ravaging huge green areas.

Vegetation and ecosystems are also clearly decreasing with the notable increase in the demand

for resources, especially after the influx of refugees from neighbouring conflict countries.

Air pollution makes it hard to breathe sometimes. Administrative centralization and urbanization have led to dense pollution especially over coastal cities. Heavy industries, the intense movement to the cities -mainly Beirut- and the flagrant lack of clean transport have raised pollution to levels that sometimes become unbearable and affect people's health.

Land degradation, which results from erosion, deforestation, and unsustainable agricultural practices, is also an important issue, alongside security-linked problems (such as recent wars and explosions) and the absence of urban planning.

Ecological issues, however, are not strictly limited to the local scene. Regional and international problems also affect the country.

At regional level, a shortage of water resources has recently been noticed in the Middle East. Even though Lebanon is said to be 'rich' in water compared to other countries in the region, poor management and a lack of financial resources and the necessary data make it difficult to access clean water. This issue clearly calls

“So environmental disasters should be connected in some way or another to what most attracts the audience’s attention”

for the relevant legislation to be properly implemented. Awareness of the problem is also still at its lowest level. And, more importantly, the population is growing, thus increasing the need for access to water.

At international level, climate change is affecting Lebanon as much as the rest of the world. In this respect, some tree species are endangered. Lebanon’s renowned Cedar (*Cedrus libani*) and Juniper (*Juniperus excelsa*), among other species, are threatened with extinction in the country by 2050, and the sea level is expected to rise. Many mammal, bird, and fish species are threatened as well.

To try to find answers to these issues, Lebanese civil society, NGOs and international institutions have mobilized their capacities.

CNRS (the national science research centre), for instance, local municipalities, policy makers like FAO, USAID, universities, GreatMed, EcoPlantMed, Greenpeace, Lebanon Reforestation Initiative, Jouzour Loubnan, CEPF and other local and international environmental associations and projects have taken the initiative to launch campaigns for awareness raising, reforestation and ecosystem restoration, among others.

As a journalist, the problem resides in setting priorities. In a country where political problems affect your everyday life, sectarian strife is threatening your every hour, the influx of refugees is becoming unbearable, and bombs and explosions are expected to happen at any second, it is always difficult to shift the public’s attention to ecological problems because, unfortunately, they seem much less important, for their consequences do not have an immediate impact on an individual’s health.

Politics and security issues are always a way to catch the readers’ attention, at least in a country like Lebanon. So environmental disasters should be connected in some way or another to what most attracts the audience’s attention. Interlinking these issues could be the best way to achieve solutions to environmental problems. Prioritizing the list is also a good idea, but relating the issues to the readers’ own concerns and worries in order to develop their awareness is best.

Finally, the dragonfly effect should be the first thing to try. Using social media and catching the readers’ attention with a number, a picture, a quote, a joke or any other personal thing they might relate to is perfect for campaigning.



WHEN THE SAHEL-SAHARA THREATENS... THE MEDITERRANEAN

Sidi El Moctar Cheiguer

President of ANEJ, the African Network of Environmental Journalists, based in Mauritania

The increasing insecurity generated by international terrorism and all kinds of traffic in the Sahelo-Saharan area should not hide an even more harmful reality: this immense area of land has been almost decimated by irregularities in the climate. No other place on the planet is more desolate, more sinister. Here the fauna, flora and people have fallen into the trap of climate tragedy. But worse is yet to come: the Sahel-Saharan is threatening... the Mediterranean.

Facing a double challenge -security and climate vulnerability-the Sahel-Saharan area seems to have been 'left out' in an already defenceless Africa in the face of climate change.

While everybody actually agrees on the increasing dangers of terrorism in the Sahel-Saharan and the traffic taking place there, the international community does not seem aware of the imminent and al-

most irreversible danger of the challenge posed by the continuous environmental deterioration of this land and the risk involved for the Mediterranean, the Sahel-Saharan's next-door neighbour. It is an immense geographical area, with a lunar, near-deserted landscape stretching from coastal countries in the Southern Mediterranean to the Red Sea, and holds the world record for the lowest human population density, with less than one inhabitant per km².

