MISIS

European Commission
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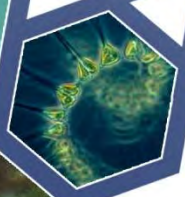
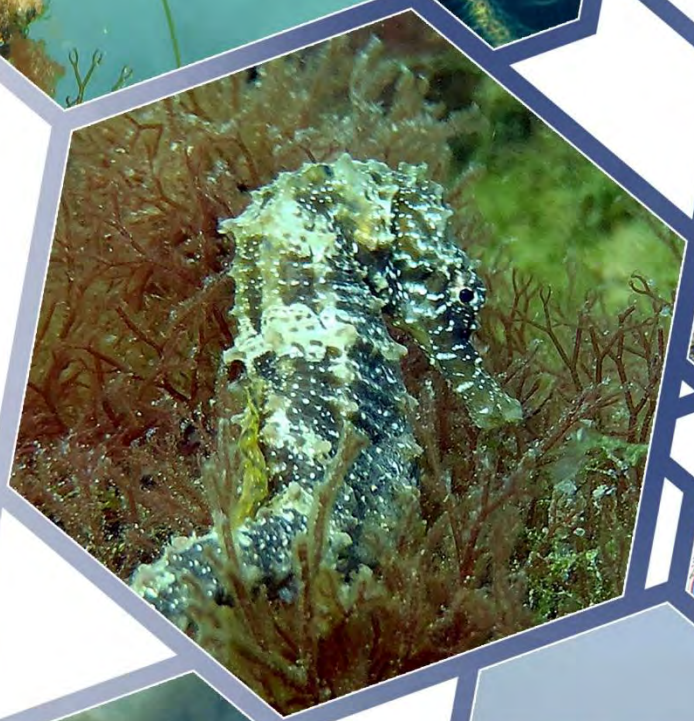
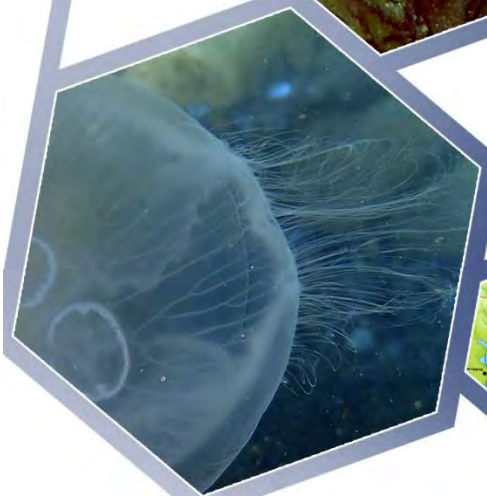
Conservation and Protection

of the Black Sea Biodiversity





Conservation and Protection of the Black Sea Biodiversity

Review of the existing and planned protected areas in the Black Sea (Bulgaria, Romania and Turkey) with a special focus on possible deficiencies regarding law enforcement and implementation of management plans

EC DG Env. Project MISIS:
No. 07.020400/2012/616044/SUB/D2

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Abbreviations and Acronyms

ACCOBAMS	Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and contiguous Atlantic Area, http://www.accobams.org/
BAS	Bulgarian Academy of Science
BBI-MATRA	Funding programmes of the Dutch government
BD	Bird Directive
BG	Bulgaria
BS	Black Sea
BSC	Black Sea Commission (Commission on the Protection of the Black Sea Against Pollution), www.blacksea-commission.org
BS SAP	Black Sea Strategic Action Plan
BSBLP	Black Sea Biodiversity and Landscape Protocol
BSIMAP	Black Sea Integrated Monitoring and Assessment Program
CBD	Convention on Biological Diversity
CFP	Common Fisheries Policy
EEZ	Exclusive Economic Zones
EC	European Commission, http://ec.europa.eu/
ECBSea	Environmental Collaboration for the Black Sea (Project of EC DG Devco), http://81.8.63.74/ecbsea/en/documents/relevant/index.htm
EU	European Union
EUNIS	EU Nature Information System
HD	Habitat Directive
GeoEcoMar	National Research and Development Institute for Marine Geology and Geoecology, Bucharest-Constanta, Romania
GES	Good Environment Status
GMO	Genetically Modified Organisms
ICM	Integrated Coastal Management; also known as Integrated Coastal Zone Management (ICZM) and Integrated Marine and Coastal Area Management
IMS/METU	Institute for Marine Sciences/Middle East Technical University (Erdemli, TR)
IO-BAS	Institute of Oceanology, Varna, Bulgaria
IUCN	International Union for Conservation of Nature
MPA	Marine Protected Area
MSP	Marine Spatial Planning or Maritime Spatial Planning (EU only)
NGO	Non-governmental organization
NBSAP	National Biodiversity Strategic Action Plan
NIMRD	National Institute for Marine Research and Development, Constanta, Romania
SAC	Special Area of Conservation (EU)
SAP	Strategic Action Plans
SEA	Strategic Environmental Assessment
SCI	Sites of Community Interest (EU)
SPA	Special Protected Area (EU Wild Bird Directive); Specially Protected Area (Barcelona Convention)
PA	Protected Area
PEBLDS	Pan-European Biological and Landscape Diversity Strategy (http://www.pebld.org/index.php?ido=11&lang=eng)
RAC/SPA	Regional Activity Centre for Specially Protected Areas (Barcelona Convention)
RO	Romania
TBPA	Transboundary Protected Areas
TDA	Transboundary Diagnostic Analysis
TR	Turkey
TUBITAK	The Scientific and Technological Research Council of Turkey, www.tubitak.gov.tr/
UNCLOS	United Nations Convention on the Law of the Sea
UNEP-WCMC	UNEP-World Conservation Monitoring Centre
WCPA	World Commission on Protected Areas
WFD	Water Framework Directive
WWF	World Wildlife Fund

Executive Summary

This Report has been prepared as part of the MISIS Project 'MSFD Guiding Improvements in the Black Sea Integrated Monitoring System (EC DG Env. Project MISIS: No. 07.020400/2012/616044/SUB/D2). The Project is financed by EC as an activity under the EC DG Env. Programme 'Preparatory action – Environmental monitoring of the Black Sea Basin and a common European framework programme for development of the Black Sea region/Black Sea and Mediterranean 2011. MISIS is an integral part of the overall ongoing process of harmonization of policies in the Black Sea region in the field of environment protection, taking into consideration relevant European acqua.

Purpose of the report is to trace the progress in the beneficiary states toward the marine areas protection and the Biodiversity and Landscape Conservation Protocol1 enforcement and in this context to specifically review the level of designation in each beneficiary country of MPAs, the management plans in place and the effectiveness of their implementation, including legal, policy and technical aspects of planning transboundary areas in the Black Sea for designation as protected.

All three countries have established protected areas in marine part, the categories of protection being quite similar. The process of designing protected areas has been carried out mostly in the frame of Natura 2000 in Bulgaria and Romania and Emerald Network and RAMSAR Convention in Turkey. Bulgaria already has an overall of 15 marine protected areas, which comprise parts of both marine and terrestrial environment. Currently, several are being in the process of extension (6 sites) while proposals for 3 new sites have been elaborated. Romania has 2 marine protected areas, the greatest being the marine part of Danube Delta Biosphere, which also have a management plan in place, 8 sites under Habitat Directive and one under Birds Directive. Turkey proposed 6 RAMSAR sites and deltas on the coast of Black Sea.

Despite the availability of best practices in nature conservation governance worldwide and of numerous guidelines for protected areas management, incorporating them into national law and policy remains a challenge. This report assesses the MPAs-related legislation and policies in Bulgaria, Romania and Turkey. The 'gaps' identified include areas where legislation and policy are missing. Furthermore, the mismatches between the written law/policy and what is being applied in practice by local people are also discussed. It is demonstrated that compliance with acting law and policy requires better control and development of economic incentives.

[1] Protocol to the Bucharest Convention, http://www.blacksea-commission.org/_table-legal-docs.asp

INTRODUCTION

Many coastal and offshore ecosystems continue to be degraded by anthropogenic causes, despite efforts to control or limit them. The causes of degradation are numerous, and can include:

- pollutants;
- runoff (carrying sediment and chemicals) from land;
- coastal development;
- introduction of non-native or invasive species;
- overfishing and by catch;
- habitat alteration; and
- rising sea level and climate change.

In response to these problems, policy-makers world-wide tend to develop strategies to protect, conserve and recover the marine environment (Borja et al., 2008). In Europe, several policies refer in full or partially to the marine environment protection, such as the Habitats Directive (HD, 92/43/EEC), the Water Framework Directive (WFD, 2000/60/EC), the Common Fisheries Policy (CFP and the new reform COM(2010)241 final) or the Recommendation on the Integrated Coastal Zone Management (2002/413/EC). Additionally to several existing international regional conventions dealing with the protection of European seas (i.e. OSPAR, in the Atlantic Ocean; HELCOM, in the Baltic Sea; Bucharest, in the Black Sea; Barcelona, in the Mediterranean Sea), in 2008, the European Parliament approved the Marine Strategy Framework Directive (MSFD, 2008/56/EC), for the protection of all seas of the European Union in parallel and synergistically, based on the ecosystem approach (Borja et al., 2010).

Marine protected areas (MPAs) are generally defined as areas reserved by law or other effective means to protect part or the entire enclosed environment. Some observers, often including scientists and environmental advocates, recommend designating MPAs to achieve management and conservation goals. From their perspective, the designation of MPAs is not a panacea that responds to all causes of degradation, or leads to a quick recovery for all degraded environments, but in many cases they contend that MPAs are necessary for protecting and restoring the marine environment. Policy makers are looking at how this tool has worked, alternative ways that MPAs can be designed, and whether and how MPAs might be broadly applied. Little opposition has been expressed about the overall concept of establishing MPAs, but some of the more specific discussions about which uses would be limited or prohibited have been controversial. Oil and gas development, the fishing industry, and other marine industries have consistently expressed concerns with the use of MPAs. These industries question whether the use of MPAs would afford the proper balance between conservation and economic activities.

CBD Convention, EU policy documents and Black Sea Biodiversity and Landscape Conservation Protocol to the Convention on the Protection of the Black Sea against Pollution

The 1992 CBD Convention (http://www.cbd.int/) requires that "Parties, as far as possible and appropriate, establish a system of protected areas or areas where special measures are needed to conserve biological diversity and to develop guidelines for the selection, establishment and management of such protected or special areas".

In 2001, the European Union set itself the ambitious goal of „halting the loss of biodiversity by 2010". The policy framework successfully has been enforced in many countries of the EC. Some habitats or species have shown recovery signs in the context of new environmental concern and people attitude changing. But the pace of change and extent of implementation had so far been insufficient to meet the 2010 target.

The EU therefore decided to increase its efforts, and the Commission launched a new Biodiversity Action Plan in 2006. This provides a strategic European response to tackling biodiversity loss and establishes a detailed set of target driven objectives and actions at both national and European level. In addition to a focus on implementation, the Action Plan also calls for the full integration of biodiversity concerns into all other EU policy areas, from territorial and rural development policies to fisheries and development cooperation („The European Union's Biodiversity Action Plan "Halting the loss of biodiversity by 2010 – and beyond").

The **objectives** of this new EU Action Plan are to:

- Reinforce action to halt the loss of biodiversity in the EU by 2010;
- Accelerate progress towards the recovery of habitats and natural systems in the EU;
- Optimize the EU's contribution towards significantly reducing the rate of biodiversity loss worldwide by 2010.

The Action Plan identifies four main policy areas and sets out 10 key objectives to deliver the 2010 biodiversity target and put biodiversity on the course to recovery. These are, in turn, translated into over 150 individual priority actions and supporting measures which are to be implemented against specific time-bound targets at both national and European level. First two policy areas concern biodiversity in EU and across world-wide, while the third treats the biodiversity in relation with the climate change issue. The fourth area is dedicated to the improving of knowledge base.
Later on, the new Biodiversity Strategy of EU was endorsed in 2011, The six targets of this new strategy cover:

- Full implementation of EU nature legislation to protect biodiversity
- Better protection for ecosystems, and more use of green infrastructure
- More sustainable agriculture and forestry
- Better management of fish stocks
- Tighter controls on invasive alien species
- A bigger EU contribution to averting global biodiversity loss

The strategy is in line with two commitments made by EU leaders in March 2010. The first is the 2020 headline target: "Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss"; the second is the 2050 vision: “By 2050, European Union biodiversity and the ecosystem services it provides – its natural capital – are protected, valued and appropriately restored for biodiversity's intrinsic value and for their essential contribution to human wellbeing and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided.”
It is also in line with global commitments made in Nagoya in October 2010, in the context of the Convention on Biological Diversity, where world leaders adopted of a package of measures to address global biodiversity loss over the coming decade.
Global and EU documents, when speaking about marine biodiversity conservation, remind the great challenges arising from the economic and social pressures put on the fragile marine ecosystems (shipping, tourism, overfishing, pollution, nutrients loading, oil spills, exotic species) and reclaim urgent actions to be taken to safeguard the biodiversity.

For example, it is urgently required from EU Member States “to ensure a rapid and effective implementation of the Marine Strategy Directive in order to bring all EU marine waters into a good environmental condition and to integrate biodiversity and ecosystems requirements into the future EU Maritime Policy”. The EU Biodiversity Action Plan/2006 also calls for „a more sustainable use of marine resources under the new Common Fisheries Policy (CFP). Thereafter, measures currently being introduced are based on a gradual application of a multi-annual, multi-species approach to fisheries management which takes account of the whole marine environment, and not just the commercially valuable fish stocks.

Taking into account the European framework and the global preoccupation for minimization of human impact on biodiversity, the Black Sea Commission2 committed in the elaboration of Black Sea Regional Agreements (e.g., The Convention on the Protection of the Black Sea Against Pollution, Black Sea Biodiversity and Landscape Conservation Protocol to the Convention on the Protection of the Black Sea Against Pollution, Strategic Action Plan for the Environmental Protection and Rehabilitation of the Black Sea 2009) to helping the Black Sea coastal states to integrate the regional environmental policies and

[2] Commission on the Protection of the Black Sea Against Pollution (Black Sea Commission, BSC). The BSC is the body responsible for the implementation of the Bucharest Convention and its protocols, and the Black Sea-Strategic Action Plan (BS SAP). The Commission is made up of one representative from each of the Black Sea coastal states, parties to the Bucharest Convention (Bulgaria, Georgia, Romania, Russian Federation, Turkey and Ukraine). The Commission meets annually and adopts an annual work program. The ultimate goal of the Commission is to “rehabilitate” the Black Sea, and ‘to preserve it as a valuable natural endowment of the region, while ensuring the sustainable use of its marine and coastal resources for the economic development, well-being, health and security of the population of the Black Sea coastal States’ (BS SAP2009, http://www.blacksea-commission.org/_bssap2009.asp). In order to achieve this goal, the Istanbul-based Commission has been given a number of functions under Article 18 of the Bucharest Convention, which include:

1. Promoting the implementation of this Convention and informing the Contracting Parties of its work.
2. Making recommendations on measures necessary for achieving the aims of this Convention.
3. Considering questions relating to the implementation of this Convention and recommending such amendments to the Convention and to the Protocols as may be required, including amendments to Annexes of this Convention and the Protocols.
4. Elaborating criteria pertaining to the prevention, reduction and control of pollution of the marine environment of the Black Sea and to the elimination of the effects of pollution, as well as recommendations on measures to this effect.
5. Promoting the adoption by the Contracting Parties of additional measures needed to protect the marine environment of the Black Sea, and to that end receiving, processing and disseminating to the Contracting Parties relevant scientific, technical and statistical information and promoting scientific and technical research.
6. Cooperating with competent international organizations, especially with a view to developing appropriate programmes or obtaining assistance in order to achieve the purposes of this Convention.

strategies into their national legal frameworks and cope with Black Sea transboundary environment problems.

In 2002, the Black Sea coastal countries (Bulgaria, Georgia, Romania, Russian Federation, Turkey, and Ukraine) adopted/signed the fourth Protocol to the Bucharest Convention - *The Black Sea Biodiversity and Landscape Conservation Protocol ("Black Sea Biodiversity Protocol")* which entered into force in 2011[3] [As of 21 June 2011 the Black Sea Biodiversity and Landscape Protocol entered into effect, following the deposit of the fourth instrument of ratification by Ukraine on the 21st April, 2011. See http://www.blacksea-commission.org/_table-legal-docs.asp.]. It has incorporated principles from the main international conservation conventions, in particular the 1992 UN Biodiversity Convention (CBD Convention). In addition, the *Black Sea Biodiversity and Landscape Protocol* relies on the principles of the 1998 *Pan-European Biological and Landscape Diversity Strategy "PEBLDS"* [The PEBLDS is a twenty-year strategy (1996-2016) for the entire continent of Europe to implement the 1992 Biodiversity Convention in Europe by filling in gaps and harmonizing nature conservation initiatives. See on-line at http://www.pebldsorg/[4]].

The **Black Sea Biodiversity Protocol** (BCBLP) purpose is to "maintain the Black Sea ecosystem in the good ecological state and its landscape in the favourable conditions" as well as to "preserve and to sustainably manage the biological and landscape diversity of the Black Sea in order to enrich the biological resources"[Article 1(1) of The Black Sea Biodiversity and Landscape Conservation Protocol to the Convention on the Protection of the Black Sea Against Pollution].

Given that all six Black Sea coastal States have ratified the 1992 UN Convention on Biological Diversity ("CBD") the Biodiversity Protocol may well serve as the regional instrument of cooperation for implementation of its objectives, principle and polices [Convention on Biological Diversity, done in Rio de Janeiro, 5 June 1992, in force 29 December 1993, 90 days after the 30th ratification]. Of course, the Protocol does not repeat the CBD Convention. Thus, while the CBD has foreseen a "fair and equitable sharing of genetic resources", no reference is made in the BSBLP, but a general reference to sustainable development.

The Articles 4 and 5 of the BSBLP include, among others, the Parties' obligations in taking the "measures to protect, preserve, improve and manage in a sustainable and environmentally sound way areas of particular biological or landscape value, notably by the establishment of protected areas according to the procedure in Annex 1 to the Protocol", to ensure the species occurring in the area under the protocol meet the favourable status of conservation and habitats stay close to undisturbed, to restore and rehabilitate the damaged areas of previously high biodiversity and landscape value. The Protocol invites the Contracting Parties to make an inventory of diversity components (habitats and landscapes) in danger of being destroyed and

[3] In the period 2004-2011, the Protocol has been ratified by Bulgaria, Georgia, Romania, Turkey and Ukraine.

[4] The PEBLDS is an intergovernmental platform under the broad auspices of the UN Economic Commission for Europe's (UN-ECE) *Environment for Europe* process. Its legal framework is based on an agreement between the Council of Europe and UNEP, which provide its Joint Secretariat. The overall aim of the PEBLDS is to promote and enhance biodiversity protection in Europe, *inter alia*, through acting as an implementing arm of the Convention on Biological Diversity. The PEBLDS Council works closely with the UN-ECE and the European Commission. In PEBLDS the ***Common Vision for Europe*** is*:* After the first five years of the Strategy, there should be national biodiversity strategies and action plans for all countries of Europe to implement the Convention on Biological Diversity. In the years to follow, national ecological network action plans and networks should have been established, and a Pan-European Ecological Network should be realized, along which animal and plant species would be able to migrate freely.

those that constitutes valuable components of the Black Sea ecosystem due to their intrinsic natural and/or cultural significance.

Under the Protocol (BSBLP) provisions, the Strategic Action Plan for the Black Sea Biodiversity and Landscape Conservation Protocol was conceived as a tool for regional cooperation and synergetic actions in the long-term run on the basis of reviewed agreements and actions proposed every 5 years. This regional policy document should have become the fundament for the National plans or programmes for the conservation of biological and landscape diversity and for the sustainable use of marine and coastal living resources in each contracting party to the Bucharest Convention. However, to date, the regional Action Plan remains in draft, not being discussed by the BSC, but by the relevant Advisory Groups[5] of the BSC only. Respectively, none of the Black Sea countries have specific national SAP for the Black Sea, though closely related national strategies and programmes are in place. The Parties [to the Bucharest Convention] successfully managed to produce the "Provisional List of Species of the Black Sea Importance". As per today the list contains 95 species of algae, plants and animals (invertebrates, fishes, mammals and birds) considered rare or in danger of disappearance, whereas 126 were initially included (Annex 2 of The Black Sea Biodiversity Protocol[6]). According to Article 2 of Annex 3 to the Biodiversity Ptotocol, .."*the Contracting Parties shall adopt co-operative measures to ensure the protection, conservation and improvement of the flora and fauna listed in Annex 2 to this Protocol relating to the list of threatened species. The list shall be revised every five years and within three years of this Protocol coming into force".*

Annex 3 of the BSBLP, entitled "Conservation of Species and Management of Their Habitats", in its Art. 3 stipulates the measures in relation to exploited species. These species are enlisted in Annex IV to the BSBLP ("List of Species Whose Exploitation Should Be Regulated by the Black Sea Biodiversity and Landscape Conservation Protocol"). Annex IV is elaborated, and the same as for Annex II, it should be refularly revised every 5 years. The BSBLP includes also provisions for: exemption from protection and conservation measures, as necessary, and where appropriate in cases of traditional activities of local communities (criteria are enlisted[7]), the duty to inform the public on the value of protected areas, promote public participation and information on the Protocol; for the Parties to provide financial support according to

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[5] Six Advisory Groups (http://www.blacksea-commission.org/_directory.asp) advise the Black Sea Commission and its Secretariat. An Advisory Group consists of two representatives from each of the six Black sea countries, acting also as an intermediary between the Commission and the national authorities and other stakeholders in their respective countries. The Advisory Groups are an integral part of the institutional structure of the Commission and function as specialized subsidiary bodies. In many ways, they are to serve not only as specialized technical bodies but also as the "eyes and ears" of the Commission so as to promote more harmonious implementation of policy and consequently advance the objectives of the Bucharest Convention, its Protocols and the BS SAP.

[6] Criteria used for compiling the ANNEX 2 List of Species of the Black Sea Importance:
The 5 categories of species that fall under IUCN criteria: extinct (EX), extinct in the wild (EW), critically endangered (CR), endangered (EN), and (vulnerable VU) - species shall form these group of species if they are defined in the Black Sea Coastal States
The species for which conservation status is legally defined. The National Red Data Books as one of the information source for species status are not available in all Black Sea Coastal states and have different legal status. In those countries where the Red Data Book does not have legal power the national legislation exists on protected species.
Rare species inventory for which are available in the Black Sea coastal states could form another group of candidate species of the Black Sea importance.
Species that are currently protected by international agreements, like Bern Convention, ACCOBAMS, etc.
Annex 2 is every

[7] Art. 8.1: No exemption which is allowed for this reason shall:
endanger either maintenance of landscapes of high aesthetic value or the ecosystems protected under this Protocol or the biological processes contributing to the maintenance of those ecosystems;
cause a substantial reduction in the number of individuals making up the populations of species of flora and fauna, in particular threatened, migratory or endemic species, destruction of their habitats or landscapes, especially ones of regional importance;
cause an irreversible damage of the landscapes constituting the nature, cultural, historical, or aesthetic heritage of the Black Sea importance.

the capabilities, and the requirement for the Parties to cooperate *in conducting scientific research, undertake joint scientific programmes and projects. The Parties* are *also required to adopt the necessary measures to prevent or regulate the international or accidental introduction of non-indigenous species or genetically modified organisms, the use of environmental impact assessments, making express reference to using criteria and objectives to be regionally developed pursuant to the Convention and international experience* …giving as an example the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention).
Under the BS Biodiversity Protocol and multilateral international obligations of the Black Sea coastal states in protection of the Black Sea Cetaceans (ACCOBAMS, IWC, Convention on Protection of Biodiversity), the BSC facilitated the development of a *Plan for Protection and Recovery the Black Sea Cetaceans*[8] (shortly named Cetaceans Plan) in close cooperation with ACCOBAMS, and initiated its implementation with major attention to:
Establish the stranding network for the cetaceans of the Black Sea;
Organize a Black Sea network of rescue and rehabilitation centres for the Black Sea cetaceans.