The repeated droughts in the 1970s and 80s and desertification have decimated livestock in the Sahel-Saharan, where a dozen or so countries all have a predominantly pastoral economy. Since 1900, the sand has advanced 250 km southward along a 6,000 km east-west strip. This inexorable displacement of dunes (up to 5 km per year in some places) has buried whole villages including historical cities strongly influenced by the Mediterranean way of life and civilization. Precariousness, anarchic urban growth, poor access to water, social deprivation, and political disturbances are the direct consequences. And now the threat is reaching the Mediterranean, with the continuous migratory flows from the Sahel-Saharan incessantly shown on TV screens all over the world for at least the last five years.

“The true challenge is for the Mediterranean media to show their ability to mobilize the world so that Marrakech 2016, and the Mediterranean by extension, can contribute to answering the planetary challenge posed by climate change”

The Mediterranean has never been so threatened by the vulnerability of this desert strip to the climate. Its harmful power is calling upon us!

This sombre picture should not worry the world, of course, if it were not for the fact that it is an area of around 11 million km² (nearly 16 times the size of France), covering a little more than one-third of the African continent. It is home to a quarter of all the countries of Africa, including at least six Mediterranean countries: Morocco, Algeria, Libya, Tunisia, Mauritania and Egypt.

A good proportion of the population in the Sahel-Sahara, especially in the north-west, has been influenced by the Mediterranean basin for centuries. Their civilization, spirituality, history, culture and social codes all bear witness to a strong interpenetration. That means there is interdependence between the two areas, Sahel-Sahara and Mediterranean, at a particularly difficult moment.

In the face of this drama, however, governments in the region and the international community do not seem to be aware of the tragedy unfolding. The great climate conferences of the 21st century left people feeling that hope for a global binding agreement was flying away... until the COP in December

2015 in Paris. Historical or bare minimum agreement, Paris 2015 has confirmed one thing: the war is not won, but hope is finally there and no one has the right to kill this hope.

Hope is in fact essential and it is a Mediterranean country, Morocco in this case, which will host the first big meeting after Paris. An opportunity for Mediterranean countries: I would almost call it a historical challenge. The Mediterranean basin, the space where the history of humankind was founded, must attend the rendezvous with History (with a capital H) next December. In this context, the true challenge is for the Mediterranean media to show their ability to mobilize the world so that Marrakech 2016, and the Mediterranean by extension, can contribute to answering the planetary challenge posed by climate change.

Proving that Marrakech can succeed in making the post-Paris arrangements -something that neither Doha nor Cancun or even Copenhagen managed to achieve in relation to the post- Kyoto arrangements- is a challenge that the Mediterranean environmental press must tackle. The Mediterranean media must anticipate the movement; they must be the engine. We have the human and intellectual means.

Doesn't the Mediterranean basin, mostly on the north shore, have some of the most influential media in the world? And therefore doesn't the intellectual density of this region make it a fertile land par excellence for media production?

In doing so, our media must also raise awareness of the vast untouched energy potential of this immense desert that is the Sahel-Sahara. From being a threat, this neighbouring land could prove to be an extraordinary opportunity for mutually beneficial economic development. In terms of the green economy, the Sahel-Sahara is indeed a potential source of inexhaustible clean energy: wind, solar and hydroelectric power not only for the Mediterranean, but also for Europe.

According to studies carried out several years ago in the framework of the ambitious projects Desertec and Medgrid, if only 0.3% of the entire surface of this desert were covered by solar thermal power plants, the energy demands of Europe and North Africa together would be met! And we are only talking about potential solar energy! If we were to add wind, geothermal and hydroelectric, we could expect the Sahel-Sahara to become an area of salvation for humankind.

To boost the media will require political will from decision makers in the countries of the region and genuine engagement by the international community. What journalists in the region need to work on is this lack of awareness among the world's decision makers of the climate threat enveloping the Mediterranean. Whenever possible, the media have to challenge politicians and the people about the vulnerability of this part of the world.