The Cetaceans Plan remains unadopted by the BSC, however, some of its most important targets were incorporated in the new BS SAP2009.

Main objectives and actions proposed through Strategic Action Plan for the Black Sea Biodiversity and Landscape Conservation Protocol (BSBLCP-SAP)

In the chapter **"Biodiversity and Habitat Conservation",** the general objectives and specific actions of the Plan are presented. Initially, some of them had as deadline the 2007-2008 period (e.g., the actions stipulated in Objective 1).

Objective 1: "to prevent appearance of new threatened species and to halt losses of currently known threatened species and destruction of their habitats by 2010"

- **inventory of species inhabiting the BSBLCP Area**, create an on-line Register of these Species and establish mechanism for its regular update;
- **prepare inventory of habitats of the BSBLCP Area based on agreed classification (e.g. EUNIS), improve habitat monitoring and develop habitat mapping based on regionally agreed methodology;**
- identify **species status according to IUCN criteria and species protected under national legislation**
- **develop criteria for identification of species and habitats of Black Sea** importance, prepare Lists (Annex II to the Protocol and Part II of the BS Red Data Book, respectively) and outline priorities for regional action in species and habitat conservation and protection;

[8] The Plan has been developed in 2006, it is not yet adopted by the BSC, however, relevant activities at the national and regional level are traced and reported by the BSC to ACCOBAMS on an annual basis.

- establishing regional procedure for regular revision of Annex I and Annex II to the Protocol;
- publish the **Black Sea Red Data Book of Species and Habitats** and establish a regional mechanism for its regular update;
- according to established priorities for action in preservation and rehabilitation of Black Sea species and habitats to develop and implement corresponding protection/recovery plans and establish procedure to trace their implementation.

Objective 2 of the BSBLCP-SAP is referring to the *management of existing protected areas paying a particular attention to marine protected areas.*

The right way to do this is by enlarging the networks of Black Sea Reserves, by promoting the designation of national and Transboundary MPAs. Respectively, the need for regionally agreed methodological guidelines for identification, designation and management of MPAs is mentioned.

An ambitious target is to introduce and promote the use of economic incentives for management of human activities carried out within the protected areas, so far poorly handled in national legislation/policy related to nature conservation. To introduce and promote the use of economic incentives do not need a special plan, they have to be incorporated in environment protection policies, e.g. in MPAs management plans.

One of the most important actions coupled with the purposes of MPAs is mentioned in the following paragraph:
"integrate the system of protected landscapes, Biosphere Reserves, National Parks and other types of protected areas with existing international initiatives aiming at establishing a Pan-European Ecological Network ("the PEEN") under the auspices of the Pan-European Biological and Landscape Diversity Strategy ("the PEBLDS") and complimenting existing national initiatives on ecological networks"

The accomplishment of this very important action would bring a common "language" among different types of protected areas from different countries or regions and above all would create real vast and ecologically functional interconnected ecosystems.

Objective 3 of the BSBLCP "Restore and Rehabilitate Damaged Areas of Previously High Biodiversity Value" shows very pragmatic actions, but as has been for long time experienced in the Black Sea countries, the lack of resources and high anthropogenic pressures, and different political and socio-economic interests are the main barriers to accomplishment of this objective. Of course, the ecological state of the Black Sea, affected in the past and which is still of concern, requires a lot of investments and hard work to manage the damage incurred. What should be the level of protection needs to be better substantiated for all areas of concern (e.g. areas of no-use, etc., see IUCN categories: http://www.unep-wcmc.org/iucn-protected-area-managementcategories_591.html).Indicators). The practices developed through the EC WFD, Habitats and Birds Directives, and MSFD can be recommended for wider use in the BS region so that to achieve common understanding of GES (good environment status) and targets, and hence, programmes of measures.

Objective 4: "*Promote ecosystem-based management of environmental protection in the area of the Protocol in particular in exploitation of living marine resources by introducing sustainable practices and eliminating harmful practices".*

This objective could be called the "secret recipe of a successful management" of the MPAs because it takes into account the human element (ecosystem-based approach in management). Basically, humans are the beneficiaries but also the "disrupting" elements into the nature. Therefore, judicious integration of a local community in the plans of management should employ the proactive approach by putting humans in the role of "legitimate" defenders of biodiversity values.

The actions planned are meant to give a concrete orientation toward biodiversity protection and assessment of efficiency of measures taken by developing biodiversity quality objectives and relevant ecological criteria (e.g. criteria on GES) to be also used in environmental impact assessments (EIA). The activities are recommended to go in close collaboration with the Convention on Biological Diversity, Espoo Convention and Pan-European Biodiversity and Landscape Conservation Strategy. The need for promotion of ICZM and development of BS regional procedure for EIA in transboundary context is also mentioned. The latter would constitute a valuable tool to assess the possible consequences and ensure prevention, in cases of large projects with potential for transboundary impact, in line with the obligations under the Espoo Convention, to which Turkey and Russian Federation are not signatories.

Note: Such Guideline has been developed by the BSC PS (Permanent Secretariat) in cooperation with the Secretariat of the Espoo Convention; however, it stays non-adopted by the BSC.

The sub-chapter 5.3 of the Action Plan is about Landscape Conservation which contains two major objectives and several actions, some of them directly related to the **marine landscapes** and regards among others:

In close cooperation with the **European Landscape Convention**, to review strategies, objectives, actions/measures, criteria, assessment methodologies and assessments, etc. related to landscapes and their conservation in general, and specifically for the Black Sea coast and coastal waters to subsequently formulate priority conservation actions for the Black Sea landscapes by the year 2015.

Note: Initially, this action must have been completed by the year 2007. Later, the year 2015 was proposed as a deadline.

"improve the cross sectorial cooperation for the purposes of landscape conservation by promoting Integrated Coastal Zone Management in particular land use planning and zoning" based on a regionally agreed methodology.

Note: such methodology is developed but stays non-adopted by the BSC.
In the sixth chapter: **"General Tools"** of the BSBLCP-SAP 5 operational methods/instruments are presented in order to "to maintain the Black Sea

ecosystem in a good ecological state and its landscape in favourable conditions" while socio-economic development in the region is also pursued:

a) **Ecosystem Approach to the management of** environment protection[9]. This assumes the *"identification and designation of* ***special areas and measures of conservation*** *that will have impact on diverse sectorial activities, and set up the process for the integration of nature protection measures into other areas of policies of the Contracting Parties; to* establish ecosystem benchmarks, targets *and/or quality objectives to ensure conservation of biodiversity and sustainable use of bio resources; to support the ecosystem approach by a co-ordinated science and advisory process that provides information on all relevant impacts implying creation of mechanism for integration of science in a wider scope of reporting".* However, the compensatory or incentives measures for nature protection and existing best available practices for different sectorial activities are not specifically suggested while they may be worth mentioning.

b) **Integrated Coastal Zone Management.** The BSBLCP-SAP identifies the ICZM as one of the main tools to be applied in its implementation. However, there is no mentioning of other closely related tools such as maritime spatial planning, which has become a key area of development in Europe, and is paid due attention in other regional seas programs.

c) **Biodiversity and Landscape Monitoring and Assessment Programme.** The Objective 7 within the third tool of the BSBLCP-SAP brings the obligation to assessing the impacts of human activities, which is also recognised as a must by the EC WFD, MSFD, Habitats and Birds Directives. Further the Plan stipulates the need "comprehensive and up-to-date presentation of the Black Sea biodiversity state to appear in Pan-European assessments". One of the most important actions foreseen in the BSBLCP-SAP for the accomplishment of this objective was to: Develop and implement the Biodiversity and Landscape Monitoring Programme (environmental and compliance) as an integral part of the Black Sea Integrated Monitoring and Assessment Program (BSIMAP) with particular attention to development of proper indicators and harmonization of methodologies for assessment of status of species, ecosystems, habitats, and landscapes and trends in their evolution.

d) **Public Awareness and Public Participation** sensu the Aarhus convention, http://www.unece.org/environmental-policy/treaties/public-participation/aarhus-convention.html, recognising that both, public participation (bottom-up control) and public awareness are essential to advance biodiversity protection and conservation, especially in areas designated as protected.

e) **Scientific Research and Education and Information Exchange.** The knowledge-based decision-making is recognised as a must through development of research, capacity building/education and improved information exchange, as

[9] **Ecosystem approach** is based on a multi-species framework, where emphasis is on long-term sustainability, integrating human activities and conservation of nature, including political, economic and social values, and should propose solutions which are socially acceptable. It is also important to recognise that it is human activities that we are able to manage, not ecosystems *per se*.

the latter is a serious problem in the Black Sea region due to the historical legacy of 'conspiracy' in the field of marine science as well as else where.

More specific targets established through the BSBLCP-SAP go indirectly along with the objectives of Natura 2000, though there is no specific reference to this network.

The provisions of the Black Sea Biodiversity and Landscape Protocol related to MPAs/Natura 2000 sites and progress in their implementation

In the EU Biodiversity action Plan [COM(2006)216 final], Natura 2000 is seen as one of the key instruments for biodiversity loss halting and for preservation of ecosystems' social, economic, cultural, and ecological services. The request addressed to the Member States and the Community is to:

1. Finalise the Natura 2000 Network by ensuring that every country (particularly the new Member States) proposes sufficient sites in their territory to safeguard the listed habitats and species across their natural range in the EU;
2. Designate, protect and effectively manage terrestrial Natura 2000 sites by 2010, and marine sites by 2012 to ensure that the species and habitats are maintained or restored to a favourable conservation status and their long-term conservation management is secured;
3. Ensure adequate funding to manage the sites over the long-term, *inter alia*, through EU funds and through greater integration of conservation management needs in other land use activities.

Even before its entry into force in 2011, the implementation of the *Black Sea Biodiversity and Landscape Protocol* has been initiated by the Black Sea Commission through its Secretariat. Actions, listed in **the draft Biodiversity SAP** were attended as follow:

- In May 2007 the European Environmental Agency-EEA-Topic Centre for Biodiversity- and the BSC jointly organized a workshop on Habitats Classification and Mapping where a **List of Black Sea Habitats** was developed.
- The "**Lists of Species of Black Sea Importance"** and the **"Species which exploitation shall be regulated"** were developed and are being regularly updated (as mentioned above, Annexes II and IV to the BSBLP).
- **Mapping of habitats** was undertaken (fish nursery grounds, spawning areas, etc.; sensitivity areas mapping), as a **step towards designation of Marine Protected Areas (MPAs) in the Black Sea**. New species were added to the List of species whose exploitation should be regulated under Annex 4 of the Protocol [The Black Sea Biodiversity Protocol]. In accordance with the Protocol and SAP the Black Sea Commission also worked toward harmonization of **methodologies used in the region for the collection and analysis of plankton and zoobenthos samples**. Guidelines were developed and promoted for wider use in the Black Sea region.
- In relation to **designation of marine protected areas**, including **transboundary areas**, an area in between Bulgaria and Romania, Vama Veche to Cape Kaliakra, has been proposed as a site for a transboundary marine protected area. Furthermore, in 2009 the *Phyllophora* field of Zernov in the north-western part

of the Black Sea, located in Ukrainian waters, was designated as marine protected area.

- In its aim to develop a network of marine protected areas in the Black Sea, the Black Sea Commission in cooperation with the EuropeAid Project ECBSea (http://www.enpi-info.eu/maineast.php?id=140&id_type=9) had developed **guidelines** [Guidelines for the Establishment of Marine Protected Areas in the Black Sea, Draft 2008].
- The first regional **Black Sea Red Data Book** was published in 1999 with 158 species. Its update is in process, with a total of 259 species enlisted so far. Their status is identified based on IUCN criteria. The revised regional Red Data Book will be published soon on the webpage of the BSC.
- In addition, the BSC conducted a Feasibility Study for an ICZM instrument to the Bucharest Convention. According to the conclusions of the study, the Black Sea region should develop a number of "soft law" legal instruments such as an ICZM Declaration, a Code of Practice (ICZM Guidelines) and an Action Plan. In the long-term (5-10 years), the study suggested that the BSC could consider developing a legally binding instrument, most likely in the form of a protocol to the Bucharest Convention.

Strategic Action Plans for the Environmental Protection and Rehabilitation of the Black Sea

The first Black Sea Action Plan elaborated in 1996 (amended in 2002) *("Strategic Action Plan for the Rehabilitation and Protection of the Black Sea"* - http://www.blacksea-commission.org/_bssap1996.asp) was focused on 3 programmatic policy actions (reduction of pollution, living resources management, sustainable human development), which reiterate the main concerns regarding biodiversity protection and conservation (1996 BSBLSAP, chp. III).
A series of specific actions were foreseen to be happening between 2005-2007 years[10], but little progress was made. Besides at that time, the Biodiversity Protocol was not yet ratified and the Action Plan remained non-finalized and non-adopted. Unfortunately, the ratification of the Protocol has not yet lead to revision of the already outdated Action Plan and its promotion for implementation. However, a new regional Strategic Action Plan was developed, incorporating biodiversity operational targets. The new SAP2009 is based on the findings of the TDA2007 (http://www.blacksea-commission.org/_publications-GEF.asp), the BS SoE2008 (for the period 2001-2006/7, http://www.blacksea-commission.org/_publ-SOE2009.asp), and the national and regional Gap Analysis reports2009 (for the period 2002-2007, http://www.blacksea-commission.org/_publ-BSSAPIMPL2009.asp) of the previous SAP1996.

[10] The first draft of the Plan contained actions specified for the period 2003-2005, however, while amending it the BSC PS changed the period to 2005-2007, which obviously have to be now changed for 2013-2020, taking into consideration the few operational targets already accomplished.

2009 Black Sea Strategic Action Plan[11]

However, in spite that the objectives of biodiversity conservation are stipulated in the BS Biodiversity Protocol and are reiterated specifically in the *2009 Black Sea Strategic Action Plan (BS SAP)* (http://www.blacksea-commission.org/_bssap2009.asp), the signatory countries still have a long way further to go in achieving them. *The 2009 SAP* was elaborated from consensus reached at a multinational level in relation to a series of proposals that include: Ecosystem Quality Objectives (EcoQOs); short, medium and long term targets; and legal and institutional reforms and investments necessary to solve main environmental problems identified within the 2007 BS Transboundary Diagnostic Analysis (TDA2007, http://www.blacksea-commission.org/_publications-GEF.asp). Four major objectives are proposed to sustain the improvement of Black Sea environment. One of them (EcoQO 2) and its subsidiary objectives are specifically addressed to conservation of Black Sea biodiversity and habitats.

EcoQO 2: Conservation of Black Sea Biodiversity and Habitats
EcoQO 2a: Reduce the risk of extinction of threatened species
EcoQO 2b: Conserve coastal and marine habitats and landscapes
EcoQO 2c: Reduce and manage human mediated species introductions
A positive step was the establishment of monitoring tools and measurable qualitative and quantitative process, stress reduction and environmental state indicators (Table 1) to track the progress of SAP implementation at the level of Black Sea countries.

Table 1. Process and stress reduction indicators within the EcoQO 2: Conservation of Black Sea Biodiversity and Habitats (source: *2009 Black Sea Strategic Action Plan*)

EcoQO 2: Conservation of Black Sea Biodiversity and Habitats	**Process Indicators**
	1. Official recognition by the BSC and all national governments of the Black Sea Red Data book 2. ICZM Guidelines developed and supported by regional ICZM Declaration 3. Increasing number of policies or legislative acts reflecting ICZM principles 4. Development of an inventory, classification and mapping system for BS habitats 5. Level of harmonization with provisions of the BWM Convention (International Convention for Control and Management of Ships' Ballast Water and Sediments)
	Stress Reduction Indicators
	1. **Number and total area of Protected Areas** 2. **Surface area of buffer zones** 3. Number of EA/EIA/SEA procedures used 4. Number and area of illegal dumping sites cleaned-up 5. Number of new projects to install solid waste handling facilities

[11] The 1996 BS SAP was revised and the new regional SAP was adopted by the Black Sea coastal states in April 2009.

The status of conservation foreseen to be achieved within NATURE2000 sites in the Black Sea depends not only on Bulgaria and Romania, as most of the environment problems in the Black Sea are of transboundary character. Thus, the success of NATURE2000 depends also on the implementation of measures recommended through Black Sea regional legal/policy documents, following step by step the short, medium and long term activities assumed by these agreements[12]. As seen in the Table 1, a number of indicators have been proposed in the SAP2009 to trace whether conservation targets have been reached. The indicators are related to the management actions proposed to eliminate the threats and risks for the Black Sea environment. Synergy in the management actions is possible when policies are harmonised and this is explicitely mentioned in the BS SAP2009, and in the Sofia Declaration2009
(http://www.blacksea-commission.org/_sofia2009.asp#highlight_0),
as follows:

10) **co-ordinate and harmonize** where appropriate the Black Sea environmental policies with relevant regional and global initiatives and agreements in order to achieve synergy in the actions aimed at the further recovery of the Black Sea environment and contribute to sustainable development of the Black Sea coastal states

Both, the SAP2009 and the Sofia Declaration 2009 mention the importance of networking of MPAs as well:

16) **strengthen** regional cooperation in the establishment of network of protected areas, with particular attention to marine protected areas, and development and introduction of species conservation plans, inter alia marine mammals, in cooperation with relevant international organizations, in the coastal zone of the Black Sea aiming at species and habitat conservation;
Besides*, the provisions foreseen in the Habitat Directive* (Art 6) and Natura 2000 network are so universal, that they can be easily found in any other similar document dealing with protection, restoration and conservation of habitats and species, including the BS SAP2009. According to the EC Habitat Directive:

- Member States must establish the necessary conservation measures including, as needed, appropriate statutory, administrative or contractual measures which correspond to the ecological requirements of the site and management plans (Art. 6). These include appropriate measures to avoid deterioration of the site or disturbance of the species for which the site has been designated, and to clearly and precisely define and assign surveillance (Art. 11, 14) and monitoring obligations.
- Member States are required to make assessments of the potential impact of proposed activities outside a selected site to ensure that those activities do not adversely affect the integrity of the site being protected (Art. 6).

[12] In these agreements contracting parties are the 6 Black Sea coastal states – Bulgaria, Georgia, Romania, Russian Federation, Turkey, Ukraine, as mentioned already. Only BG and RO are EU-members, TR is in accession.

One of the most important provisions of the Habitat Directive requires Member States to integrate nature conservation considerations in all land use policies and actions. States are to refuse any plan or project that could significantly harm a Natura 2000 site, except for an overriding public purpose where no alternative can be found and if ecological compensation is provided (Art. 6(3), 6(4)). Such provisions are fully in line with the ICZM principle recognised in the BSSAP2009 as fundamental to improve Black Sea environment protection.

Alignment of national biodiversity strategies with EU

The first European Biodiversity strategy was adopted in 1998 with the aim to anticipate, prevent and tackle the causes of significant reduction or loss of biodiversity at the source. With the adoption of the Biodiversity Strategy, the EU Commission took the first step towards implementing its most important obligation as a Party to the United Nations Convention on Biological Diversity (CBD). The second step, foreseen in the Strategy, is the development and implementation of Action Plans and of other measures affecting the policy areas concerned. The sectoral Action Plans define concrete actions and measures to meet the objectives defined in the strategy, and specify measurable targets. Thus, in 2001 Biodiversity Action Plans were adopted, they cover the following areas: Conservation of natural resources, Agriculture, Fisheries, Economic and Development cooperation.

In May 2006, the European Commission adopted a communication on **"Halting Biodiversity Loss by 2010 – and Beyond: Sustaining ecosystem services for human well-being"**. The Communication underlined the importance of biodiversity protection as a pre-requisite for sustainable development, as well as set out a detailed **EU Biodiversity Action Plan** to achieve this.

The EU Biodiversity Action Plan [COM(2006) 216 Final[13]] addresses the challenge of integrating biodiversity concerns into other policy sectors in an unified way. It specifies a comprehensive plan of priority actions and outlines the responsibility of community institutions and Member States in relation to each. It also contains indicators to monitor progress and a timetable for evaluations. The European Commission has committed to provide annual reporting on the progress in implementation of the Biodiversity Action Plan.

On May 3, 2011, as mentioned already above, the European Commission adopted a new strategy [COM(2011) 244] to halt the loss of biodiversity and ecosystem services in the EU by 2020, with a vision for 2050: "by 2050, European Union biodiversity and the ecosystem services it provides – its natural capital – are protected, valued and appropriately restored for biodiversity's intrinsic value and for their essential contribution to human wellbeing and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided".

[13] COMMUNICATION FROM THE COMMISSION
HALTING THE LOSS OF BIODIVERSITY BY 2010 — AND BEYOND Sustaining ecosystem services for human well–being

Romania's first National Strategy for Biodiversity was elaborated in 1996 and revised in 2001. The Strategy and its associated Action Plan are, however, outdated and need urgent revision and alignment to CBD Convention, current EU policy and national priorities. Romania has only made modest steps to establish a comprehensive Clearing House Mechanism (CHM) in the areas related to biodiversity. Currently, there is a lack of cooperation among various stakeholders, there are not enough partnerships established and the scientific community is insufficiently involved in biodiversity conservation/protection.

In **Bulgaria**, the National Biodiversity Strategy was adopted in 1998, followed by two Action Plans for Protection of Biodiversity, namely 2000-2003 and 2005-2010 (the latter adopted in 2004). The Plans were approved as a tool for implementation of the National Strategy, based on ecosystem approach. The framework created by these documents is stable and very much connected with European integration and management tendencies in a global scale. This framework is supplemented by the following strategy documents:

- National plan for development till 2000 - 2006 (sector program Environment)
- National plan for priority actions for protection of main wet lands in Bulgaria
- National framework for biological protection
- National ecotourism strategy, 2003
- National forest strategy and Strategy "Sustainable development of forest sector in Bulgaria 2003-2013"
- National plan for development of agriculture and village areas 2000-2006
- National ecological program 2007-2013

Similar to the European Biodiversity Strategy, the Bulgarian policy documents are related to preservation of biodiversity, aiming at: recovery of key ecosystems, habitats, species and landscapes. The strategic aim of the National Plan 2005-2010 was to discontinue biodiversity loss in Bulgaria by 2010, with the following operational aims and planned priorities:

***Operational aims*:**

- Protection and recovery of species, habitats, ecosystems and landscape. Protection of genetic diversity and biological safety
- Integration of the problems of biodiversity in the national ecological and sector legislation and national policies and programs
- Sustainable use of biological resources
- Integration of biodiversity problems with agriculture sector
- Protection of biodiversity by sustainable forest management
- Protection and sustainable use of fish resources
- Optimization of the international trade with biological resources policy
- Sustainable tourism development
- Diminution of negative impact on the biodiversity by climate changes.

Plan priorities:

- Collection of information, preparation of measures, approaches and systems for protection, preservation, maintenance and sustainable management of biodiversity and natural resources
- Elaboration and consolidation of legislation and capacity of the implementation bodies
- Protection of the biodiversity by long term observation and assessment of trends
- Development of mechanisms, tools and measures for management of biodiversity
- Good information and science base development for effective management of biodiversity
- Development of public participation.

However, with the adoption of the new EU Biodiversity strategy in 2011, the Bulgarian Strategy became especially outdated, besides the last Action Plan covered the period until 2010 only.

Methodogical disputes on the NATURA 2000 and mpas in the world and the concept acceptance in the Black Sea region

2012 was an year with major impact on the fulfilment of obligations in conservation and protection assumed through the EU Biodiversity Strategy, meant to deal with the increasing necessity of "halting the loss of biodiversity by 2020. In the EU Biodiversity Action Plan the objectives to be reached by Natura 2000 were highlighted. Among them, having the deadline until 2012 is: to designate Special Areas of Conservation (SAC) and establish management priorities and necessary conservation measures for SACs; establish similar management and conservation measures for SPAs.

The establishment of a marine network of conservation areas under NATURE2000 is believed will significantly contribute to not only the target of halting the loss of biodiversity in the EU, but also to broader marine conservation and sustainable use objectives.

While at the European level a controversy still exists regarding the notion of protected areas within the Natura 2000 network as covering area, definition, concept, power of decision, tools or instruments of management, MPAs referring also to provisions of the Habitats and Birds Directives became a sort of interchangeable definition of the NATURE2000 in the new contexts. Now that NATURE2000 sites are considered as MPAs in many countries, the main worry is that the assessment framework would obviously not be the same to evaluate a true no-take zone within the frames of MPAs/MPAs Network and a NATURE2000 site. Undoubtedly, different types of networks need different management and assessment/evaluation frameworks.

In this report the term "MPAs" is used also referring to the NATURE2000 network, which is the status of special protected areas legally enforced under the Habitats and Birds Directives by Bulgaria and Romania.

Currently, **there is no regionally agreed definition of what constitutes an MPA in the Black Sea,** though the term is explained in the Glossary of the BS SAP2009. And, according to the UNEP-World Conservation Monitoring Centre (World Protected Areas Data Base, 2007), 132 protected areas have been designated bordering the Black Sea coast until 2007 (Figure 1).

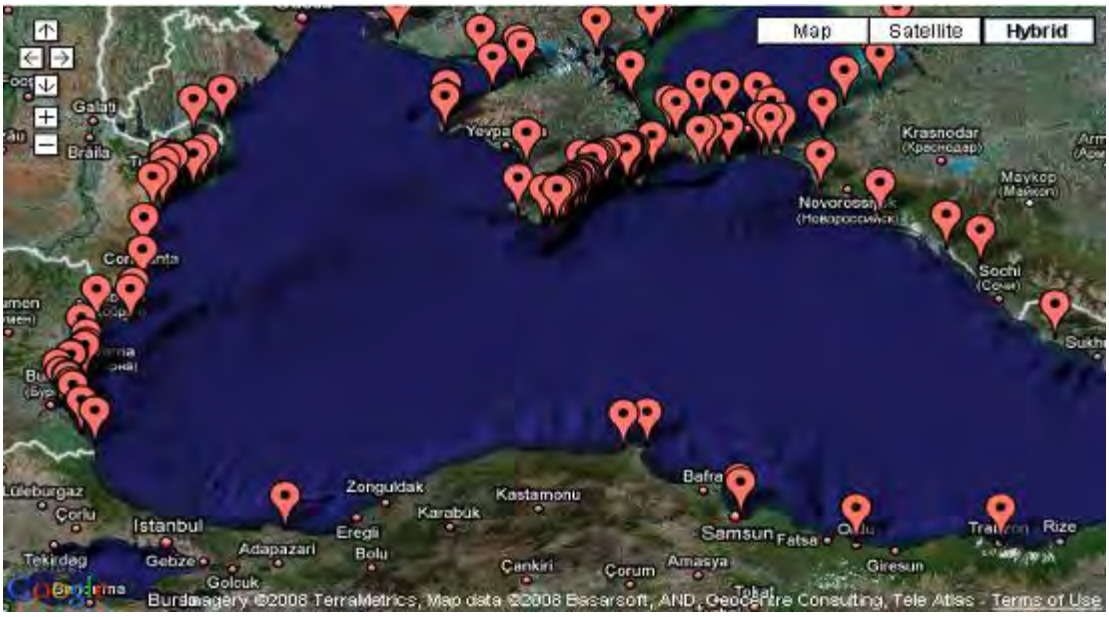


Figure 1. Black Sea Coastal (including Ramsar sites)/Marine Protected Areas reported to the BSC and UNEP-WCMC

These vary in size from scientific reserves of 1 ha up to the Danube Delta Biosphere Reserve in Romania and Ukraine with 576,216 ha[14]. The PAs are mostly wetlands (Ramsar sites), coastal lakes, and a few of them have small projections into the Black Sea itself.

The Glossary of the BS SAP2009 and the BS TDA2007 defines a *Marine Protected Area* as "an area of sea (or coast) especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means." This definition is essentially the same as the general definition of a PA adopted by IUCN (1988) but also more recently definitions place an MPA in the context of any area of sea or coast. In this sense, it reflects acceptance by the BSC of the current move away from making overly artificial distinctions or boundaries between terrestrial, coastal and marine protected areas since many protected areas include all three zones. Similarly, the IUCN PA Management Categories apply equally to terrestrial and coastal/marine areas. Of course, the conservation management issues and approaches in each zone are distinctive and these need to be recognised in the zonation of protected areas and their management plans.

[14] As per 2007, full list with names, size and year of designation of the BS PAs is given in the BS SAP Implementation Report for the period 2002-2007 (see the Annexes of this report: http://www.blacksea-commission.org/_publ-BSSAPIMPL2009.asp).

For the purposes of devising a common approach for identifying and establishing MPAs in the Black Sea, which is considered to be a single biogeographic unit, three inter-connected marine realms have been identified ("Guidelines for the establishment of the Natura 2000 network in the marine environment. Application of the Habitats and Birds Directives", 2007):

a) saline/brackish coastal wetlands and shorelines having a direct hydrological connection with the Black Sea;
b) the benthic/neritic zone from the high water mark to 120 m depth (being the approximate limit of occurrence of the polychaete worm *Notomastus profundus* and at this depth macrobenthos gives way to meiobenthos (Sergeeva and Zaika, 2000);
c) the pelagic zone beyond 120 m depth.

For NATURE2000 the "network concept" is less comprehensive than that for a MPAs network. Thus, Article 3.1 of the Directive (92/43/EEC) states "a coherent European ecological network of special areas of conservation shall be set up", and that "This network, composed of sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, shall enable the natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range". The network shall also include special protection areas classified by Member States under the Birds Directive (79/409/EEC).

Emphasizing the concept of interconnectivity, in the Article 10 of the Habitats Directive it is stipulated:
"Member States shall endeavour, where they consider it necessary, in their land-use planning and development policies and, in particular, with a view to improving the ecological coherence of the NATURE2000 network, to encourage the management of features of the landscape which are of major importance for wild fauna and flora.

Such features are those which, by virtue of their linear and contiguous structure (such as rivers with their banks, or traditional systems for marking field boundaries) or their function as stepping-stones (such as ponds or small woods) are essential for the migration, dispersal and genetic exchange of wild species."

In the chapter referring to MPAs (*Marine Protected Areas - A Multidisciplinary Approach)* in the book of Grorud-Colvert *et al*, 2011("*The assessment of marine reserve networks: Guidelines for ecological evaluation*"), a network is defined, in line with the IUCN Global Protected Areas Program and WCPA Strategic Plan 2005-2012 (http://www.iucn.org/about/work/programmes/gpap_home/gpap_wcpa/gpap_wcpaactivities/), as: *"a collection of individual marine protected areas (MPAs) or reserves operating co-operatively and synergistically, at various spatial scales and with a range of protection levels that are designed to meet objectives that a single reserve cannot achieve"* (IUCN-WCPA 2008).

In the same chapter (Grorud-Colvert *et al*, 2011), the following definitions are given:

- *Ad-hoc or Regional Networks*: an unplanned collection of reserves in a given area not established with an overall aim (e.g. all the Mediterranean & Black Sea MPAs)
- *Conservation networks*: A collection of reserves in a given area aimed at protecting conservation priority sites
- *Management networks*: A collection of reserves in a given area established to manage a marine resource and multiple human uses
- *Social networks*: A collection of reserves whose managers, practitioners, stakeholders, decision-makers, scientists, and others interact and transfer knowledge
- *Connectivity or Ecological networks*: A set of multiple reserves connected by the movement and dispersal of larvae, juveniles, or adults

The 2008 IUCN-WCPA guidelines on protected area management categories (Dudley, 2008) provide a general definition for protected areas that updates the IUCN definition issued in 1994. The guidelines indicate that all protected areas, including TBPAs (Transboundary Protected Areas), should fit within the following definition:

> *"A protected area is a clearly defined geographical space recognized, dedicated and managed, through legal and other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values"* (Dudley, 2008).

The use of MPAs with varying protection levels together with no-take zones in multiple-zoning schemes adds another layer of complexity to network design and evaluation, however, partially protected areas are generally used to manage coastal uses and avoid conflicts (rather than for strict ecological purposes) and are therefore a function of the local social, economic, and cultural context.

Quoting from the book (Grorud-Colvert et al, 2011): " The definitions of these five network types (see above) raise a new question: Can a single network achieve all of the objectives? For example, combining social networks with any of the other four management types may achieve better regional governance. If the reserves in an ad-hoc regional network, conservation network, or management network are serendipitously established in sites that are connected, they can serve as de facto connectivity networks. In fact, to effectively achieve the goals of protecting an adequate portion of a region (regional network), a particular species, set of taxa, or habitat (conservation network), and a set of fished species that are targeted in areas outside the network (management network), all network types will need to consider connectivity in order to better achieve their goals. A properly designed connectivity network should achieve the goals of regional, conservation, and management networks by ensuring that these network types are protecting a connected set of sites and species beyond just a collection of single reserves, covering an appropriate geographical gradient, and considering the needs of managed fisheries in the surrounding waters. Although multiple types of potentially non-connected reserve networks may exist, we assert that **connectivity should be a driving goal of network establishment".**

Approaches to TBPAs (Transboundary Protected Areas)

It is broadly recognized that a variety of approaches can be used to establish TBPAs. The common theme is the linkage across national or international borders. Each area presents unique challenges for cross-border cooperation because of the different legal systems, biophysical features, socio-economic systems, cultures, political approaches, land tenure arrangements and historical traditions involved.

As mentioned by the Global Transboundary Protected Areas Network, "there can be no 'cookbook' approach to transboundary conservation" (GTPAN, 2007a).

Since the 1980s, efforts have advanced to standardize the international system of defining and recording TBPAs.

IUCN-WCPA guidelines on protected area management categories (Dudley, 2008) and IUCN's two publications specifically on TBPAs (Braack et al., 2006; Sandwith et al., 2001) provide several principles for the design and management of TBPAs.

The *key management principles* of relevance for the establishing of TBPAs are "the ecology common sense" principles pursuing the achievement at globally level of good status of conservation and protection measures, including the natural intrinsic values of diversity and emerged functional ecological, social and economic services and goods.

On the first place, in the process of transboundary areas management establishing is the knowledge about the category of area to which the management is going to be applied. These categories should be in accordance with the IUCN system of protected area management.

The common aspects between neighbour countries in regard of natural sites, resources, ecosystems services, the existence of rare species or habitats, and cultural heritage must provide strong arguments in the matter of proposal of transboundary areas for protection. Above all, on the scale of ecosystem maintenance and connectivity, the TBPAs will help to better manage the biodiversity in holistic manner. There is a large recognition of the fact that areas which may integrate populations of wild species of sufficient size and equilibrate structure could sustain marine system functions and genetic diversity, and support ecological corridors and related connectivity conservation needs.

Another important aspect to keep in mind is explained in the IUCN guidelines on TBPAs:

> "*coordinated planning can reduce the risk of incompatible activities on either side of the border and ensure that the partners develop an appreciation of the relative biophysical, political, social and economic context of the protected areas*"
>
> (Sandwith et al., 2001).

The principle of stakeholder's participation: Keep the people interests stick around protected areas. Local communities should be aware of the advantages arising from the cross-countries cooperation beyond political or administrative boundaries. There

is no use to keep the nature away of people sight. On contrary, joint MPAs management implies the people from both neighbour countries will create a bridge/connection between traditions, cultures, ideas, and resources. The management should be based not only on the goods harvesting but on the goods maintaining at the local level due to decision capacity, evaluation and control of resources in a responsible and acknowledged way with a wide participation of local communities.

Key elements of this principle (stakeholders participation) include early engagement and dialogue; identification of potential problems related to customary resource rights, and disputes especially related to security and border policies; and identification of opportunities for sustainable economic development that could bring benefits to local communities in and adjacent to the TBPA.

Parties to the CBD Convention are urged to establish and strengthen regional networks of TBPAs (CBD COP 2004 VII/28, Annex, goal 1.3). A target date of 2012 was set for this goal for transboundary marine protected areas (MPAs). The CBD programme of work also calls upon Parties to cooperate with neighbouring countries to establish an enabling environment for TBPAs and similar transboundary approaches (CBD COP 2004 VII/28, Annex, activity 3.1.11).

Thus, the CBD Convention *Programme of Work on Marine and Coastal Biological Diversity* addresses TBPAs as a governance tool for marine and coastal areas management. Specifically, it calls upon Parties to build coordinating mechanisms for transboundary areas, stating:

"*Good governance will depend on having one or more bodies, each with the authority and capacity to undertake their responsibilities. When there is more than one body, including, in the case of transboundary areas, bodies in different countries, mechanisms for coordinating and integrating management will be vital*" (CBD COP 2004 VII/5, Annex II, para. 5)

I. MISIS Project Activity:

Project activity PA4.1

PA4.1. Review of the existing and planned protected areas in the Black Sea (Bulgaria, Romania, Turkey) with a special focus on possible deficiencies Protection Act, Fishing and Aquacultures Act, Genetically Modified Organisms Act, Ambient Air Quality Act, Water Act, etc.

BULGARIA

1. Legal/Policy Framework

1.1. National Level

A range of secondary legislative acts contain detailed provisions on nature protection and biodiversity conservation. The legal framework for biological diversity conservation comprises also a system of administrative and regulating instruments applied by the MOEW (Ministry of Environment and Water), MAF (Ministry of Agriculture and Forestry), MRDPW (Ministry of Regional Development and Public Works) and other institutions. These instruments serve to control, prevent and impose penalties for potential and actual violation of the law concerning the conservation of biodiversity.

Major administrative and regulating instruments include:

- Environmental impact assessment (EIA);
- Permit regime for trade with medicinal plants, endangered wild flora and fauna species and their products;
- Ensuring minimum admissible run-off in rivers to protect water ecosystems and wetlands;
- Administrative penalties imposed in the field of the environmental protection, respectively in biodiversity conservation.

Strategies and programs

The conservation and sustainable use of the biological diversity is referred to in common and sector national programs and strategies, as follows:

The National Development Plan 2000-2006 (sector program "Environment") reviews the existing nature protection legislation and the real condition of the biological diversity (types of fauna and flora and protected areas) in correspondence

with the Common European strategy for biological and landscape diversity and sets the main goal: conservation, strengthening and restoration of key ecosystems, habitats, types and peculiarities of the landscape as the priorities for the achievement of the above are set according to the level of endangerment of the biological species and the nature significant place, the significance of the activity on conservation and maintenance of the biological diversity, the obligations stemming from national legislation and the concluded international acts.

National Biological Diversity Conservation Strategy, National Biological Diversity Conservation Plan. Bulgaria is among the first countries to approve in 1998 a Strategy on Biological Diversity Conservation and a National plan for its implementation. The strategy makes an assessment of the available biological diversity; the main treats and suggests a complete program with specific protection measures while focusing on the management of land and biological resources, protected areas and regions beyond their scope, the sustainable management of biological resources, restoration of habitats and protection measures ex situ.

The first National Plan for Biological Diversity Conservation was adopted in 1999 as an instrument for implementation of the National Strategy. Based on the ecosystem approach, the plan determines priority measures for conservation and maintenance of the biological diversity, specific related actions, responsible institutions and the necessary financial resources, as well as the mechanism for coordinating the activities of the various participants in the implementation.

The National Strategy and National Biodiversity Conservation Plan for 2005-2010 were inspired by the Pan European Strategy for Biological and Landscape Diversity, and contain the same provisions. Other important policy documents in the area of biodiversity conservation/protection are:

- **National Plan for Priority Actions for the Protection of the Most Important Wetlands in Bulgaria**
- **National Strategy for Environment and Action Plan 2000-2006**
- **Strategy for Protection and Restoration of the Floodplain Forests on the Bulgarian Danube Islands** (2001) and Action Plan for Protection and Restoration of the Floodplain Forests on the Bulgarian Danube Islands 2003-2007. They are developed as part of the implementation of the Declaration for Creation of Green Corridor "Lower Danube" and represent the main policy framework for the Danube islands for the next 30 years.
- **National Ecotourism Strategy.** It was developed and adopted in 2003.
- **National Forestry Policy and Strategy "Sustainable Development of the Forest Sector in Bulgaria, 2003-2013".** They integrate biological diversity conservation.
- **National Plan for Development of Agriculture and Rural Areas** (2000-2006) under the Special EU Accession Program for Agriculture and Rural Development (SAPARD).

- The area of **Genetically Modified Organisms** (GMO) is regulated by: SG.27 / 29.03.2005

- **Law on Genetically Modified Organisms** (GMO), (SG.27 / 29.03.2005) - fully transposing the provisions of Directive 90/219/EEC on the contained use with genetically modified micro-organisms as amended with Directive 98/81/EC, and Directive 2001/18/EC on the deliberate release of genetically modified organisms and repealing Council Directive 90/220/EEC and introduces the requirements of the Cartagena Protocol for biological safety. The Law regulates contained use activities with GMO, deliberate releases and placing on the market of GMO as or in products, transboundary movements and control over the activities with GMO.

The GMO Act provides for:

- Permit regime for activities related to working with GMO under controlled conditions, releasing GMO into the environment; offering GMO on the market as products or product ingredients;
- Registration regime for the premises for working with GMO under controlled conditions;
- Control over the implementation of the activities regulated by the draft Law and strict sanction for violations.

Besides, the GMO law envisages the establishment of administrative units to the Ministry of Environment and Water and the Ministry of Agriculture and Forests to operate the GMO-related activities; and a special consultative GMO Committee to the Minister of Environment and Water.

According to the Genetically Modified Organisms Act, the control over the activities with GMO and GMO products is performed by the MAF, MOEW, MTC, Customs Agency, the Committee on Trade and Consumer Protection.

The effective control on the introduction of genetically modified organisms and conservation of local breeds and plants is a specific objective of NSEAP 2005-2014.
This objective requires a number of actions, such as:

- Strengthening of the administrative capacity through: creation of administrative units for GMO at the MOEW and MAF; creation of Consulting Committee on GMO to the Minister of Environment and Water; training of the administrative staff in applying and controlling the implementation of the requirements of the GMO Law;

- Establishment and operation of regulatory body within the National Nature Protection Service at the MOEW to control the implementation of the GMO Law;

- Undertaking of measures to conserve rare breeds and plant species;

- Assessment of invasive species to the Bulgarian flora and fauna and development of measures to limit their impact on natural ecosystems and

1.2. European Level

The European legislation on nature protection, particularly on protection of biodiversity has been almost completely transposed into the national legislation of Bulgaria.

The level of transposition of the Wild birds and Habitats Directives is high.

- Directive 79/409/EEC on the conservation of wild birds as amended by Directives 81/854/EEC, 85/411/EEC, 86/122/EEC, 90/656/EEC, 91/244/EC, 94/24/EC and 97/49/EC ("Wild Birds Directive")

The main transposing acts are the Biodiversity Act of 2002 and the Hunting and Game Protection Act of 2000. The Wild birds Directive is implemented since 2003. The few obligations still in the process of being implemented concern the designation of special protection areas (SPAs) (Article 4) and the establishment of information systems to report to the Commission. Full implementation of these is foreseen to be achieved soon.

- Directive 92/43/EC on the conservation of natural habitats and of wild fauna and flora as amended by Directive 97/62/EC ("Habitats Directive")

The Directive, except for three definitions, is transposed by the Biodiversity Act of 2002 and the Regulation on the conditions and order for issuance of permits for introduction of non-native or reintroduction of native animal and plant species into the nature of 2003.

A partial assessment at national level of the existence and location of sites hosting the natural habitat types listed in Annex I to the Directive and the species listed in Annex II, which are native to the national territory, has been undertaken by a DANCEE project (2002-2004). Initially 309 potential **NATURA 2000 sites** have been identified. The process continued in the period 2005-2012 till a comprehensive assessment was completed. This phase was nationally funded.

- Regulation 338/97/EC on the protection of species of wild fauna and flora by regulating trade therein, as amended by Regulations 1497/2003/EC and 834/2004/EC ("Endangered Species Regulation"), also considering Regulation 1808/2001/EC laying down detailed rules concerning the implementation of Council Regulation 338/97/EC and Regulation 349/2003/EC suspending the introduction into the Community of specimens of certain wild fauna and flora

This regulation is implemented, except for the establishment of a mechanism to regularly communicate information to the Commission (Article 15).

1.3. International Cooperation/Agreements

Bulgaria is one of the most biologically diverse countries in Europe, hence nature protection is among the major priorities of the national environment policy. Biodiversity conservation activities at national level are combined with international ones. Bulgaria has signed and ratified a large number of global, European and regional conventions, most important among them being:

- Convention on Biological Diversity,
- Convention on the Conservation of European Wildlife and Natural Habitats (Bern);
- Contention on International Trade with Endangered Species (CITES);
- Convention on Wetlands of International Importance as Habitat of Wild Birds (Ramsar);
- Convention on Protection of World Cultural Heritage;
- Convention on the Protection of the Black Sea Against Pollution and the Protocol on Biodiversity and Landscape Conservation;
- Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), ratified, State Gazette 87/5 October 1999, in force since 1 June 2001, State Gazette 95/8 October 2002.

Etc.

Bulgaria has long established traditions in nature conservation and well-functioning administrative system in this area (see further Institutional settings). In general, Bulgaria complies with international commitments undertaken, though measures in practice are not always taken in due course due to financial constraints.

Although no specific bilateral agreements on nature/biodiversity conservation have been signed, the issue is among the priority areas for cooperation identified in virtually all bilateral agreements on environmental protection signed by Bulgaria in the last 20 years.

2. Institutional Settings/Stakeholders

Several state bodies have management and control functions relating to biodiversity conservation and sustainable use of natural resources.

The Ministry of Environment and Water draws up and implements state policy in the field of the environment, including biological diversity. In March 1994, a National Nature Protection Service was established in the MOEW as a specialized body for management, control and protection of biological diversity, protected areas and natural ecosystems. The Executive Environment Agency is responsible for biodiversity monitoring, as this is an element of the National Environmental Monitoring System. Regional bodies of the MOEW with responsibilities on biodiversity conservation are the Directorates of the three National Parks and the 15 Regional Inspectorates for Environment and Water.

The Ministry of Agriculture and Forests (MAF) implements the state policy in the field of agriculture, forestry, hunting and fishing industry. The Ministry itself or through its National Forestry Administration is responsible for the protection, preservation, recovery, use and conservation of protected areas in state owned forests and for management of natural parks.

The following structures in the MAF have functions related to protection of biodiversity, more particularly to the agricultural ecosystems: the National Service on Plant Protection, Quarantine and Agro-Chemistry, the National Medico-Veterinarian Service, the National Service on Selection and Reproduction in Livestock, the Control and Technical Inspectorate, the Executive Agency on Fishing and Aquaculture, etc., as well as Regional Directorates on Agriculture and Forests. The scientific institutes and complex experimental stations in the Agricultural Academy develop studies and carry out research and in the field of biological diversity conservation.

The National Forestry Administration has established administrative units for management of natural parks in the country. The Regional Forestry Offices and the State Forestry Units are bodies of the National Forestry Administration. Their functions are to organize, coordinate and control the reproduction, use and protection, design and construction activities in forests and lands from the state forest fund, including in protected areas without national parks, reserves and controlled reserves.