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Acronyms

ACCOBAMS	Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and the Contiguous Atlantic Area	BP/RAC	Blue Plan Regional Activity Centre
AECID	Spanish Agency for International Cooperation and Development	CBC	Cross-Border Cooperation
AFP	Agence France-Presse	CBD	Convention on Biological Diversity
AJSPI	French Association of Science Journalists	CEAM	Centre for Environmental Studies in the Mediterranean (Centro de Estudios Ambientales del Mediterráneo)
AMAN	Alliance of Mediterranean News Agencies	CEAMA	Andalusian Environmental Centre (Centro Andaluz de Medio Ambiente)
ANEJ	African Network of Environmental Journalists	CEPF	Critical Ecosystem Partnership Fund
ANSES	French Agency for Food, Environmental and Occupational Health & Safety	CIESM	International Commission for the Scientific Exploration of the Mediterranean Sea
APIA	Spanish Association of Environmental Journalists	CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
ARLEM	Euro-Mediterranean Local and Regional Assembly	CJA	Croatian Journalists' Association

CMS	Convention on the Conservation of Migratory Species (Bonn Convention)	ENEA	Italian National Agency for New Technologies, Energy and Sustainable Economic Development
CNA	Cyprus News Agency	ENI	European Neighbourhood Instrument
CNRS	National Science Research Centre (Centre national de recherche scientifique)	ENP	European Neighbourhood Policy
COP	Conference of the Parties	EU	European Union
CSIC	Higher Council for Scientific Research (Centro Superior de Investigaciones Científicas)	FAO	Food and Agriculture Organization of the United Nations
EASIN	European Alien Species Information Network	FIMA	Italian Federation of Environmental Media
EBSA	Ecologically and Biologically Significant Area	FPZ	Fisheries Protection Zone
EEZ	Exclusive Economic Zone	GFCM	General Fisheries Commission for the Mediterranean
EFIMED	Mediterranean Regional Office of the European Forest Institute	ICCAT	International Commission for the Conservation of Atlantic Tunas

ICM	Institute of Marine Sciences, Barcelona	MEDMIS	Smartphone and online information system for monitoring invasive alien species in Mediterranean marine protected areas.
ICZM	Integrated Coastal Zone Management	MedPAN	Network of Marine Protected Area Managers in the Mediterranean.
IMEDEA	Mediterranean Institute for Advanced Studies (Instituto Mediterráneo de Estudios Avanzados)	MedSea	Project on Mediterranean Sea acidification in a changing climate
ISPRA	Higher Institute for Environmental Protection and Research (Istituto Superiore per la Protezione e la Ricerca Ambientale)	MedWet	The Mediterranean Wetlands Initiative
IUCN	International Union for Conservation of Nature	MIO-ECSDE	Mediterranean Information Office for Environment, Culture and Sustainable Development
IWC	International Whaling Commission	MPA	Marine Protected Area
JRC	Joint Research Centre	MSSD	Mediterranean Strategy for Sustainable Development
LBS	(pollution from) Land-Based Sources	NGO	Non-governmental organization
MAP	Mediterranean Action Plan	NNA	National News Agency, Lebanon
MCSD	Mediterranean Commission on Sustainable Development	PAP/RAC	Priority Actions Programme, Regional Activity Centre



RAC/SPA	Regional Activity Centre for Specially Protected Areas	UN	United Nations
RAC/SPC	Regional Activity Centre for Sustainable Consumption and Production.	UNCCD	United Nations Convention to Combat Desertification
REMPEC	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea	UNCLOS	United Nations Convention on the Law of the Sea
SCP/RAC	Regional Activity Centre for Sustainable Consumption and Production	UNEP/MAP	United Nations Environment Programme/Mediterranean Action Plan
SDG	Sustainable Development Goal	UNESCO	United Nations Educational, Scientific and Cultural Organization
SEO/BirdLife	Spanish Ornithology Society (Sociedad Española de Ornitología)	UNFCCC	United Nations Framework Convention on Climate Change
SPA	Specially Protected Area	US	United States
SPAMI	Specially Protected Area of Mediterranean Importance	USAID	United States Agency for International Development
UCA	University of Cadiz	VMS	Vessel Monitoring System
UfM	Union for the Mediterranean	WWF	World Wildlife Fund



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