The Ministry of Regional Development and Public Works, in cooperation with other state bodies, ensures the conditions for effective use of land, energy and other resources, and for the sustainable regional and local development.

Local authorities develop specific and detailed environmental programs, report on violation of legislation and collaborate with central government institutions in the process of regional planning and urban development.
In addition to the above mentioned bodies, other governmental institutions are also involved in biodiversity conservation: Ministry of Finance, Ministry of Economy, Ministry of Transport, Ministry of Education and Science (the latter through training and contribution to public awareness, as well as supporting projects through its Projects Fund).

There is good communication between MOEW and MAF at the governmental level. The situation with the other state institutions is not so favourable mainly due to the fact that biodiversity is not a priority issue for them.

Coordination among stakeholders may be considered the best between the MOEW, the scientific community and NGOs. Business and private landowners may be considered almost fully outside the coordination efforts, both due to the lack of interest on their side and the inability of MOEW or other biodiversity concerned parties to attract their attention.

The control on the work with GMO is performed by the MOEW, MAF, MH (Ministry of Health) and MLSP (Ministry of Labour and Social Policy) within their competencies.

According to the GMO Act the Minister of Environment and Water is the competent authority for the issue, change or taking away of permits for work with GMO and registration of facilities for work with GMO under controlled conditions. In his/her activity the Minister is assisted by a consulting body, Commission on Genetically Modified Organisms, comprising experts of the stakeholder state institutions and scientific organizations.

The List of Stakeholders (PAs-related issues, biodiversity protection/conservation, in general) is presented in Annex I.

ROMANIA

1. Legal/Policy Framework

1.1. National Level

National Biodiversity and Action Plan (NBSAP) - in order of priority, the biodiversity objectives established for Romania include: the development of the legislative framework and institutional capacity; organization of national network of protected areas; conservation of species with a high economic value; integration of the NBSAP into national, sectoral and local strategies and policies; and the protection, conservation and restoration of biodiversity outside protected areas. Draft Action Plan specifically for the BS is under discussion.

1.2. European Level

Specific national legislation in response to EU harmonisation requirements includes the following main regulations and laws:

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora
Amended by 31997L0062, Amended by 32003R1882, Implemented by 31997D0266

- EGO No 236/24.11.2000 (OJ No 625/04.12.2000) regarding the protected natural area regime, conservation of natural habitats, wild flora and fauna approval by Law No 62/18.07.2001 (OJ No 433/02.08.2001) modified by Law 345/2006 and L 49/2011 (OJ 262/2011) which approves EGO 57/2007 modified through EGO No 154/12.11.2008 (OJ No 787/25.11.2008) and modifying the Law of Hunting and Forestry Fund No 407/2006
- Decree No 187/30.03.1990 (OJ No 46/31.03.1990) -ratifying the Paris Convention on Protection of World Cultural and Natural Heritage
- Law No 5/25.01.1991 (OJ No 18/26.01.1991) ratifying the Convention on wetlands of international importance especially as waterfowl habitats (ref. To Ramsar Convention, 1971)
- Law No 13/11.03.1993 (OJ No 62/25.03.1993) -ratifying the Convention on the Conservation of European Wildlife and Natural Habitats (ref. to Bern Convention, 1979)
- Law No 82/20.11.1993 (OJ No 418/27.07.2001) on setting up the Danube Delta Biosphere Reserve modified through EGO No 112/2000 and L No 454/2001 (OJ No 283/7.12.1993)
- Law No 58/13.07.1994 (OJ No 199/02.08.1994) ratifying the Convention on Biological Diversity (ref. To Rio de Janeiro Convention, 1992)
- Environmental Protection Law No 137/29.12.1995 (OJ No 70/17.02.2000), republished amended by EGO No 91/20.06.2002 (OJ no 465/28.06.2002) approval by Law No 294/27.06.2003 (OJ No 505/14.07.2003)
- Law No 26/24.04.1996 (OJ No 93/08.05.1996) - Forestry code
- Law No 103/23.09.1996 (OJ No 328/17.05.2002) on hunting fund republished in 2002 (Law No. 654/18.07. 2002

- Law No 13/08.01.1998 (OJ No 24/26.01.1998) -ratifying the Convention on the Conservation of Migratory Species of Wild Animals (ref. to Bonn Convention, 1979)
- Law No 5/06.03.2000 (OJ No 152/12.04.2000) on the territorial planning use - section III protected areas
- Law No 90/10.05.2000 (OJ No 228/25.05.2000) on the ratification of the European Agreement of the Conservation of Bats (London 1991)
- Law No 91/10.05.2000 (OJ No 239/30.05.2000) on the ratification of the International Agreement of the Conservation of Cetacean in The Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS)
- Law no 45/08.07.2002 on the (OJ No 536/23.07.2002) ratification of the Landscape European Convention, Florence 20.10.2002
- GD No 230/04.03.2003 (OJ No 190/26.03.2003) on the delimitation of the biosphere reserves, national parks and natural parks and the setting up of their administrations
- MO No 850/27.10.2003 (OJ No 793/11.11.2003) on procedure of entrustment of administration and custody of the protected natural areas
- MO No 552/26.08.2003 (OJ No 648/11.09.2003) on approval of the internal zoning of natural and national park from biological diversity conservation point of view
- MO No 246/22.07.2004 (OJ No 732/13.08.2004) on cave classification-natural protected areas
- MO No 374/03.09.2004 (OJ No 849/16.09.2004) on the approval of the Action Plan regarding Cetaceans Conservation from Black Sea, Romania waters
- GD No 2151/30.11.2004 (OJ No 38/12.01.2005) on setting up the protected natural area regime for new zones
- EGO No.195/2005, modified and completed with EGO 164/2008
- GD No 1586/2006 regarding the including of some protected areas into the category of wetlands of international importance
- GD No 1529/2006 for the modification of Annex 1 at the GD No 230/2003 regarding the delimitation of Biosphere Reservations, Natural Parks, and Natural Reserves, and constitution of their administration
- Order No 1964/2007 for the constitution of natural protected areas regime of community interest sites, as integrated part of Natura 2000 network in Romania, modified with Order No 2387/ 29.09.2011 (OJ No 846/29.11.2011)
- Law No 314/2007 (OJ No 3/3.01.2006) for the adhering of the Romanian Government to the International Convention regarding the whales hunting (ref. Washington Convention and protocol)
- Law No 46/19.03.2008 (OJ /13.07.2009) - Forestry code modified with L193/2009 and L271/2009
- GD No 1679/2008 regarding the procedure of Framework Directive For the Marine Environment Strategy (2008/56/CE) transposed through the Law 6/2011 for the approval of EGO 71/2010 regarding the establishes of marine environment strategy
- Order No 203/14/ 5.03.2009 regarding the Procedure for the setting up derogations from the protection measures of wild flora and fauna
- Law No 317/2009 for the approval of the EGO No 23/5.03.2008 regarding fishing and aquaculture
- Order No 135/2010 for the approval of Methodology of application of EIA for the public and private projects

- Order No 19/2010 for the approval of Methodology for Appropriate Assessment of potential effects of plans and projects on the community interest natural protected areas
- Law No 218/28.11. 2011 for the ratification of the Protocol for the biodiversity conservation and natural landscape of the Black Sea (Sofia, 14.06. 2002) (ref. to 1992, Bucharest Convention)

Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds
Amended by 31994L0024, Amended by 31997L0049, Amended by 32003R0807

- EGO No 236/24.11.2000 (OJ No 625/04.12.2000) regarding the protected natural area regime, conservation of natural habitats, wild flora and fauna approved by Law No 462/18.07.2001 (OJ No 433/02.08.2001)
- Decree No 187/30.03.1990 (OJ No 46/31.03.1990) -ratifying the Paris Convention on Protection of World Cultural and Natural Heritage
- Law No 5/25.01.1991 (OJ No 18/26.01.1991) ratifying the Convention on wetlands of international importance especially as waterfowl habitats (ref. To Ramsar Convention, 1971)
- Law No 13/11.03.1993 (OJ No 62/25.03.1993) -ratifying the Convention on the Conservation of European Wildlife and Natural Habitats (ref. to Bern Convention, 1979)
- Law No 82/20.11.1993 (OJ No 418/27.07.2001) on setting up the Danube Delta Biosphere Reserve republished in 2001
- Law No 58/13.07.1994 (OJ No 199/02.08.1994) ratifying the Convention on Biological Diversity (ref. To Rio de Janeiro Convention, 1992)
- Environmental Protection Law No 137/29.12.1995 (OJ No 70/17.02.2000), republished amended by EGO No 91/20.06.2002 (OJ no 465/28.06.2002)
- Law No 294/27.06.2003 (OJ No 505/14.07.2003)
- Law No 26/24.04.1996 (OJ No 93/08.05.1996) -Forestry code
- Law No 103/23.09.1996 (OJ No 328/17.05.2002) on hunting fund and game protection, republished
- Law No 13/08.01.1998 (OJ No 24/26.01.1998) -ratifying the Convention on the Conservation of Migratory Species of Wild Animals (ref. to Bonn Convention, 1979)
- Law No 5/06.03.2000 (OJ No 152/12.04.2000) on the territorial planning use - section III protected areas
- Law No 89/2000 (OJ No 236/30.05.2000) for the ratification of the Agreement regarding the African-eurasiatic waterbirds
- GD No 1284/2007 (OJ No 739/31.10.2007) regarding the declaration of avifaunistic special protected areas as part of the Natura 2000 network in Romania

Council Regulation (EC) No 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade therein

- Amended by 32001R1579,
- Amended by 32001R2476,
- Amended by 31997R2307,
- Amended by 31998R2214,

- Amended by 31999R1476,
- Amended by 32003R1497,
- Amended by 32003R1882,
- Implemented by 32001R1808

  - Law No 69/15.07.1994 (OJ No 211/12.08.1994) ratifying the Convention on the International Trade with Endangerous Species of Wild Fauna and Flora (CITES) (ref. to Washington Convention, 1973)
  - MO No 117/05.05.2003 (OJ No 326/14.05.2003) for the modification of the Annex No 12 at the Authorization Procedure of the activities of harvesting, seizing and/or acquisition and trading on the domestic market of the plants and animals from the wild flora and fauna.
  - Order No. 255/2007 regarding the measures for the application of UE regulations on wild flora and fauna trade.
  - Order no. 410/2008 (OJ 410/11.04 2008) for the approval of the authorization procedures for the harvesting, seizing, acquisition activities and trading on the external or internal market and import of plants and animals from wild fauna and flora

1.3. International Cooperation/Agreements

Romania is a party to numerous conventions and bi- or multilateral agreements (Table 2) having relation to biodiversity conservation:

Table 2. List of conventions dealing with biodiversity, nature protection and climate change

Convention related to the subject	Romania year of signing
Ramsar Convention on wetlands	1991
Convention on Biological Diversity	1994
Bern Convention on Conservation of European Wildlfe and Natural Habitats	1993
CMS/Bonn Convention on the Conservation of Migratory Species	1998
AEWA CMS Agreement on Conservation of African-Euroasian Migratory Waterbirds	2000
Eurobats CMS Agreement on the Conservation of Bats in Europe	2000
ACCOBAMS CMS Agreement on the Conservation of Cetaceans	2000
International Convention on the Protection of the Birds	
WH Convention on the Protection of the World Cultural and Natural Heritage	1990 Protocol 2000
Helsinki Convention	1995
Lower Green Danube Corridor Agreement	2001
Convention Concerning Fishing in the Waters of the Danube	1958 amended in 1979
Danube Convention on Navigation	1948
Convention on the Law of the Sea	1996

Convention related to the subject	Romania year of signing
International Convention for the Prevention of Pollution from Ships	1993
Bucharest Convention	1992
European Landscape Convention	2002
Carpathian Convention	yes
International Plant Protection Convention	1971
Convention for the Establishment of the European and Mediterranean Plant Protection Organization	
UNCCD United Nations Conventions on Combating Desertification	1998
Espoo Convention on Environmental Impact Assessment in a Transboundary Context	2001
Convention on the Transboundary Effect of Industrial Accidents	2002
UNFCCC/Kyoto Protocol UN Framework Convention on Climate Change	2001
Aarhus Convention	2000

Other relevant conventions are:

- Convention on the Territorial Sea and the Contiguous Zone, Geneva, 1958;
- Convention on the Continental Shelf, Geneva, 1958;
- Convention on the High Seas, Geneva, 1958;
- Convention concerning fishing in the Black Sea, Varna, 1959;
- The Antarctic Treaty , Washington, 1959;
- Protocol to the Antarctic Treaty on Environmental Protection, Madrid, 1991;
- Agreement concerning co-operation in the North-West Atlantic Fisheries, Ottawa, 1978;
- United Nations Convention on the Law of the Sea, Montego Bay, 1982;
- Agreement Relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea, New York,1994;
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989);
- Convention on the Protection of the Black Sea Against Pollution, Bucharest, 1992;
- Strategic Action Plan for the Rehabilitation and Protection of the Black Sea, 1996;
- International Convention for the Prevention of Pollution from Ships, London, 1973;
- Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, London, 1978;

2. Institutional settings/Stakeholders

The Ministries related to biodiversity conservation in Romania are:

- Ministry of Environment and Climate Change
- Ministry of Agriculture and Rural Development
- Ministry of Administration and Internal Affairs / General Police Border Inspectorate
- Ministry of Transport
- Ministry of Economy, Trade and the Business Environment
- Ministry of National Defence / Research Centre for Navigation

The specialized institutions are:

- National Institute for Marine Research and Development "Grigore Antipa" (NIMRD)
- National Research and Development Institute for Marine Geology and Geoecology – GeoEcoMar
- National Institute for Danube Delta Research and Development (INCDDD)
- National Institute for Research and Development in Tourism
- National Institute of Statistics
- Constanta County Department for Statistics
- National Institute for Environmental Protection

The governmental agencies are:

- Environmental Protection Agency Constanta
- Romania National Water Administration (RNWA)
- Romanian Water Administration - Dobrogea Litoral (ABADL)
- National Company "Maritime Ports Administration"
- Romanian Naval Authority (ANR)
- Constanta County Department of Public Health
- Tulcea County Department of Public Health
- National Agency for Fishery and Aquaculture
- Nuclear Agency for Radioactive Waste
- Danube Delta Biosphere Reserve Authority (ARBDD)
- Environmental Protection Agency Tulcea
- National Environmental Protection Agency
- Romanian Space Agency (ROSA)
- Border Police Inspectorate
- National Environmental Guard

The List of Stakeholders (PAs-related issues, biodiversity protection/conservation, in general) is presented in Annex II.

TURKEY

1. Legal/Policy Framework

1.1. National Level

Turkish laws and by-laws which relate to conservation of biodiversity are as fallows.

- Turkish Constitution (9.11.1982)
- Environmental Law (9.8.1983)
- Harbours Law (14.4.1923)
- Coastal Law (4.4.1990 Amendment 1.7.1992)
- Fisheries Law (22.3.1971, Amendments 15.5.1986)
- National Parks Law (9.8.1983)
- Law for Protection and Cultural and Natural Wealth (21.7.1983)
- Council of Ministers Decree for Agency for Specially Protected Areas (19.10.1989)
- Bosporus law (18.11.1983)
- Coastal security force law (9.7.1982)
- Settlements law (3.5.1985)
- Tourism Incentives Law (12.3.1982), (2003)
- Forestry Law (31.8.1956; Amendments, 23.9.1983)

Additional important documents relevant to protected areas in Turkey are:

- Decree on the establishment of a special protected area agency for environmental protection
- Law on Emergency Response and Compensation for Damages in the Case of Pollution of the Marine Environment by Oil and Other Harmful Substances
- Decree on the establishment and responsibilities of the Ministry of Environment and Urbanization
- Decree on the establishment and responsibilities of the Ministry of Forestry and Water

The National Biodiversity Strategic Action Plan (NBSAP) is based on the five following assumptions: biodiversity is the biological foundation for sustainable development; biodiversity is in jeopardy; conserving biodiversity is a shared responsibility; biodiversity links to future prosperity; and Turkey contributes to global biodiversity conservation. Turkey's NBSAP comprises 6 goals, which relate to: conservation and sustainable use; ecological management; education and awareness; incentives and legislation; International Cooperation and implementation. The NBSAP2001 was updated in 2007 (active for 2008-2017). The Plan does not refer specifically to the Black Sea.

Draft Turkish laws, which are to be discussed in the Parliament are:

a) *Draft Code on Draft Law on Protection of Nature and Biological Diversity* includes changes or additions such as the following:
    - Slight changes in the definition of "biological diversity" and will include "genetic resources".

- "sustainable use" of biological diversity (this provision created much opposition)
- Changes to the definition of "waste" to be harmonized with EU *aquis communautaire*
- Addition of integrated approach to waste management
- Sensitive areas, defined as those with high risk for eutrophication, to be designated by the MoFW
- Prepare a "strategic noise map"
- Preparation of emergency response plans
- Integrated coastal management
- Landscape definition
- Climate change
- Climate change risk management
- Special protected area to include protection of landscape

b) Draft Law Amending the Environmental Law

Current situation: Due to the creation of the two new Ministries there is a significant degree of overlapping authorities which need to be resolved. This is particularly the case in regard to protected areas. Currently, marine protected areas are under the authority of the MoEU and the Directorate of Natural Resources. However, there is work underway to revise the entire Turkish environmental legislation and regulations to address the problems that have arisen from overlapping authority. For this reason, the information in this report is subject to change significantly during this Parliamentary session, which should end in June 2013.

1.2. European Level

The implementation of the Birds and Habitat Directives has been supported by the EU since 2002. Activities related to the Habitat and Bird Directives is going on under The Ministry of Forestry & Water Affairs, General Directorate of Nature Conservation and National Parks.

1.3. International Cooperation/Agreements

Convention on biological diversity

- Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) under CBD
- CITES
- RAMSAR Convention
- EİT (Economic Cooperation Organization)
- KEİ (Black Sea Economic Cooperation)
- EU Landscape Convention
- Bern Convention on the conservation of the European Wildlife and habitats.
- Natural Habitats (Natura 2000)
- The World Heritage Convention
- The UNESCO Man and the Biosphere Programme and its work on Biosphere Reserves

- Bonn Convention on the conservation of migratory species of wild animals, marine fauna (Turkey doesn't sign)
- ACCOBAMS (Turkey doesn't sign)
- Convention on the Protection of the Black Sea Against Pollution, Bucharest, 1992
- Strategic Action Plan for the Rehabilitation and Protection of the Black Sea, 1996
- EU Habitat & Bird Directive
- European Marine Strategy Directive

2. Institutional settings/Stakeholders

The Ministries related to biodiversity conservation in Turkey are:
- Prime Ministry
- Ministry of Environment and Urbanization
- Ministry of Foreign Affairs
- Ministry of Reconstruction and Settlement
- Ministry of Interior
- Ministry of Health
- Ministry of Finance
- Ministry of Culture and Tourism
- Ministry of Industry and Trade
- Ministry of Agriculture and Rural Affairs
- Ministry of Forestry & Water Affairs
- Ministry of Labour and Social Security

The specialized institutions are:
- State Planning Organization
- Agency for Protection of Special Areas (APSA)
- Municipalities
- Metropolitan Municipalities
- Water and Sewerage Administrations of Greater Municipalities (SKİ's)
- Special Provincial Administrations
- Housing Administration

The community-based organizations are given below:
- The society for Protection of Nature (DHKD)

NGOs actively participate in biodiversity protection/conservations, such as:
- TUDAV
- MEDCOAST
- TURMEPA

The List of Stakeholders (PAs-related issues, biodiversity protection/conservation, in general) is presented in Annex III.

II. Review of the existing and planned protected areas in the Black Sea with a special focus on possible deficiencies regarding law enforcement and implementation of management plans

The beneficiary countries have a rather long-standing tradition in the domain of protected areas. The commencement of this environmental activity started already in the beginning of the last century for terrestrial ecosystems. Specialized legislation exists in the countries; however, the designation of coastal and marine protected areas is not equally well advanced. Besides, the Biodiversity Action Plans available are not specific for the Black Sea. There are no specific national Red Data Books for the Black Sea as well. The regional one has not been updated since 1998.

List of areas eligible for designation as MPAs exist in BG. In RO all planned areas were designated already. In BG and RO the protected areas are included into the NATURA 2000 network, which proofs their conservation significance and their effective contribution to the biodiversity protection. However, in BG the list of NATURE2000 sites is in process of revision, as certain inconsistencies with requirements were found in previous identification of sites.

Development of MPAs management plans is attended in Romania only. In RO there is an acting management plan for the Danube Delta Biosphere Reserve. The management plans for eight Natura 2000 sites (RO marine part) were developed in the period 2010-2012 and are under approval by the ministry.

BULGARIA

1. How MPAs are designated?

The following categories of PAs are present in Bulgaria:

- Strict nature reserve
- National park
- Natural monument
- Managed nature reserve
- Natural park
- Protected site

According to the **Protected Areas Act (1998),** the areas under protection shall incorporate forests, terrestrial and aquatic areas. Therefore, the Act regulates the regime of protection and use, designation and management of **marine protected areas (MPAs)** as well as terrestrial areas.

Criteria for selection of sites for designation of MPAs

The **criteria for selection of MPAs** are based on relevant national (Protected Areas Act and Biodiversity act) and international Acts (Council Directive 92/43/EEC on the conservation of natural habitat and of wild flora and fauna; Convention on the conservation of European wild life and natural habitats, Bern, 1979; IMO Resolution A.982 (24) for the identification and designation of particularly sensitive sea areas, 2005 and a number of IUCN guidelines for MPAs designation and management (Kelleher G. & Kenchington R., 1992; EC, 2000; Saim et al. 2000). In this report, priority is given to ecological criteria as the MISIS project objective is identification of MPAs for the purposes of biodiversity protection/conservation.

These encompass:

<u>Uniqueness or rarity</u>

- ecosystems and habitats which are the only one of its kind or occur in few locations;
- rare, threatened and endangered species and their habitats.

<u>Representativeness</u>

- typical, outstanding and illustrative examples of ecosystems, communities, ecological processes and other natural characteristics and processes.

<u>Diversity</u>

- exceptional variety of species or genetic diversity.

<u>Naturalness</u>

- a relative lack of human induced disturbance or degradation.

<u>Dependency</u>

- ecological processes and biological diversity are highly dependent on biologically structured systems (e.g. biogenic reefs, seagrass meadows, *Cystoseira* meadows).

<u>Critical habitats</u>

- areas essential for the survival and recovery of fish stocks or rare or endangered marine species (spawning, nursery, feeding grounds, migration routes).

Vulnerability

- habitats, communities and species with low tolerance to natural and antropogenic disturbance.

Representative and outstanding seascapes and features or non-living nature

- reefs;
- sandbanks;
- sea caves;
- underwater structures made by leaking gasses.
- For the establishment of ecologically coherent network of MPAs two principal conditions are considered:
- replication of features;
- identical species, communities, habitats and seascapes are represented in the individual areas of the network.

Connectivity

- within a network of MPAs some level of connectivity should be present; thus, the individual areas should be close enough for resident populations to interact through dispersal or migration.

Scientific and educational criteria such as scientific/educational value and reference conditions (baseline for long term monitoring studies as well as social and economic criteria are taken as much as possible into account; further steps are needed to involve politicians, economists and sociologists to work on the socio-economic aspects of MPAs. The full set of criteria used in Bulgaria is given within the brochures ***Marine Protected Areas in Bulgaria - Present and Prospects*** (Todorova et al., 2008). In the frame of Matra project, under the coordination of EUCC, in Romania was realized the brochure T*he Development of an Indicative Ecologically Coherent Network of Marine Protected Areas in Romania* and the Romanian version of EUCC periodical CoastLine , vol.16 no.2/2007.

2. Inventory of MPAs and availability of management plans, including their level of implementation

History of designation of Marine protected areas in Bulgaria

First two MPAs in Bulgaria are “Kaliakra” nature reserve and “Koketrays” sand bank. They were designated **under the national Protected Areas Act**, and constitute just 0.2% of the total protected area in Bulgaria (on land), barely 0,2% of the Bulgarian Black Sea territorial waters and no more than 0.1% of the Bulgarian shelf area to 100 m depth.

Cape Kaliakra itself is one of the first protected areas in Bulgaria, declared a **National Park** as early as 1941 (Dobrudzha and Kaliakra, 1997). In 1966 it was designated as **Strict Nature Reserve** with an area of 53 ha. In 1980 the reserve was extended to its present size of 687.5 ha. In 1983 a buffer zone of 109 ha was in stated. The reserve covers 400 ha of marine area – a stretch of sea 500 m wide and 8 km long and 287.5

ha of terrestrial area – a strip of land along the coast from Cape Kaliakra to the Taukliman marsh. It is situated at the end of long and narrow peninsula. The site is historically famous and for its nature and pristine conditions. The entire terrestrial part of the reserve is uncultivated land with natural habitats, limestone cliffs up to 70 m high are crimson red due to iron oxides. One third of the coastal area comprises natural pastures, steppes, woodlands, bushes and coastal wetlands in a strip along the coast. The flora encompases 450 vascular plants, among which 45 are considered rare, threatened or endemic species. Kaliakra stands on the autumn migration route of 220 migration species of birds, 39 of which breed in the reserve (Todorova et al., 2008).

The marine habitat comprises rocky bottoms, overgrown by brown (*Cystoseira*), red (*Gelidium, Corallina*, *Ceramium, Peysonnellia. Polysiphonia*) and green algae (*Ulva, Cladophora, Chaetomorpha*), mussels (*Mytillus* and *Mytilaster*), sponges, ascidians, briozoans and hydroids. Sandy and muddy soft bottoms are populated by different bivalves (*Chamelea galina, Lentidium mediteraneum, Anadara inaequivalvis*, *Mya arenaria*, *Abra alba*, *Cardidae*). 78 fish species are encountered, of which 44 are resident. Dolphins are also seen in this area.

The following activities are strictly prohibited in the reserve - fishing, hunting, killing, collecting and harvesting of any flora and fauna, disturbing the wild fauna, destroying bird nests and animal lairs, mining, extraction and excavation, building constructions of any kind, pollution with chemicals and litter, camping and fire making, trampling outside the indicated pathways. The human pressures are negligible due to small population, lack of industry, absence of harbours and minor touristic coastal development. Moderate eutrophication mostly related to the Danube River influence has been documented.

Recently wind power electric generators/turbins have been installed in the area. They occasionally kill birds and hinder their fly and migration. Tourism is supposed to expand and increase pressures on coastal and marine environment thus threatening not only the biological diversity, but also the aesthetic, cultural and spiritual values of the “Kaliakra” reserve if developed improperly.

Protected site “Koketrays sandbank” (7.6 km^2), 760 ha was designated in 2001. The purpose of this site is to conserve benthic fauna diversity, which is exceptionally high in the area (Konsulova, Tokmakov, 1995). The prohibited activities are mining, dredging and bottom trawling, pollution with oil, litter and other contaminants.

Other protected areas designated under the National Protected Area Act are listed in the Table 3 below:

Table 3. Register of the Bulgarian Black Sea protected areas designated under the national Protected Areas Act

№	Locally used name	Category	Date of Designation	Area (ha)
Reserve (R)				
1.	Kaliakra	R	27.9.1941	687,5
2.	Kamchia	R	29.6.1951	842,1
3.	Ropotamo	R	07.5.1992	1 000,70
Nature Monument (NM)				
4.	Boaza	NM	13.3.1978	0,1
5.	Kuza skoza	NM	26.7.1961	1
6.	Sini vir	NM	11.1.1968	4
7.	Blato Alepu	NM	22.7.1986	166,7
Maintained Reserve (MR)				
8.	Atanasovsko ezero	MR	12.8.1980	1 002,30
9.	Velyov vir - vodnite lilyi	MR	24.7.1962	13,6
10.	Peshtera I izvory na reka	MR	29.12.1973	8,3
11.	Baltata	MR	20.4.1978	205,6
Protected Site (PS)				
12.	Yatata	PS	23.7.1987	154
13.	Parorya	PS	31.10.1991	988,6
14.	Moryane	PS	08.7.1994	102,7
15.	Orlov kamyk	PS	11.10.1965	0,4
16.	Kamchiiski piasutsy	PS	14.2.1980	372,6
17.	Kazashko	PS	15.2.1995	125,1
18.	Liman	PS	12.6.1979	5,2
19.	Kalpunar - blatno kokiche	PS	03.7.1970	12
20.	Blatno kokiche - Osmar	PS	23.8.1979	19
21.	Vaya	PS	04.12.1997	379,4
22.	Poda	PS	20.4.1989	100,7
23.	Blatoto - blatno kokiche	PS	03.7.1970	33,9
24.	Ustie na reka Yzvorska	PS	16.2.1990	170
25.	Marina reka	PS	16.5.1991	47,3
26.	Kazakov vir	PS	04.8.2003	35,5
27.	Blatno kokiche - Chairite	PS	03.7.1970	2
28.	Taukliman	PS	04.4.1980	89,5
29.	Ustie na reka Veleka	PS	01.9.1992	1 511,20
30.	Koketrais	PS	01.2.2001	760
31.	Pomoriisko ezero	PS	23.1.2001	760,83
32.	Blatno kokiche - Kalinata	PS	03.7.1970	63,1
33.	Durankulashko ezero	PS	21.2.1980	446,54
34.	Shablensko ezero	PS	24.1.1995	531,24
35.	Blatoto Stamopolu	PS	16.5.1991	40
36.	Chengene skele	PS	14.11.1995	160
37.	Sylystar	PS	01.9.1992	773,3

Source: National Report on Water Management at River Basin Level (March 2005)

Here we can add also the complex of the Rezovo River mouth, Veleka River mouth and Silistar River mouth protected sites, which are part of the Strandzha Nature Park, designated in 1995. Located in the far South East of Bulgaria the Strandja Mountains form a bridge between two continents: Europe and Asia. This makes the area unique in Europe for its flora and fauna. The special nature here is a result of Strandja's geolological past, climate and geographical location.

The plant communities in Strandja developed before Europe was separated from Asia by the formation of the Bosporus Strait that now connects the Black Sea and the Mediterranean. Land-ice never reached Strandja during the ice-ages of the Pleistocene and the Holocene. And this lack of glaciations has created a unique window to the past. Plants that were once widespread on the European continent during the Tertiary period are now only preserved in Strandja. It is a living museum. Because the Strandja Mountains form a bridge between Europe and Asia, the area has a very rich culture and history. A reservoir in the park is a haven for water birds in winter. The high diversity of flora and fauna is amazing. The area has been designated as one of the five top priority sites for protection in Central and Eastern Europe, and the whole park has been included in the Natura 2000 ecological network.

In 2007, in compliance with the national Biodiversity Act and Council Directive 92/43/EEC[15], sites of Community Importance (SCI), which cover 29.5 % of the Bulgarian territory were approved by the Council of Ministers and submitted to the European Commission for inclusion in NATURA 2000 network. Fourteen sites contain marine area with a total surface of 611 km^2, which constitutes 9.4 % of the Bulgarian territorial sea, 5.6 % of the shelf area and 2.4 % of EEZ.

[15] In addition to the national legal provisions on nature conservation, Bulgaria as a Member State of EU is obliged to enforce the Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). Pursuant to the Habitats Directive, an initial nationally validated list (Decisions of the Council of Ministers No 122/ 02.03.2007, No 802/4.12.2007) of sites of Community importance (SCIs) was proposed by the national authorities and adopted by the Commission of European communities with Commission Decision of 12 December 2008. Bulgaria designated these sites as special areas of conservation (SACs), which became part of the coherent European ecological network Natura 2000, which aims at the maintenance and restoration at a favourable conservation status of important natural habitats.

The candidate regions for MPAs identified do not overlap with the proposed NATURA 2000 sites in 2007 (Figure 2).

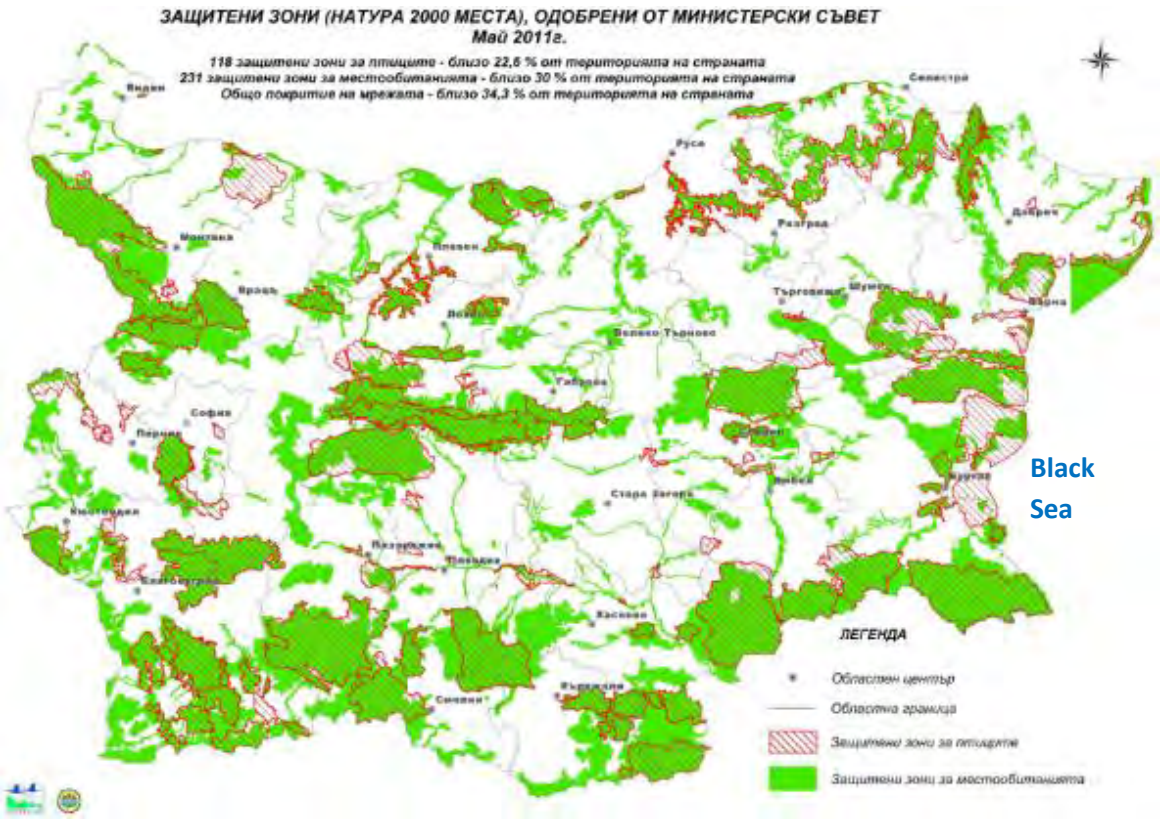


Figure 2. NATURE2000 sites in BG, approved by the Ministerial council in May 2011 (red marked – sites under the Birds Directive; green – Habitats Directive)

Natura 2000 Marine protected areas.

As mentioned above, they are designated under the Habitats and Birds Directives. Nowadays, the following marine protected areas included in Natura 2000 network are designated and approved by the European commission as MPAs in Bulgaria/Bulgarian Black Sea:

1. Strandzha Marine Protected Area

Strandzha mountain coast is distinguished by conditions nearly undisturbed by human activities and highly varied underwater habitats, the most representative among them encompassing clean sands inhabited by psamophilic clams (*Donax trunculus, Chamelea gallina*) and rocky seabed covered by extensive meadows of the brown algae *Cystoseira barbata and Cystoseira crinita* and blue mussels (*Mytilus galloprovincialis, Mytilaster lineatus*). The coarse sands in the mediolittoral zone, well flushed by the wave action, are inhabited by dense populations of the small wedgeclam *Donacilla cornea*, a species threatened by tourist impact on beaches, water pollution and building of coastal defence constructions that impair the water exchange. Strandzha coast might be still visited occasionally by the monk-seal (*Monachus monachus*), a world threatened species included in Annex II of the Bern Convention. This is probably the last secure and tranquil area of the Bulgarian coast where theoretic possibility exists for restoration of the monk seal population (Note: The species was considered extinct, the evidence of its re-appearance in the Black Sea is not confirmed). In a standard reporting form, following the marine habitat

types, for this area the mentioned habitats are: 1110-sandbanks; 1140-Mudflats; 1160-large shallow inlets and bays; 1170-reefs; 1130-estuaries; 8330-submerged or semi-submerged marine caves.

Eight fish species are present among those listed in the Council Directive 93/43/EEA, and 25 fish species constitute other important fauna for the area. From fishes (as listed in the Council Drirective 93/43/EEA*) Alosa agone, Alosa immaculata* and *Alosa tanaica* are present.. From mammals, dolphins - *Tursiopsis truncatus* and *Phocoena phocoena* and otter *Lutra lutra* are occasionally spotted in the area. Main pollutants in the Strandzha PA are associated with environmentally-unfriendly development of tourism and agriculture. But these have no substantial influence on the marine ecosystem. The Black Sea ecosystems are in good condition. Currently, this Marine Protected Area is proposed for extension to the 75 m isobath.

2. Other MPA in the NATURE2000 network

The beach "Gradina-Zlatna ribka" situated in the Sozopol town. It covers terrestrial and marine area - 1153 ha. Marine part covers 82% of MPA. In the standard reporting form there are no marine species listed, but some birds. Habitats which are included are: 1140-mudflats; 1110-sand banks; 1160- large shallow inlets and bays; 1170-reefs.

In 1110 habitat meadows with some species of sea grasses have been registered. Great parts of the beach are taken for the building of camping places. Reefs are covered with *Cystoseira* meadows and other red and green algae. Some invertebrates and fishes find hospitality inside.

Large amounts of the sand of the beach are illegally extracted by people for construction. The site is under strong touristic impact as well.

3. The Natura 2000 protected area "Ropotamo"

It covers 12815.82 ha terrestrial and marine part. Only 23% include marine ecosystems. Habitat types present on the site are: 1110 – sand banks; 1130 – estuaries; 1150 – coastal lagoons; 1160- large shallow inlets and bays; 1170 - reefs; 8330 - marine caves submerged or semi-submerged.

This area partially overlaps with the nature reserve Ropotamo which has been designated in 1940. It is famous with its water lilies and over 100 endangered flora species along the mouth of the Ropotamo River. One of the most bizarre rock formations in Bulgaria - Lavska Glava (a Lion's head) is situated here. Except for all this Ropotamo is famous for the four natural reserves that are within its borders:

- Natural Park Ropotamo (water - lily reserve).
- Zmiiski (Snake) Ostrov reserve (St. Toma) it is situated close to Arkutino Bay. The island is rocky and covered with grass. The rocky formations and sandy stripes with dunes enrich the picturesque sight. There are plenty of cactuses, birds and snakes.
- Arkutino reserve - it is a marsh - lagoon, situated 2.5 kilometers north - west from the mouth of the Ropotamo River. It has fresh water, and sometimes dries up.
- Morski Pelin Reserve- this is the protected area of the sea plant "Sea Wormwood".

The marine protected area stretches from Primorsko town to Cape Humata and Snake Island (St. Toma Island). The Ropotamo protected area is distinguished by high diversity of different habitats with marvellous views and natural forms, Thracian sacred places, mosaic of varied coastal and marine habitats: fjords, coves and bays, inlets, islands, mussel reefs, beaches with beautiful dunes, lagoons and marshes, and the estuary of the Ropotamo River. A remarkable unknown habitat - huge biogenic reefs built by the native flat oyster *Ostrea edulis* was found during the MATRA project diving expedition in 2007. This newly discovered marine habitat is deemed unique for European seas and probably the world, therefore a habitat of high conservation interest too *(*Micu and Todorova, 2007*)*. Unlike the flat oyster beds commonly known from the intertidal areas of Western Europe and North America, at 7 m height, 30-50 m length and 10 m width for each mound, Black Sea ostrak are massive, towering biogenic structures. Despite numerous oyster reefs documented, no live oysters were observed at any of the locations. A dedicated survey is needed to reveal the causes of the mysterious die-off of oysters and suggest rehabilitation options. Other habitats of high conservation interest include rocky reefs overgrown by diversity of seaweeds (large *Cystoseira* meadows and fields with sea grasses, included in red data book (Dumont, 1999) - *Zostera marina, Zostera nolltii* and *Pothamogeton pectinatus* which surve as sanctuarty and protection of many invertebrate species and fishes, and fine sands inhabited by Thalassinid crustaceans. Other important inhabitants in *Cystoseira* meadows are hydrozoans, bryozoans, the snail *Tricolia pulus*, decapods *Xantho poressa, Pachigrapsus marmoratus, Pilumnus hirtellus*, the sea horse, *Hippocampus guttulatus*, a variety of wrasses, gobbies, biennies. A rare rocky habitat, established in the area is punctured by boring bivalve *Petricola lithophaga* (Todorova et al. 2008).

Supralittoral zone in reefs near Maslen Cape is covered by *Corrallina* sp., *Ralfsia verrucossa* and other crusts (red algae) and ascidians. In some inlets *Phyllophora crispa* could be seen in small patches. On the reefs blue mussels *Mytilus* and *Mytilaster* are common species. Many invertebrate species live in the soft sediments. In *Zostera marina* fields, rare goby, *Zostericessor ophiocephalus* has been found, which is in IUCN world list of threatened species (Todorova et al, 2008). Other important habitats are sediments inhabited by Thallasinid crustaceans, fine sands with *Pestarella candida*, and sandy silts with *Upogebia pusilla*, the former being rare species. Ample trophic resources by Ropotamo River determine high diversity of gastropods (*Cyclope neritea, Nasarius nitidus, Rissoa splendida, Bittium reticulatum*) and bivalves (*Loripes lacteus, Lentidium mediterraneum, Chamelea galina, Donax trunculus, Tellina tenuis, Cerastoderma glaucum)*, that inhabit sands in front of the river estuary (Todorova et al., 2008). From mammals, the otter *Lutra lutra* is spread in the Ropotamo Estuary and water snakes *Matrix sp*. often could to be seen. Many species of birds and fishes are registered in this region. The dolphins visit this area on their way through the sea. One of the caves at the Maslen Nos Cape was famous as sanctuary of the monk *Monachus monachus* in the past. On the biogenic reefs and marvelous rocks many sponges, sciaphylic algae *Zanardinia prothotypus, Apoglossum ruscifolium, Phillophora crispa*, crusts (*Peisonellia rubra, Peisonnellia dubii*) crabs (*Eriphia verrucosa*), bennies, gobbies, scorpion fishes (*Scorpaena porcus*), wrasses and mullets could be seen.

The site near Maslen Nos Cape, being almost pristine, has been chosen as referent site along the Bulgarian Black Sea coast for the biological element

'macrophytobenthos' under the European Water Framework Directive (Dencheva, 2008). This area is very interesting from scientific point of view and most appropriate for identification of GES, *sensu* water quality, biodiversity, and different habitats state.

4. Marine protected area "Islands Saint Ivan and Saint Petar"

It is in the vicinity of the Sozopol town. It is designated to protect coastal and marine habitats - 1170 and 1240 ha, respectively. From flora and fauna for protection under the Habitats Directive is defined fish *Alosa immaculata*. On hard substrate grow *Cystoseira* species as dominant and other algae (red, green and brown), which shelter fish and invertebrate species.

5. Marine protected area "Chengene skele".

Whole territory of the protected area is 191.19 ha. Marine area is 54% from the whole area. Approved by the Council of Ministries of Bulgaria – in 2007.

In the standard data reporting form the enlisted marine habitat is: 1160 - large shallow inlets and bays. Important for protection in this habitat are sand banks (1110) with *Zostera noltii* and *Potamogeton pectinatus* meadows, which invertebrate species and fishes inhabit. Very high diversity of bird species is found, the birds are included for protection. Important marine fish species for protection are: *Hippocampus guttulatus, Pegusa lascaris, Coriphoblennius galerita, Mesogobius batrachocephalus, Pungitus platigaster, Salaria pavo, gobby, Symphodus ocellatus, Syphonostoma typhle, Atherina boyeri, Gasterosteus aculeatus*, reptiles *Natrix tesselata*. In this area, pollution, associated with the development of industry, tourism and port activities/shipping around the city of Bourgas is the main human pressure and a challenge for management to ensure protection in practice.

6. Protected area "Mandra –Poda"

Marine area is 3% from the whole size of the protected area. In this area habitat type 1150 - coastal lagoons is under protection. Meadows of seagrasses *Potamogethon pectinatus* are spread in this habitat type which overlaps with 1110 habitat type - sand banks. Otter Lutra lutra is under protection here. Many different species are listed under protection. Across Mandra Lake the big European migratory bird route, Via Pontica, passes.

7. Protected area "Pomorie".

The marine territory in this area is 54%. Habitat types present in this site are: 1110 - sand banks; 1150 – coastal lagoons; 1160 - large shallow inlets and bays; 1170-reefs. Important species of fishes present (listed in Annex II of the Habitats Directive) are *Alosa pontica, Alosa fallax, Alosa maeotica,* and *Alosa caspia nordmani*. Reefs are covered with *Cystoseira* meadows and other algae (green, red and brown). In sand banks sea grasses such as *Zostera marina, Zostera noltii* and *Potamogeton pectinatus* grow. They shelter invertebrates and fishes (bennies, gobbies, and wrasses). Many birds are listed in the standard data reporting form as important for protection, because they breed and live in the Pomorie Lake and related wet zones.

8. Protected area "Ravda- Aheloy-Nesebar.

Surface – 3928.38 ha. Marine area is 81%. Habitat types present and listed in the standard reporting data form: 1160- large shallow inlets and bays; 1110-sand banks; 1170- reefs; 1140-mudflats.

In this protected area meadows of the brown algae *Cystoseira sp*. and sea grasses *Zostera marina*, *Potamogeton pectinatus* are characteristic and well developed. Ecosystems are in good condition.

9. Protected area Cape Emine – Irakli beach.
Its territory is 11282.80 ha, from which 19% is marine. The rocky coast is structured by sandstone and marl layers (Peychev, 2004).
Habitats, protected in this area: 1110-sand banks; 1130-estuaries; 1140- mudflats; 1170-reefs; 8330- marine caves submerged or semi-submerged.

Hard substrate is covered by algae *Cystoseira, Ulva, Ceramium, Cladophora*. The highest conservation importance in the area is given to soft marl rocks in the upper infralittoral punctured by the boreholes of the common piddock *Pholas dactylus*. The species is officially protected by the Bern convention (Appendix II). Destruction and fragmentation of its typical habitat by building of coastal defence constructions and covering of the hard substratum with sand for beach enhancements represent threats to the common piddock. Its conservation status in Bulgaria is unclear at present. The coarse sands are inhabited by bivalves *Donacilla cornea, Chamelea gallina, Donax trunculus*. A further characteristic habitat is sandy/silty bottom inhabited by the crustacean *Upogebia pusilla*, polychatete *Arenicola marina*. Fishes present (listed in Annex II of the Council directive 92/43/EEC) are: *Alosa agone, Alosa immaculata. Alosa maeotica, Alosa tanaica*. From mammals, *Phocoena phocoena* is very important species for protection. Other important fish species, listed in the standard data reporting form, are Huso huso, Atherina boiery, *Belone belone, Hippocampus guttulatus* and others.

10. Protected area "Kamchia".
The territory is 12919.94 ha. Marine area occupied is 6%. Marine habitat types spread in this site are: 1110-sand banks; 1130-estuaries; 1160-large shallow inlets and bays.

Important species listed in international conventions are: *Atherina boyeri, Belone belone, Liza ramado, Neogobius bathrachocepha lus, Natrix natrix* and others.

11. Protected area "Shkorpilovtsi".
Occupied area – 51256.53 ha. Marine area is 22%. Habitat types spread in the marine area: 1140-mudflats; 1110-sand bamks; Mammals listed in Habitats directive: *Phocoena phocoena; Tursiops truncates;* and *Lutra lutra*.

The clean sands present in this area are suitable habitat for the bivalves *Donacilla cornea, Donax trunculus* and *Chamelea gallina*. Here could be seen the rare stargazer *Uranoscopus scaber*. Reefs are overgrown by the algae U*lva, Cladophora, Ceramium* and blue mussels, actinias, sponges and harbour a range of rare species: the endemic misids *Hemmiyisis sp*., the decapod crustacean *Polybius navigator*, the damsel fish *Chromis chromis* and pipe fish *Nerophis ophidian*. (Todorova et al., 2008). Many fish and bird species are present in the area.

12. Protected area Galata.
Occupied area - 16237.19 ha. Marine area is 76%. Habitat types: 1140-mudflats; 1160- large shallow inlets and bays; 1170-reefs.

Many species of fishes and birds are listed for the area. Reefs are covered by green and red algae. Ecosystems are under strong pressure from tourism, industry and port activities/shipping.

13. Protected area "complex Kaliakra".
Occupied area – 44128.26 ha. Marine area is 90%. Habitat types spread in this area: 1110-sand banks; 1140-mudflats; 1150-coastal lagoons; 1160-large shallow inlets and bays; 1170-reefs; 6330-marine submerged and semi-submerged caves.

Many birds are listed as important species for this area (included in Annex I of the Council Directive 79/409/EEC).

Reefs are covered with *Cystoseira* meadows and other algae (red, brown and green). Infralittorall and pseudolittoral associations of the coralline red algae *Corallina officinallis* are spread. *Mytillus galloprovinciallis* reefs are also present. On muddy substrates sea grasses grow: *Zostera noltii* and *Zostera marina*. Ecosystems are in good condition. The influence of the Danube River is traced in the area and could be occasionally regarded as 'human pressure' factor (e.g. excessive nutrient enrichment).

14. Protected area "Ezero Shabla-Ezeretz".
Occupied area – 26235.30 ha. Marine territory - 65%. Habitat types listed in the standard data reporting form are: 1140-mudflats; 1150-coastal lagoons; 1170-reefs are not included, but they do exist. Reefs are covered by *Cystoseira sp.* and other algae (green and red). Sandy bottoms are inhabited by the snail *Cyclope neritea* and *Nassarius nitidus* and various bivalves – *Lucinella divaricata, Lentidium mediterraneum, Chamelea gallina, Telina tenuis*, *Mya arenaria* and *Anadara inaequivalvis* (Todorova et al., 2008). Many species of birds and fishes are present in the area. Species listed in Annex I of the Council Directive 92/43.EEC – the mammals Phocoena pocoena and Tursiops truncatus are registered as well.

Ecosystems in this area are in moderate condition.

15. Protected area "Ezero Durankulak".
Occupied area – 5050.79 ha. Marine territory is 75%. Habitat types listed in the standard data reporting form is 1140. Many bird species are present in this area and enlisted for protection.

In this area marl sandy plate's reefs are present. They are covered with algae. Sandy bottoms are characterized with the same populations as mentioned above for the "ezero Shabla – Ezeretz protected area". Many fishes are present in the area. The mammals *Phocoena phocoena* and *Tursiops truncatus* are occasionally registered.

Marine Protected areas in Bulgaria have no Management plans so far.

3. Recent developments, planned protected areas

The European Commission considered that Bulgaria had not proposed sufficient sites to meet the requirements of the Habitats Directive for certain habitat types and species. For those habitat types and species it was concluded that the network was complete and the initial list of sites would need to be revised in accordance with Article 4 of the Habitats directive.

With regards to marine habitats the proposed network of SCIs did not cover at all the following natural habitat types and subtypes:

- 1180 Submarine structures made by leaking gases. Methane seeps biogenic reefs have been scientifically documented recently in the Black Sea and SCIs shall be identified for their conservation within Natura 2000.
- 1170 Reefs: biogenic reefs of *Mytilus galloprovincialis* (mussel bed on sedimentary bottoms). The habitat is excluded due to wrong national interpretation of the habitat type 1170 as "Communities of algae on rocky bottoms". New SCIs shall be identified to cover mussel beds, which besides a habitat of Community importance ensure the resistance/resilience of the Black Sea ecosystem against eutrophication, as well as maintain highly diverse community of associated marine organisms.
- 1170 Reefs: Rocky bottom with beds of the red alga *Phyllophora nervosa*. *Phyllophora* beds are important conservation hotspots in the Black Sea providing suitable habitat for rich invertebrate fauna and demersal fishes. Extensive *Phyllophora* bed was found recently along the Bulgarian coast and shall be included in Natura 2000 network.
- 1170 Reefs: Soft rocky bottoms with *Phollas dactylus* – species protected by the Bern Convention.

Dedicated field work for marine habitats inventorying and mapping was practically not carried out within the national Natura 2000 implementation process in Bulgaria. Classification and inventory of the typical Black Sea habitats that fall within the natural habitat types of Community importance was not developed. The selection of marine areas was a mechanical extension of the terrestrial coastal sites, not connected with the marine realities, thus coverage and replication of the important marine habitats is completely accidental.

The national network of marine SCIs needed re-evaluation in terms of location and extent of sites, as well as identification and designation of new sites to adequately cover the habitats and species of European conservation interest.

Recently in the frames of a national project “Extension of Natura 2000 Marine protected areas”, lead by Valentina Todorova (IO-BAS, Varna), three proposals for new protected areas in accordance with the Council Directive 92/43/EEC (Habitat) were prepared. They are as follow:

1. BG0001500 Aladja banka – 669.64 ha (100% marine area). Date site proposed as SCI: 2012-07 Marine habitat types for protection are 1110-sand banks; 1170-reefs. Marine area is 100% and constitutes 669.84 ha. Invertebrate species under protection are *Xanto poressa, Plummus hirtellus*, shell *Mytilus galloprovincialis*, crabs *Pachygrapsus marmoratus* and *Eriphia verrucosa*. “Aladja bank has exelent representativity with relation to the biotope „Infra- and circalittoral rocks with fouling of *Mytilus galloprovincialis* and *Mytilaster lineatus*”, which is subtype of 1170 - reefs habitat type. In the bank area multitude methane seeps are present (http://www3.moew.government.bg/?show=top&cid=530)

2. BG0001501 Emona. Marine area is 100% and constitutes 55345.28 ha. Marine habitat type for protection is 1170. The area has exelent representativity with relation to the biotope „Infra- and circalittoral rocks with fouling of *Mytilus gallarovincialis* and *Mytilaster lineatus*”, which is subtype of 1170 - reefs habitat type. The aquatory is habitat of fishes *Alosa immaculata*. The area is permanent habitat for two species of cetaceans, *Tursiops truncatus* and *Phocoena phocoena*.

3. BG0001502 Otmanli - Area [ha]: 2.3 Marine area 100 % and constitutes 8.83 ha. Marine habitat type for protection is 1110. The habitat is characterized by mixed communities of sea grasses from *Zostera* genus and *Zannichellia* over sandy-shell substrate. *Zostera marina* communities of sea grasses are spread to depth of 1-5.5 (6) m, as in some places they are patchy distributed. In summer season, the water clarity is 2-3 m depth, salinity - 15‰. The region is eutrophic due to the proximity of the city of Bourgas, in other words it is a strongly anthropogenically influenced area. *Zostera marina* is defined as endangered species in the Bulgarian Red Data Book (IUCN category) and is also present in the Bern Convention list. Underwater meadows of sea grasses are the main habitat which defines the structure in this marine area and still are present, but endangered of extinction. *Upogebia pusilla* - endangered invertebrate species, included in the Black Sea Red Data Book, is registered in this marine area.

In the frames of the above mentioned project, proposals were made for extension of the following Marine protected areas, which have been previously designated under the Habitats Directive:

1. BG0000103 Galata - 1842.97 (marine area 79%)

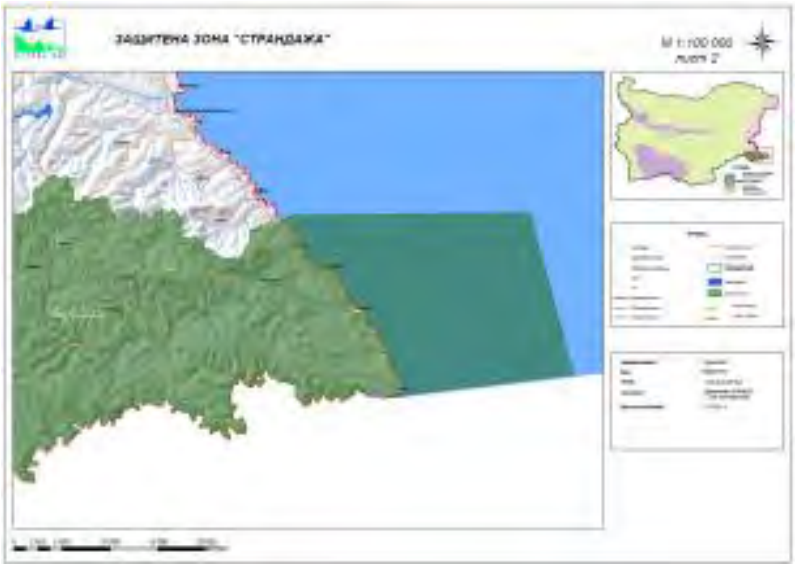
2. BG0000146 Plaj Gradina – Zlatna ribka – 1245.85 (marine area 82.95%)

3. BG0000573 Komplex Kaliakra – 48291.61 (marine area 90.5%)

4. BG0001001 Ropotamo – 98099.76 ha (marine area 89.9%)

5.BG0001004 Emine-Irakly – 16794.59 ha (marine area 45.7%)

6. BG0001007 Strandzha. – 153541.2 (marine area 25.5%)



With the proposed extension, the MPAS listed above are expanded to 50 m depth unlike previously, when these NATURA2000 sites were only to 20 m depth. The extension ensures the inclusion in the protected areas of mussel beds (*Mytilus galloprovincialis*), which are habitats of critical importance for the functioning of the coastal marine ecosystems. Mussel beds typically occur at depths beyond 20 m to 60-80 m. In the southern Bulgarian Black Sea the 20 m 58sobaths lies very close to the coast thus limiting the NATURA2000 network to a very narrow strip, which excludes important areas with offshore rocky reefs, recently found beds of the red seaweed *Phyllophora nervosa* and a newly discovered unique Black Sea habitat – oyster biogenic reefs.

The Plan is all newly proposed and the extended areas were to be approved by the Ministerial Council in January 2013. However, the procedure was postponed for April 2013[16]. Short description of these areas was given above in the text. In all these areas, meadows of *Cystoseira crinita* and *C. barbata* and associated animals mould the habitats. Cetaceans are present also. They play important role in the marine ecosystems and are mentioned in the Bern Convention. From fishes, *Alosa* genus is present (it is in the list of species for protection in the Bern Convention). In protected areas plaj Gradina - Zlatna ribka and Strandzha, *Zostera* meadows play important role for maintaining the ecosystem biodiversity and functioning of many invertebrate and fish species which find shelter and hospitality inside.

In the frames of the MISIS project there have been raised an idea for a Black Sea transboundary protected area to be proposed for designation in between Bulgarian and Turkey. It would include the Strandzha protected area from the Bulgarian side (Figure 3). As mentioned already, the area is characterized by high biodiversity of fishes, mammals, invertebrates, birds, plants. Many different habitats can be found there with high importance for the Black Sea health. The area is of scientific importance, it can be also used as a reference zone as almost undisturbed conditions are still observed. Besides, ecological tourism, non-commercial/sports fishing, underwater sports, scuba-diving, photography and others can be of interest for the people if the area is kept in its pristine state.

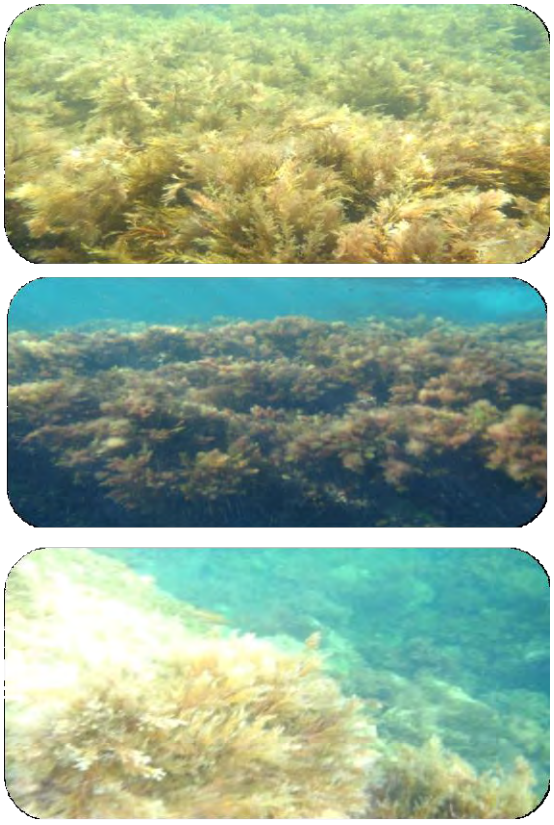


Figure 3. Views of the Strandzha marine part of the protected area. Cystoseira meadows. Photo: Kristina Dencheva.

The preservation of beautiful and unique landscapes is of high priority too. That is the reason why we would like to propose enlargement of this zone to the south direction in Turkish waters. and need of designating this region as transboundary protected area. This area was not investigated in Turkish coast and there are no protected areas in marine coastal waters.

[16] As per 15th of April 2013, there is no official confirmation that the Ministerial Council has approved the newly proposed sites.

4. Deficiencies in biodiversity conservation, MPAs identification, designation and management

The following deficiencie have been identified based on the analysis of the situation in Bulgaria:

1. Insufficiently balanced and coordinated application of policies for biodiversity conservation and sustainable use of bioresources for the complete range of activities related to biological diversity, provision of biological safety, restoration of damaged areas, stock-enhancements, etc.
2. Ineffective use of international programs to support biodiversity conservation. Bulgaria is not participating in the EU LIFE Program;
3. Limited administrative capacity in municipalities;
4. Biodiversity conservation is not fully integrated in most of the sector policies;
5. Insufficient economic incentives for biodiversity conservation;
6. Insufficient cooperation and coordination among different stakeholders on biodiversity conservation;
7. The necessary administration for implementing the requirements for introduction of GMO in the environment has not been yet established.

ROMANIA

1. How MPAs are designated?

The Romanian protected areas system includes the following categories:

- National Parks: This figure protects extensive ecosystems subject to minimal human pressure. In the core zones of the National Parks only scientific research is permitted.
- Nature Monuments
- Nature Reserves: They can be of different kinds (ornithological, botanical, zoological, palaentological, geological, speleological or mixed). They are all state owned. In addition to the national level ones, the local authorities can also establish local reserves.
- Bird Sanctuaries: Small areas that support large numbers of breeding, wintering or passage birds.
- Forestry areas: Local forestry authorities protect large areas of woodland from exploitation.
- Protected Landscapes

MPAs designation was made based on the data stored in the National Informatics System (NIS), created specifically for the purpose to extend the European ecological network into Romania. The NIS was created and nourished with available data/information by the national scientific community. NIMRD was part of the national team, having the responsibility of providing and completing the NIS with data/information about the marine environment. During the process, the scientists noticed that most of the provided data were old, while there was little information about the present diversity of marine species and habitats, and their spatial distribution. Meanwhile, the Black Sea ecosystem has changed a lot over the last decades, which strongly imposes the need for actualizing of the data/information in the NIS and their regular update.

In the declaration process of the Romanian marine protected areas network, the scientists took into consideration the following general requirements (widely recognised in designing MPA networks) based on selected ecological criteria:

- Representativeness - MPA networks should protect representative examples of the full range of marine and coastal biological diversity (from genes to ecosystems) and the associated physical environment within the given area.

- Replication - Examples of all habitats in each region should be replicated within the network and distributed spatially throughout the network.

- Viability - Networks should incorporate self-sustaining, geographically dispersed component sites, of sufficient extent to ensure population persistence through natural cycles of variation. These sites should be independent (as far as possible) of activities in surrounding areas.

- Precautionary design - Network design should be based on the best information available, rather than delaying the process to await more and better information. Where information is limited, the precautionary approach should be invoked.

- Permanence - Network design must provide long-term protection to conserve diversity effectively and replenish resources.

- Connectivity - Network design should seek to maximize and enhance the linkages within a MPA, between individual MPAs, groups of MPAs within a given eco-region, or networks in the same and/or different regions.

- Resilience - Networks must be designed to maintain ecosystems' natural states and to absorb shocks, particularly in the face of large-scale and long-term changes (e.g. climate change).

- Size and shape - Individual MPA units within the network must be of sufficient size to minimize adverse impacts from activities outside the protected area (the 'edge effect').

The criteria for selection of areas suitable for MPAs designation are defined according to the objectives to be achieved at the protected sites. When the main goal is biodiversity conservation and maintenance of vital ecological processes, priority is given to ecological criteria with emphasis on uniqueness or rarity of ecosystems, diversity and representativeness of habitats, occurrence of threatened species and habitats and preserved naturalness.

In case the protected areas aim at ensuring sustainable fisheries, the criteria should focus on identification of critical marine habitats associated with the life functions (breeding, nurseries, feeding, migration roots, etc.) of the target species.

If the objectives are mainly to safeguard areas for tourism and recreation in wilderness settings, the criteria could emphasize scenic value, remarkable seascapes and features of non-living nature, the presence of such other interests as cultural or archaeological sites, accessibility and carrying capacity; i.e., the number of visitors the area can sustain without degrading the environment or destroying the quality of the wilderness experience by crowding.

Clearly, social acceptance of the MPAs is critical to successful implementation of measures. During the selection process eligible areas should be assessed relative to traditional livelihoods and economic activities practiced by local residents. Conflicts of interest and conflicts between natural resource values and human activities should be taken into account and minimized. Areas where socio-economic developments have lead to problems that cannot be overcome by MPAs designation solely should be excluded and attended in the complex policies of marine spatial planning.

In Romania, the first step toward MPAs was to identify the marine habitat types, according to the Habitats Directive, and elaborate a specific typology for the Romanian Black Sea. When correlating the RO classification with the Palearctic

Habitats Classification, as a ready example, the scientists referred to the types indicated in the Interpretation Manual of European Union Habitats. They insisted on the necessity of interpreting the habitat types according to the European classification for the purpose of harmonization. Besides, the EU Interpretation Manual allows flexibility in building habitat classification schemes, particularly for the cases when habitats are fragmentary and under anthropogenic impact, which is the case in Romania.

In creating the RO network of MPAs, the scientists started from the main target of MPAs: preserving the marine resources (biodiversity and underwater landscape) for the benefit of the present and future generations. It was assumed that the implementation of a proper management could ensure permanent benefits in these marine areas, while avoiding as much as possible the eventual conflicts with the users. The RO scientists also considered the necessity of preserving the species and habitats of European importance, including in the network the marine sites already proposed to be part of the NATURE2000 network.

The Romanian Black Sea spans a coast length of 245 km (6% of the total Black Sea coast), with a shelf area of 30,000 km^2 (16%), and an EEZ (1986) of 30,000 km^2. The Romanian MPA network consists of 8 sites and has a total area of 1,162.86 km^2, which amounts to 4.65% of the EEZ and 3.88% of the Romanian shelf zone, while the marine part of the Danube Delta Biosphere Reserve represents 88.57% of the whole network's area.

2. Inventory of MPAs and availability of management plans, including their level of implementation

Besides the Danube Delta Biosphere Reserve (DDBR), for which there is a special protection and administration law concerning the economic and social development and water infrastructure, the Dobrogea region in Romania holds another 39 protected areas.

In Romania, the national network of marine protected areas comprises two Marine Reserves at present: the 2 Mai - Vama Veche Marine Reserve (5.000 ha) and the marine part of the Danube Delta Biosphere Reserve (buffer zone - about 103.000 ha). Under the Habitats Directive there are 8 sites designated and 1 is under the Birds Directive.

In accordance with the stipulations of the Government Ordinance No. 57 from June 20, 2007, regarding the regime of protected areas, the preservation of natural habitats, of the wild flora and fauna (Official Monitor No. 442 from June 29, 2007), as well as with the 79/409/CEE and 92/43/CEE European Directives, the following natural protected areas were established in the Romanian BS area:

- ROSPA0076 Black Sea: Site of Community importance, according to the 79/409/CEE Birds Directive, directly nominated Special Protected Area - SPA - through GD no. 1284/2007 regarding the declaration of avifaunistic protected areas as an integrating part of the Natura 2000 European ecological network in Romania - 147,242.9 ha (Custodian SC EURO LEVEL);

- ROSCI0269 - Vama Veche - 2 Mai: Site of Community Importance, according to the 92/43/EEC Habitats Directive, adopted through 2009/92/EC Decision, which overlaps the Vama Veche - 2 Mai Marine Reserve, natural protected area of national importance - 5,272 ha (Custodian NIMRD);

- ROSCI0094 - The Sulphur Seeps in Mangalia (362 ha): Site of Community importance, according to Habitats Directive 92/43/EEC, established by Decision 2009/92/EC - 362 ha (Custodian NIRD GEOECOMAR);

- ROSCI0197 - Submerged beach from Eforie North - Eforie South: site of Community importance, according to the Habitats Directive 92/43/EEC, established by Decision 2009/92/EC - 141 ha (Custodian SC EURO LEVEL);

- ROSCI0273 - Marine area from Cape Tuzla: site of Community importance, according to the Habitats Directive 92/43/CEE, established by Decision 2009/92/EC - 1,738 ha (Custodian NIRD GEOECOMAR);

- ROSCI0237 - Submerged methanogenic carbonate structures Sf. Gheorghe: site of Community importance, according to the Habitats Directive 92/43/EEC, established by Decision 2009/92/EC - 6.122 ha (Custodian NIRD GEOECOMAR);

- ROSCI0066 - Danube Delta - marine zone: site of Community importance, according to the Habitats Directive 92/43/EEC, established by Decision 2009/92/CE, overlapping the marine area of Danube Delta Biosphere Reserve - natural protected area of national and international importance - 121.697 ha (Custodian DDBRA).

Concerning the European ecological network NATURE2000, in 2007, through *Order No. 1964 of the Environment and Sustainable Development*[17] *Minister, December 2007, on instituting the natural protected area regime on the European interest sites as part of the European ecologic network NATURE2000 in Romania* six marine sites were moved to a special preservation regime; in all these sites the special conserving area regime was instituted (Special Conservation Interest - SCI).

In 2011, based on NIMRD's proposal, two new marine sites (SCIs) were declared by the Order of the Environment and Forests Minister no. 2387/2011 (23 August 2011), amending the Order of the Environment and Sustainable Development Minister no. 1964/2007 regarding the natural protected area regime of the sites of Community importance, as part of the European ecological network NATURE2000 in Romania. The aim of this proposal of NIMRD was to protect some sub-types of 1170-Reef

[17] This was the name of the Ministry at that time, at present the correct name is: Ministry of Environment and Climate Changes, the previous name (in 2011) was Ministry of Environment and Forests.

habitat, including 1170-2-Biogenic reefs with *Mytilus galloprovincialis*, insufficiently covered in previously declared sites. These new sites were:

- ROSCI0281 - Cape Aurora (No custodian yet);
- ROSCI0293 - Costinesti (No custodian yet).

Thus, Romania has approved the designation of these newly proposed sites (Cape Aurora and Costinesti) under the Habitats Directive, however, no custody of them is yet arranged.
Detail information on the sites designated as MPAs in Romania is provided below.

ROSCI0269 2 Mai - Vama Veche Marine Reserve

It is important through the presence of some habitats of European interest. It is also an MPA in the national network of protected areas, part of the "Natural reserve" category (corresponding to category IV IUCN - Protected area managed mainly for conservation through management intervention - Habitat/Species Management Area), having the aim of protecting and conserving marine natural habitats and species. The surface of this Reserve is of about 5.000 ha.

The Reserve comprises a mosaic of NATURE2000 habitat subtypes. It is rich in benthic and pelagic life and a refuge and breeding area for many marine species.

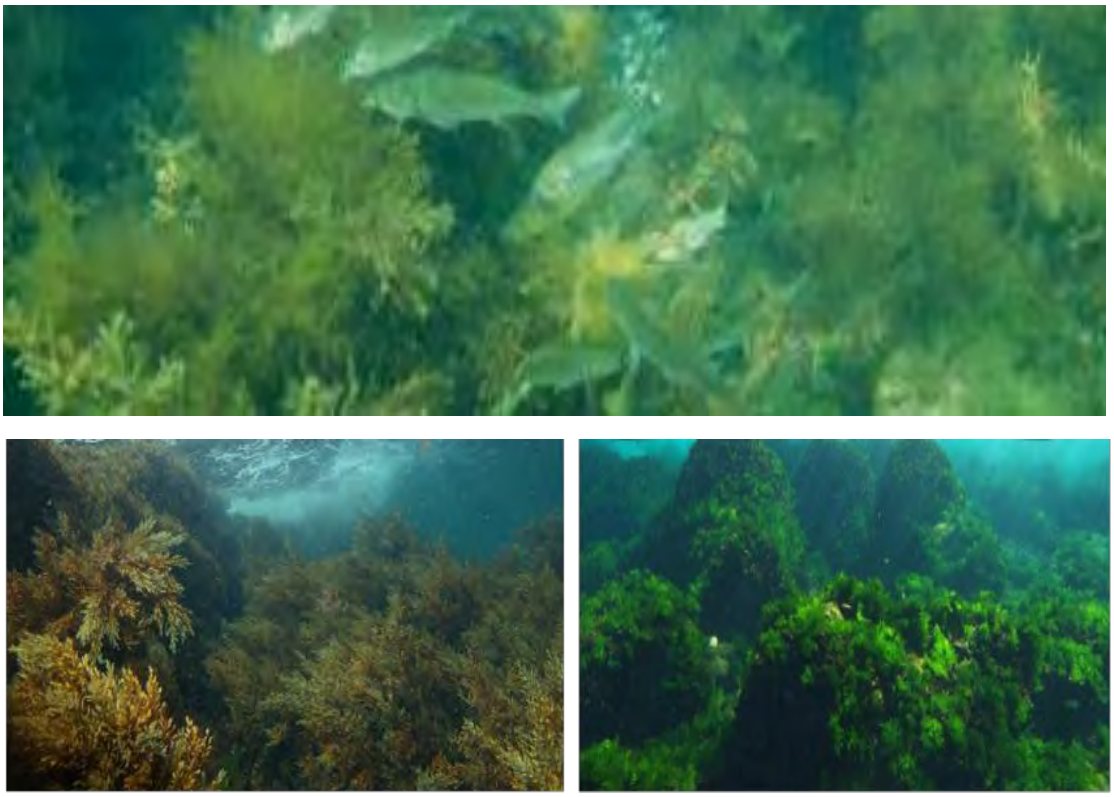


Figure 4. Underwater landscapes from the Marine Reserve 2 Mai – Vama Veche. Photos: D. Micu (NIMRD)

It is an important area both due to its biodiversity and location (the southern limit being at the Romania-Bulgaria border). Within the reserve there is a minor anthropogenic impact due to: overdevelopment of human settlements, unregulated touristic activities, Mangalia shipyard, sand and rock exploitation, illegal wastewater discharges, and illegal fishing.

Considering the interest of the scientific communities from the two neighbouring countries (Bulgaria and Romania) and the need for solving environment problems of transboundary nature, there might be prospects for establishing a transboundary reserve jointly managed by Bulgaria and Romania. The idea has appeared a few years ago, including the interest of ACCOBAMS to enhance the protection of Cetaceans through such a transboundary MPA[18], however, no advancement is so far in place. The MISIS Project considered the option to work toward the enlargement of the Vama Veche MPA into Bulgarian waters. However, priority was given to the areas between Bulgaria and Turkey, because there are no MPAs in Turkish Black Sea waters, and the MISIS Project saw it as a more substantial gap to address in enhancing the Black Sea environment protection.

ROSCI0094 Underwater sulphide seeps from Mangalia

The seeps occur on both rocky, sandy and peat bottoms and are connected to the Dobrogea plateau's karst complex. A detailed interdisciplinary study is needed in order to identify the causes of the emissions and their effects on the marine ecosystem. Although small (approx. 360 ha), this site is a biodiversity hot - spot, harbouring the highest diversity of habitats and species along the Romanian coast. Among them are ecosystem - engineering species like the seagrass *Zostera noltii*, the perennial brown alga *Cystoseira barbata* and the lugworm *Arenicola marina* (Figure 5). Extension of this highly valuable site is envisioned.

Figure 5. *Cystoseira* near a sulphide seep from Mangalia. Photo: D. Micu (NIMRD)

[18] There are also other important issues to be addressed under the Bucharest Convention, WFD and MSFD – it is about the general influence of the Danube River and RO sources of pollution/eutrophication on the GES of BG waters. There are no estimates how much nutrients and pollutants pass through the 'boundary' in between BG and RO in the Black Sea, carried by the currents, both – gradient and wind-driven. The establishment of a jointly managed MPA (projecting Vama Veche to Bulgarian waters) would imply the development of a regularly implemented monitoring system which would clarify such issues and help to resolve the distribution of responsibilities in between BG and RO so that both countries to comply with acting EU and regional BS legislation/policy requirements.

ROSCI0273 Cape Tuzla marine area

Along the Romanian coast, around Cape Tuzla rocky reefs (Figure 6) reach their maximum depth (at 28m). The underwater landscape of the reefs is very diverse, with plateaus, canyons, drop-offs, overhangs and small caves. These several microhabitats are populated by a rich marine fauna. The area is severely affected by road building along the coast, especially nearby beaches. Massive amounts of clay are being dumped into the sea, infilling small gulfs. In 2011, in the area there were realized coastal defence works in the aim to protect the coast against further erosion.

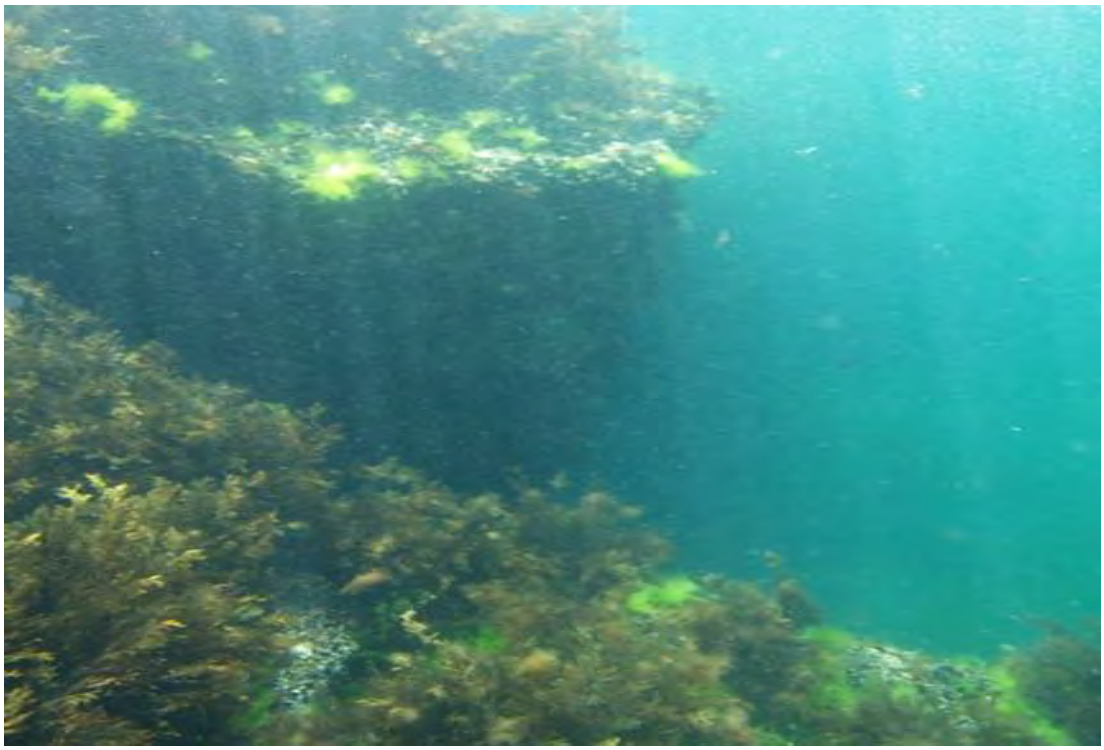


Figure 6. Tuzla. Photo: D. Micu (NIMRD)

ROSCI0197 The submerged beach from Eforie North – Eforie South

Along the southern Romanian coast, only here the hydrodynamic processes and natural habitats, specific for an exposed beach, are yet present.

This is the only place at the Romanian shore where the bivalves *Donacilla cornea* and *Donax trunculus* up to date still survive (Figure 7). In the past (years 1950s-60s), *Donacilla cornea* and *Donax trunculus* were widespread in the midlittoral and upper infralittoral of sandy beaches from the southern Romanian Black Sea. Due to their environmental requirements (water purity, oxygen concentration, salinity), the mere presence of these two species was an indicator of good water quality. Both species were presumed extinct as reported in the Romanian scientific literature between 1980 and 2000 (the period of progressive eutrophication and ecological decline of the Black Sea), yet in 2005 a small extant population was found here (Micu, 2006).

Today, the submerged beach is affected by: tourism-associated pollution and trampling, and freshwater discharges (non-compliant with standards). The size of the marine protected area is of about 140 ha.

Figure 7. *Donacilla cornea* from Eforie North – Eforie South. Photo: D. Micu (NIMRD)

ROSCI0237 Methanogenic submerged structures from Sfantu Gheorghe

present in the NW part of the Black Sea, between depths of 15 and 784 m, the submerged carbonate structures built by bacteria and archaea (Figure 8) around methane emissions grow larger beyond the oxic/anoxic interface characteristic for the Black Sea.

The shallow occurences are the eastern limit of the Danube Delta Biosphere Reserve, which gives opportunity for a joint management with the other Natura 2000 site ROSCI0066 Danube Delta marine zone (overlapping on the buffer zone of DDBR). Beside the 1180 habitat, other sedimentary habitat types are present here, types that make part of the EUNIS categories “Biogenic structures over sublittoral sediments” and “Deep shelf sediments habitats”.

Figure 8. Carbonate structures on the Black Sea bottom, North-Western Black Sea

The importance of the site is due to the existence of the unique carbonate-cemented sand structures.

The anthropogenic pressure on this site is insignificant, due to it being relatively far offshore positioned. Some impacts may occur due to navigation and non-living resources exploration/exploitation in this part of the Black Sea (namely gas and oil).

The area is public domain, part of the territorial sea and Economic Exclusive Zone of Romania. The surface of the marine protected area is of about 6.000 ha.

ROSCI0066 Danube Delta Biosphere Reserve - marine part

It is a natural protected area in the RO national network, Ramsar site and UNESCO site. It corresponds to the geographical unit of the reserve - the coastal area of the Black Sea, from the Danube discharge - Chilia branch, down to Midia Cape to the South, and up to the 20 m isobath to the East (Figure 9).

Apart from the historical conditions that favoured the forming of the Danube Delta, at the Danube discharging points in the Black Sea (they are three – Chilia, Sulina and Sf. Gheorghe) at least four current conditions are reunited, and these are:

- the existence of the limanic gulf having an almost triangular shape on the continental platform (shelf) that have depths of a few meters at shore and gets deeper up to 180 - 200 m on a distance of 180 km;
- small tide amplitude (30 cm);
- littoral currents that bring alluvia from the North - Western shore and block the Danube mouths;
- large quantity of alluvia transported by the Danube River itself.

The Danube Delta Biosphere Reserve has its own administration which, according to the Law No. 82/1993, has as main objectives the ecological management of the reserve territory, conservation and protection of the natural patrimony with great scientific value and promotion of sustainable exploitation of the natural ecosystems resources, and rehabilitation of some deteriorated habitats (because of the hydro technical projects[19] realized before 1989).

The surface of the DDBR marine area is of about 103.000 ha.

Figure 9. Marine beach at Sulina

[19] It is about the degradation of the Lagoon habitat type 1150, severely damaged by the works for the closing of the connection with the sea, at the same time with the opening of the channels for the of adduction of the Danube water into the system Razelm – Sinoe.

As mentioned above, the aim of their designation is to protect some sub-types of 1170-Reef habitat, including 1170-2-Biogenic reefs with *Mytilus galloprovincialis*, insufficiently covered in the other sites at the Romanian coastline.
The discussions further are focused on the requirements regarding the ecological criteria on the basis of which MPAs networks are habitually designed. Ecological, social, cultural, economic, scientific and educational criteria are taken into consideration. The ecological coherence of the MPA network in Romania is substantiated based on these criteria.

Ecological Criteria

Uniqueness or rarity

- ecosystems and habitats which are the only one of their kind or occur in few locations: is the case of the type represented by 1180 Submarines structures made by leaking gases present only in the Northern part of the Romanian littoral (under protection in the NATURE2000 site "ROSCI0237 Structuri submarine metanogene Sf. Gheorghe" - about 6,000 ha), or the case of the type represented by 1170-3 Shallow sulphide seeps present only in the Southern part of the Romanian littoral (under protection in the Natura 2000 site "ROSCI0094 Izvoarele sulfuroase submarine de la Mangalia" - about 360 ha);

- rare, threatened or endangered species and their habitats: it is the case of the *Donacilla cornea* and *Donax trunculus* bivalve species (protected now in the NATURE2000 site „ROSCI0197 Plaja submersă Eforie Nord - Eforie Sud - about 140 ha); and *Pholas dactylus* (protected now in the NATURE2000 site "ROSCI0269 2 Mai - Vama Veche – about 5,000 ha) or the case of the *Cystoseira barbata* macroalgae, present only in the the NATURE2000 site "ROSCI0269 2 Mai - Vama Veche and "ROSCI0094 Izvoarele sulfuroase submarine de la Mangalia".

Representativeness

- typical, outstanding and illustrative examples of ecosystems, communities, ecological processes and other natural characteristics and processes (affected by hydraulic works made for shore protection against coastal erosion): In the "ROSCI0094 Izvoarele sulfuroase submarine de la Mangalia" NATURE2000 site the last surviving *Zostera* meadows from the Romanian Black Sea are present. In the „ROSCI0197 Plaja submersă Eforie Nord - Eforie Sud NATURE2000 site" – is the only area of the Southern coast where the hydrodynamic processes and natural habitats specific for an exposed beach are present, so *Donacilla cornea* and *Donax trunculus* bivalves can be found there.

Diversity

- exceptional variety of species or genetic diversity and highly varied ecosystems, habitats and communities: the highest diversity on the Romanian coast is found in the Southern part, first of all in the "ROSCI0094 Izvoarele sulfuroase submarine de la Mangalia" NATURE2000 site, with 19 NATURE2000 elemental habitats present in this area, followed by the site "ROSCI0269 2 Mai - Vama Veche", with 16 NATURE2000 elemental habitats.

Naturalness

- a relative lack of human-induced disturbance or degradation: on the background of restructured economic activities and of increasing exigencies with respect to implementation of environmental politics, a slight but continuous recovery process of the Romanian marine ecosystem has taken place during the last years. Ecological improvement trends are visible both as far as water quality parameters are concerned and at the structural and functional level of the biota. Ecologically, the marine ecosystem on the whole can be qualified to a state of convalescence. Under these conditions of fragile equilibrium, the Romanian Black Sea remains highly vulnerable to anthropogenic impact and the effects of global climate change. In respect to human pressures, the Romanian Black Sea has two distinct sectors: the Northern sector (represented by the Danube Delta marine zone), under the influence of the Danube plume, but without direct industrial influence, and the Southern sector, under the influence of point and diffuse sources from human activities, especially around the main harbours (Midia, Constanta and Mangalia). In the Northern part there are no diffuse sources, comparing with the Southern part where these are present.

Dependency:

- ecological processes and biological diversity are highly dependent on biotic structured systems (e.g. biogenic reefs, seagrass meadows): is the case of the biogenic reefs represented by the type 1170-2 *Mytilus galloprovincialis* biogenic reefs and 1110-1 Sandbanks which are slightly covered by sea water all the time - Pontic *Zostera* meadows, where the species *Zostera marina*, *Z. noltii* and *Zanichellia pedicellata* form monospecific or mixed underwater meadows, inside sheltered bays with depths down to 4 meters, where the sedimentary stability leads to slight muddying of the sand.

Critical habitats

- areas essential for the survival or recovery of fish stocks or rare or endangered marine species - spawning, nursery, feeding grounds, migration routes: the type represented by 1130 Estuaries present in front of the Danube mouths. The fresh and marine water mixture leads to the precipitation of fine sediments and the streams render fluid and often relocate these sediments. These waters shelter specific plant and animal communities. So, even if there is no tide (as in the Black Sea) and they don't have the typical funnel shape, these waters with variable salinity represent an estuarine habitat. This area is very important for the upstream migration of sturgeon species for reproduction in the River Danube.

Vulnerability:

- habitats, communities and species with low tolerance to natural and anthropogenic disturbance: the case of the "ROSCI0197 Plaja submersă Eforie Nord - Eforie Sud" NATURE2000, which shelters the *Donacilla cornea* and *Donax trunculus* bivalves. It is possible that, in the future, some experimental hydro-technical projects will be executed in the area, and they will drastically modify the zone structure and these species with low tolerance to natural conditions variability will disappear.

Representative and outstanding seascapes and features of non-living nature:

- Reefs: present only in the Southern part of the Romanian littoral; the most important is the 1170-8 Infralittoral rock with photophilic algae type, with high

conservative value. This type of habitat is the richest and most diverse, dominated by vegetation, and its dynamics is conditioned by the life cycle of the algal flora, the composition of which varies seasonally.

- Sandbanks: 1110-1 Zostera meadows

- Sea caves: present only in the Southern part of the Romanian littoral, on the rocky mid - and infra-littoral

- Underwater structures created by leaking gases: Submarine structures consist of sandstone slabs, pavements and pillars up to 4 m high, formed by aggregations of carbonate cement resulting from microbial oxidation of gas emissions, mainly methane. The formations are interspersed with gas vents that intermittently release gas. The methane most likely originates from the microbial decomposition of fossil plant materials. Until now only the "bubbling reef" type of carbonate structure has been found in the Black Sea, the dimensions and complexity of which increase with depth.

Social, Cultural and Economic Criteria

Social or economic dependency:

- environmental quality and sustainable utilization of living resources are important for the continuation of traditional livelihoods and uses - fisheries, tourism, recreation: the whole area is used traditionally for fisheries, tourism and recreation, so the need to maintain these activities in the RO marine protected areas promoting them to become environmentally-friendly is well recognised. The Stakeholders' Opinion Pool, developed in the frames of the Matra project 2008[20], showed that the population agrees to live in the proximity of a protected area as long as their traditional occupations are allowed.

Cultural heritage

- Occurrence of significant historical remains and archaeological artefacts: on the Romanian littoral, in the Marine Protected Areas there are several artefacts: wrecks (Eforie, Tuzla, Vama Veche), some of them historical, ancient remnants

[20] The project has been implemented by partnership of EUCC -The Coastal Union in the Netherlands, the Institute of Oceanology to the Bulgarian Academy of Sciences (IO-BAS), the National Institute for Marine Research and Development "Grigore Antipa" of Romania and the Black Sea Commission.
Project duration: 1 September 2006- 1 September 2008. Project budget: 110.322,00 Euro
Core project team: Alan Pickaver, EUCC-The Coastal Union, Daniela van Elburg-Velinova, EUCC-The Coastal Union, Valentina Todorova and Marina Panayotova - Institute of Oceanology-BAS, Tania Zaharia and Dragos Micu - NIMRD „Grigore Antipa", Violeta Velikova, Black Sea Commission.
Objectives: The main objective of the project was to directly support the establishment of an indicative list of subtidal MPAs in Bulgaria and Romania. It was the aim of this project to harness, and use, the information and knowledge already present in Bulgaria and Romania and supplement this with knowledge from the European regional seas.
Results and Outputs: The goals of the project have been achieved: a list of priority regions for MPAs designation and the development of ecologically coherent network of MPAs in Bulgaria and Romania, including one transboundary area, has been drawn up. The network of sites is characterized by considerable ecological coherence in terms of repeatability of habitats and species of conservation interest; the connectivity within the network is ensured by the small distance between sites. The scientific data and the expertise on site identification and MPAs network development are excellent. Good collaboration between the two national marine institutes is established with respect to MPAs. The two research institutes have worked together to gather and analyse the necessary data to define criteria for selection and draw up a list of MPA sites. Field work was carried out in 2007-2008 by applying SCUBA diving visual census and underwater photography for identification and documentation of marine habitats and species with high conservation importance and mapping of their distribution.

like amphoras (Mangalia), the lighthouses from Tuzla and Sulina as cultural heritage, which represent, also, points of attraction in the RO MPAs.

Practicability/feasibility

- level of isolation from external destructive influences: is low, taking into account the size of the Economic Exclusive Zone and the interests in the exploitation of the natural resources.
- social and political acceptability, level of community support: the level of the community support cannot be easily qualified, as the people are rather indifferent due to low public awareness. The local population and authorities accept the creation of an MPA but they do not respect and obey the rules regarding an MPA management.
- compatibility with existing uses: in the sites selected as MPAs, human activities in the PAs will be managed in the way to minimise their impact on the environment, providing for their development using best available practices and environment-friendly technologies. This is theoretically provisioned, in practice little progess is achieved.
- management possibilities, compatibility with existing management regimes: presently, only two MPAs have the rules/regulations and management plans (the Danube Delta - marine zone, as part of the Danube Delta Biosphere Reserve (DDBR) and 2 Mai – Vama Veche Marine Reserve, which is overlapping with the respective site of NATURE2000). The overlapping of the NATURE2000 sites is with the previous natural reserves designated under the national legislation before Romania became EU country. The existing documents are compatible with the aims of the NATURE2000 sites. It is mainly about the rules and management plan of the DDBR approved by the existing legislation.

Scientific and Educational Criteria

Scientific importance

features of high scientific interest:

- MPAs need scientific research;
- Managers have to be convinced to support science, they may not know that management without science is a waste of time and money;
- Science does not benefit from MPAs, but tries to make them on their own beneficial as much as possible based on knowledge-based designation;
- Science supports the MPAs management, providing data/information on the efficiency of measures implemented measuring them against the state of the environment.

Educational value

- opportunities for illustration of typical natural processes and phenomena: all MPAs can be used in an educational process, first of all of the children, but not only, because the entire community can learn about the marine ecosystems and how these can change under human pressure. The activities developed within the Matra project with various stakeholders showed us that it is possible to change the mentality about nature and human beings. The Vama Veche - 2 Mai

Marine Reserve has a great potential to develop transboundary collaboration in the educational field related to MPAs.

Reference conditions

- baseline for monitoring and assessment: on the Romanian littoral, the institution responsible for the biological and physical-chemical monitoring is NIMRD, so it was easy to integrate the MPAs into the monitoring network. Presently, almost all MPAs are included in this network, with a few exceptions.

Ecological Coherence

Replication of features:

- occurrence of the same species, communities, habitats and seascapes in different sites of the network: in the creating of the RO network, the replication of features (first of all, habitats with European importance, species from the Habitats Directive, but also, other important species and habitats listed by other conventions or being of national importance, endemism etc.) has been considered.

Connectivity

- protected sites should be close enough for resident populations to interact through dispersal or migration: as mentioned already, the Romanian MPAs network (Figure 10) is composed of eight MPAs, with a total area of 1162.86 km^2, which represents: 4.65% relative to EEZ and 3.88% relative to the shelf (the marine part of the DDBR represents 88.57% of the total). It is expected these small reserves will provide for connectivity through eco-corridors no less efficient than fewer larger ones, because the distances between the reserves identified are short. Herewith, the distances between the MPAs are 10-15 km maximum (marine reserves from the network are close enough for protected populations to interact through dispersal). More than 80% of the Romanian coast length is under protection by this network.

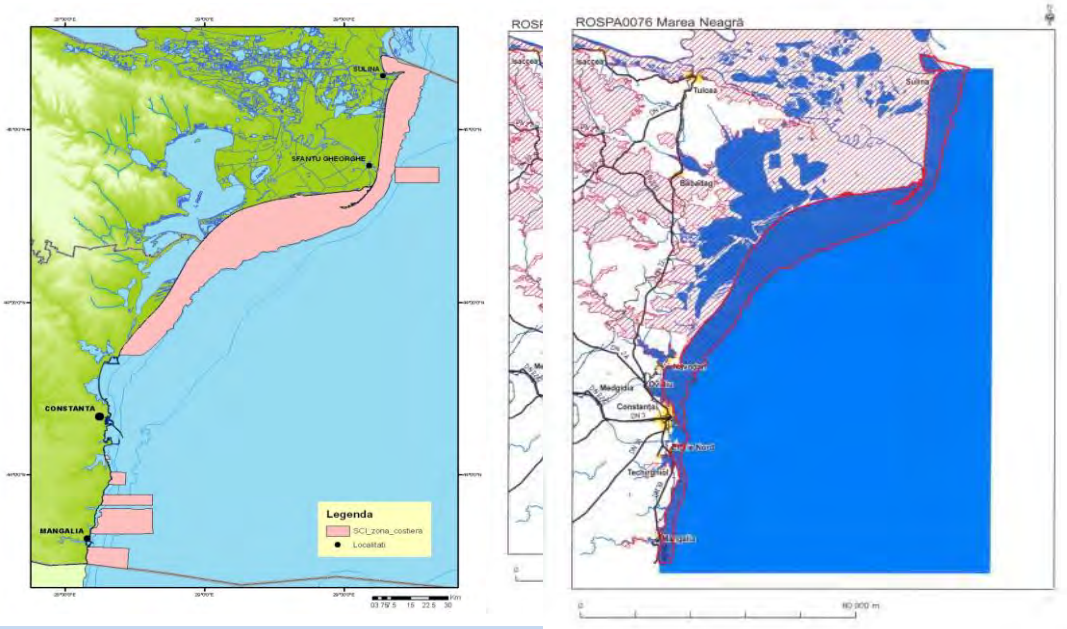


Figure 10. Protected areas under the Habitat and

The Danube Delta Biosphere Reserve management plan stipulates expenses for biodiversity preservation actions, including for the marine area (buffer zone).

The 2 Mai - Vama Veche Marine Reserve has regulations and a management plan, both approved by the Romanian Academy of Science and presently under approval by the Ministry of Environment and Climate Change. In the period 2010-2012, a new Management Plan was developed. The previous one does not reflect the fact the area became Natura 2000 site, this is why a new Management Plan was needed.
Since 2010, NIRD GeoEcoMar has 3 MPAs in its custody: ROSCI0237 Methanogenic submerged structures from Sfantu Gheorghe, ROSCI0273 Cape Tuzla marine area, ROSCI0094 Underwater sulphide seeps from Mangalia. In the first 6 months of activity GeoEcoMar has elaborated proposal on regulations for these three areas based on consultations with stakeholders at the local and national level. In January 2011 this proposal on regulations was submitted to the Ministry of Environment and Forestry (present Ministry of Env. and Climate Change), however, a relevant normative act (Ordinance) is not yet being issued. Unfortunately, no management plans for these MPAs have been finalized due to the lack of dedicated funding. The management plans for these MPAs were finalized and are presently under the procedure of evaluation to obtain Environment Agreement.
Apart from the proposal on regulations, other activities carried out by GeoEcoMar, aimed at creating a basis for a future integrated management of the sites under its custody, were as follow:

• Monitoring of the MPAs given in custody;
• Educational activities addressed mostly to children, students and teachers;
• Public awareness activities and promotion of the sites as protected areas of benefit to people and Nature.

3. Recent developments, planned protected areas

Activities during the last decade included: extension of the national network of protected areas and natural reserves.
In detail: the following activities were undertaken:

- Modification of the Annex to Law no. 462/ 2001 related to the regime of protected areas, conservation of wild flora and fauna natural habitats;
- Assuring environmental protection management at the level of EU requirements and in line with obligations to conventions in which Romania is a contracting party, creating *inter alia* national network of protected areas;
- Finalization of all protected areas survey and use of the data compiled to inventory NATURE2000 sites in Romania;
- Create data bases in which wild flora and fauna species and natural habitats of EU interest existing in Romania are thoroughly documented;
- Preparing the list of sites proposed to be part of NATURE2000 network, of EU interest, and designating special protected areas.

The Red List (updated in 2008 for the Romanian sea shore) is made up of 206 endangered species of macro algae, invertebrates, fish and marine mammals; special attention is paid to the *Squalus acanthias*, to the sturgeons (endangered

owing to the conditions in the rivers of origin, to the conditions in the breeding habitats – the benthic area of the Black Sea and to over fishing) and to the 3 species of dolphins (*Tursiops truncatus ponticus, Delphinus delphis ponticus* and *Phocoena phocoena relicta*). In relation to rare species, a coastal protected area was established in 2000 in the area of Vama Veche – 2 Mai, with a length of 7 km and a surface area of 5,000 ha, as mentioned above. The rare organisms present in this area belong to the following classes: Crustacea, Chondrichthyes, Osteichthyes, Reptilia and Mammalia.

Work is ongoing with regard to the collection of data for the establishment of special protection areas for birds.

In 2009, NIMRD started, within a project financed through the Nucleus Programme by the National Authority for Research (Ministry of Education and Research), the mapping of the habitats of European interest in the marine sites designated as such: ROSCI0269 - Vama Veche - 2 Mai, ROSCI0094 - Underwater sulfur springs from Mangalia, ROSCI0197 - Submerged beach from Eforie Nord - Eforie Sud, ROSCI0273 - Marine area from Cape Tuzla, ROSCI0237 - Metanogene underwater structures from Sfantu Gheorghe and ROSCI0066 - Danube Delta - marine zone.

4. Deficiencies in biodiversity conservation, MPAs identification, designation and management

1. In enforcement of legal/policy documents, there is a need to strengthen administrative capacity at national and local/municipal level and to ensure coordination between authorities.
2. Poor integration into sectoral policies; there is a general weak interest for integrating the coastal habitats under protection regime according with Law No 62/18.07.2001 and L5/2000 into the territorial planning use. Often, conflicting plans against the interest of conservation are permitted in or in the vicinity of the protected areas without any compensatory measures being imposed (e.g., touristic constructions.
3. Designation of areas of protection in urbanely influenced zones (e.g. in the vicinity of industrial and commercial activities: shipyards, ports, intense touristic activities) burdens the process of recovery and protection of natural sites; as result, the legal requirements are often disregarded.
4. The historic pollution in the sites adds up to a slow recovery and increases the costs for ecosystem rehabilitation.
5. The initial assessment of state of ecosystem in the areas proposed for protection under the Habitat Directive needs further scientific studies, in order to define the short, medium and long conservation targets.
6. Besides management plans, other measures of conservation which derive from the necessity of application of custodian's obligation engaged through the MO No 850/27.10.2003 on procedure of entrustment of administration and custody of the protected natural areas, are impeded or not applied.
7. The juridical status of the land under protection is not clearly defined and the protection measures can not be effectively applied.
8. No agreements or formal agreements but with no strictly contractual obligations exist between owners or administrators of the places located in or in the vicinity of the protected area (e.g. owners of hotels, of fisheries companies, etc.).

9. The level of transposition and implementation of European legislation is incomplete, implying respective sanctions from the EU; on the other hand, the legislative framework is becoming tangled and hard to work with as it is in process of permanent ”actualization”.
10. The existing monitoring capacity should be improved. This includes the need for trainings.
11. The stakeholders’ involvement remains often at the state of declaration; the immediate economic interest is on the first place (e.g., tourism development).
12. Up to now, the Action Plans for the species or habitats stipulated in the management plans were not put in practice.
13. The visibility of the protected areas at the local community level is isufficiently promoted resulting in low involvement of local people in the areas` protection.
14. There is no coordination between authorities and custodian regarding the corrective measures needed to halt law infringement (including prosecution) and no real control exists over the area under protection due to lack of personnel.
15. The management plans have no clear objectives of conservation or rehabilitation scheduled.
16. The SCI areas need to be upgraded into the SPA regime with comprehensive management plans operable at the national and regional levels.
17. In spite of comprehensive legislation, Romania needs to advance the harmonization of the methodologies of protected areas identification, designation and types of management applied.
18. The acting National Strategy for Biodiversity Conservation is technically, organizationally and financially weakly coordinated.
19. In order to have a correct listing and evaluation of the species and habitats condition measurable indicators with large applicability must be developed, but also specifically for the key species and habitats.
20. It is necessary to better design the management measures/actions according to MPAs’ categories (2008 IUCN-WCPA guidelines on protected area management categories); should be developed ecosystem based management of the MPAs.
21. Keeping in mind the threats arising from the vicinity of PAs where anthropogenic activities (industry, tourism) are in place, the proposal on designation must include specification of buffer areas and ecological corridors. At present, these areas are not delimited in the RO MPAs, excepting those from The Danube Delta Biosphere.
22. The Transboundary Areas (TBAs) designation requires a better application of International Conventions (for instance, CBD, Ramsar[21] and Bonn[22]).
23. In Romania, the Action plan for Biodiversity implementation requires better coordination of efforts from the part of different players/stakeholders, and better financial assistance.

[21] RAMSAR - Transboundary Ramsar Sites. In some instances, Ramsar Contracting Parties have established their new and existing Ramsar Sites as parts of Transboundary Ramsar Sites (TRS), meaning that an ecologically coherent wetland extends across national borders and the Ramsar site authorities on both or all sides of the border have formally agreed to collaborate in its management, and have notified the Secretariat of this intent. This is a cooperative management arrangement and not a distinct legal status for the Ramsar sites involved. (http://www.ramsar.org/cda)

[22] Bonn - Art. IV, „Appendix II: Migratory Species to be the Subject of Agreements [of the Bonn Convention] shall list migratory species which have an unfavourable conservation status and which require international agreements for their conservation and management, as well as those which have a conservation status which would significantly benefit from the international cooperation that could be achieved by an international agreement.”

TURKEY

1. How MPAs are designated?

Turkey is one of the greatest peninsula countries of the world, bordered by four seas with different ecology and oceanography: the Black Sea, the Sea of Marmara, the Aegean Sea and the Mediterranean Sea. Turkish coastline is 8592 km without islands coastline (The Min. of Environment & Urbanization, 2012). 1132 km of it is protected such as: National Parks, Ramsar sites, Nature parks etc. In addition, Marine Protected Areas is 6.57% of Turkey (The Min. Forestry % Water Affairs, 2012), however, they are not in the Black Sea.

Table 4. List of the Marine Protected Areas in the Mediterranean Sea and their Constituting Legislations

Area	Constituting Legislations	Sea
Belek, Antalya	Decision of the Cabinet dated 22.10.1990 and numbered 90/1117	Mediterranean
Foça, İzmir	Decision of the Cabinet dated 22.10.1990 and numbered 90/1117.	Mediterranean (Aegean)
Datça-Bozburun, Muğla	Decision of the Cabinet dated 22.10.1990 and numbered 90/1117.	Mediterranean
Fethiye-Göcek, Muğla	Decision of the Cabinet dated 12.06.1988 and numbered 88/13019.	Mediterranean (Aegean)
Gökova, Muğla	Decision of the Cabinet dated 12.06.1988 and numbered 88/13019.	Mediterranean
Göksu Deltası, Mersin	Decision of the Cabinet dated 18.01.1990 and numbered 90/77.	Mediterranean
Kaş-Kekova, Antalya	Decision of the Cabinet dated 18.01.1990 numbered 90/77.	Mediterranean
Köyceğiz-Dalyan, Muğla	Decision of the Cabinet dated 12.06.1988 and numbered 88/13019.	Mediterranean
Patara, Antalya - Muğla	Decision of the Cabinet dated 18.01.1990 and numbered 90/77.	Mediterranean
Saros Körfezi, Çanakkale – Edirne	Decision of the Cabinet dated 22.12.2010 and numbered 27793	Mediterranean (Aegean)

Black Sea coastline is 1400 km. Along Turkish Black Sea Coast; there are many protected areas (National Parks, Ramsar sites, Nature parks etc). The total length of coast line is ~ 8560 km and ca. 60% of the total population lives within the 100 km of the coast. There are very few MPAs along the Turkish coast: in the Mediterranean and Aegean Sea. They have been designated to protect certain species as the monk seal or for biodiversity objectives. There are no MPAs designated to sustain fisheries. Besides, the existing practices for MPAs in the Mediterranean and Aegean Seas are not uniform in terms of designation objectives and protection measures. Despite their designation as protected areas the marine parks still face a number of threats, including fishing and pollution. Most of the Coastal Protected Areas (CPAs), about 90% of the CPAs in Turkey are along the Mediterranean too. At the Black Sea, Turkey has no designated MPAs, and has the least coverage of coastal protected

areas, compared with other Black Sea countries (Black Sea TDA 2007). While Turkey has much longer shoreline than other Black Sea countries: 1.400 km (only Ukraine has longer shoreline if Azov Sea is included as part of the Black Sea). Over fishing and pollution are the main causes for habitats destruction in the Turkish Black Sea. Comparing to last 20 years, some of the fish species have diminished such as sturgeon, brown meagre, bogue, and gurnard fish.

2. Inventory of MPAs and availability of management plans, including their level of implementation

Turkey's marine biodiversity has been seriously impacted by anthropogenic pressures. The following are amongst the key types of threats and associated causes of marine biodiversity loss: degradation of marine habitats and ecosystems, overharvesting of marine resources and destruction of coastal habitats. Protected areas have a potentially significant, yet largely unrealized, role to play in eliminating these threats to marine area biodiversity in Turkey. Currently, about 6.57% of Turkey's territorial water is protected.

Several sites at the Turkish Black Sea coast are already recognized for their high ecological values. There are two internationally important wetlands: Kizilirmak delta, designated in 1998 as Ramsar site and Yeşilirmak delta, both deltas are located in the province Samsun. Designation of these two internationally important wetlands as MPAs is important in order to ensure better protection. For the designation of the sites as MPAs more efficient scientific data is necessary. Further, 5 marine sites are also known for their rich biodiversity, but there is no sufficient scientific data for their designation.

3. Recent developments, planned protected areas

The draft regional BS Biodiversity Action Plan (extensively discussed already in this report, see Introduction) calls for designation of TBAs which currently do not exist in the Black Sea. Initially, this Plan pointed the year 2005 as a deadline to prepare a list of trans-boundary areas, which would be eligible for designation as MPAs. No such list exists so far. Besides, the implementation of the regional plan would require not only the designation of TBAs, but also the development and implementation of bilateral management plans with distributed responsibilities in between two neighbouring states.

MISIS project deals with the gaps in relation to MPAs in the Black Sea region, including the lack of transboundary MPAs. The project initiated a pilot study in an area which was seen as eligible to become the first transboundary MPA in the Black Sea. The area is around the Bulgarian-Turkish border. On the Turkish side the area is named İğneada (Zone 1) (Figure 11), and on the Bulgaria side this is the Strandzha coast, which was already presented above in the report. This is a site proposed for inclusion in NATURE2000, from the coast up to the 75 m izobath. And this NATURE2000 site of Bulgaria needs to be enlarged through the border with Turkey and cover İğneada. Turkish Forestry & Water Affairs Ministry is responsible for

marine sensitive areas for all Turkish coasts including Black Sea to protect marine habitats and species.

Figure 11. Proposed MPAs for Turkish Black Sea coast (Öztürk *et al.*, *in press*)

Similar to the incredible biodiversity of the Strandzha coast in Bulgaria, İğneada comprises many habitats. It is a balanced ecosystems complex with developed waterlogged forests, wetlands on alluvial soils and coastal sands. İğneada (National Park) is one of the few preserved areas in Europe, the area has ultimate importance for biological diversity (both on coast and in the sea) and is a home to many flora and fauna species, a part of which are under threat. İğneada is also not far from the Istanbul Strait (Bosporus), which surroundings in the Black Sea were already mentioned as an area in need for protection.

The zone 2 is pre-bosphoric region. The region is under a threat imposed by alien species (Note: some non-native species penetrate through the Bosporus on their own – north-ward movement of species due to climate change). Alien species were determined from the Turkish part of the Black Sea, they are well established near the pre-bosphoric area most probably due to easy acclimation. Intense shipping traffic (and associated ballast water exchange) is the reason for most of the introductions. This area is also feeding ground and distribution area of larvae and eggs of some commercial fishes.

Zone 3 is from Cide to Doğanyurt and it was inhabited by the Mediterranean monk seals. The population of the monk seal in the Turkish coast of the Black Sea is going extinct. The species is critically endangered; both its distributional range and population size has dramatically declined from peak abundances observed in the 1960s (IUCN Redlist; Guclusoy et al. 1994). In the area the Küre Mountains National Park is located. The Küre Mountains National Park Management Plan has been prepared by the project “Enhancing Forest Protected Areas Management System in Turkey”, funded by the Global Environment Facility (GEF). The Plan has been approved by the General Directorate of Nature Conservation and National Parks at 3 December 2012 (Min. of Forestry and water Affairs).

Zone 4 is between Kizilirmak (RAMSAR SITE) and Yeşilirmak (Wetland) Rivers. In the middle of the Turkish coastline the Yeşilirmak and Kizilirmak have created wide constructional plains reaching far out to the Black sea, almost to the edge of the shelf. In the lowland area, the Yeşilirmak divides into many branches and reaches the sea through them. The Kizilirmak debouches into the sea through a single main channel, with some unimportant branching; the river channel is broken up by sandy islands. Both rivers have islands in their estuaries, near the coast, and the outer

edges of their deltas are fringed with wide sandy beaches. These two rivers are the most important rivers as wetland and deltaic ecosystems in the Turkish part of the Black Sea. The Delta of Kızılırmak occupies 56,000 ha and includes 12,000 ha of freshwater marshes and swamps, coastal lakes, and lagoons on both sides of the Kızılırmak River. The ecosystem of the delta wetland area is very rich in biological diversity. Kızılırmak Delta has three criteria in the most important European Bird Areas inventory. The Delta is vital during the migration of bird species which directly access the Black Sea. This area is the only area for feeding and sheltering during flight preparation and post flight. So far, 341 species have been identified in this area, and this corresponds to 73% of the total number of species registered in Turkey. The delta, with its bird heritage and the dune vegetation is very attractive for fauna and flora. In the TR BS, sturgeon species mostly live in the delta of Kizilirmak, spawns on pebble and their larvae move then downstream for feeding .The grown up fries and adult individuals inhabit the open sea. The appearance frequency of *Acipenser gueldenstaedtii, A. stellatus* and *Huso huso* throughout the Southern Black Sea coasts is the highest in the Yeşilirmak-Kizilirmak Basin and Sakarya Basin (Ustaoğlu *et al*., 2011). *A. persicus* was newly recorded from the Sinop-Samsun coast of the Black Sea in 2004. Besides, sturgeon stocks enhancement activities continue in these two rivers (Kizilirmak and Yeşilirmak). The Management Plan of the Kızılırmak Delta (Ramsar Site) was approved in 2011, of the Yeşilırmak Delta (wetlands) was approved in 2012.
Zone 5 is Mesgit reef. Reefs are important habitat mostly for benthic species. Mesgit reef is located at the middle of the sea, with a depth of 80-90 m, and its distance from Trabzon is 30 miles. In the Black Sea this kind of habitats is rare and in need for protection and further investigations.

4. Deficiencies in biodiversity conservation, MPAs identification, designation and management

The draft “Guidelines for the Establishment of Marine Protected Areas in the Black Sea” (October 2008, ECBSea Project&BSC) is the methodology recommended for the establishment of an MPA network in the Black Sea region. The approach proposed takes into consideration the provisions of the CBD (Convention of Biological Diversity) Decision 9/20, and the obligations of the EU Birds and Habitats Directives. Turkey, as well as all other Black Sea countries, is a party to the CBD. Further, the implementation of the EU Birds and Habitats Directives is considered during the EU accession period of Turkey. The Guidelines document recommends a set of criteria for MPAs sites selection in the Black Sea. These are: Uniqueness or rarity; Special importance for life-history stages of species; Importance for threatened, endangered or declining species and/or habitats; Vulnerability, Fragility, Sensitivity, or Slow recovery; Biological productivity; Biological diversity; Naturalness. These common criteria should be used with the understanding that they will be further specified as more data/information becomes available for the Turkish Black Sea.
Common EU/Black Sea lists of habitats and species of conservation importance are not available. Habitats protection is crucial for maintaining the Black Sea biodiversity, in other words species-oriented protection is presently understood in TR as insufficient to halt biodiversity loss. The habitats that are most at risk include the neritic water column, coastal lagoons, estuaries/ deltas and wetlands/salt

marshes. The EU Habitats Directive currently lists nine main categories of marine habitats for which sites should be identified and conservation measures taken. While many of these habitats are found in the Black Sea, there are some other habitats types which are found only in the Black Sea and which also deserve protection. As mentioned already, Black Sea habitats classification has been prepared under the BSC, based on the European Nature Information System (EUNIS). The situation with species of Black Sea importance is more complicated. A combined list of species covered by the EU directives, by the Black Sea Biodiversity Protocol (Annex II) and by the Black Sea TDA 2007 comprises a total of 320 species. The legally binding List of species, which need conservation efforts in all BS coastal states is the Annex II of the BS Biodiversity Protocol, which is under constant update. As per today, Annex II contains less than 100 species. However, for most taxonomic groups, except for birds and mammals, additional survey and assessments are needed to make sure that Annex II is complete.

After establishing the important habitats and species for conservation, more detailed mapping of their distribution and abundance should be carried out using best available practices. Experience with proposing EU NATURE2000 sites in the marine environment has shown that this presents more of a challenge than originally expected because of the general lack of scientific knowledge on the distribution and abundance of species and habitats, and the high costs of carrying out research and surveys in offshore marine areas. Further, assessments should be carried out on the adequacy and viability of selected MPAs in terms of their size, shape, boundaries, buffering and appropriateness of proposed site management regime. In TR, scientific data/information on Black Sea marine habitats and species are rather scarce. Research is needed to develop lists of habitats and species requiring conservation measures (MPAs including) and to map their distribution.

The draft law on Conservation of Nature and Biodiversity, which has been in preparation since 2002 and is to be discussed in the Parliament, evidences that the regulations concerning conservation of nature and biodiversity in TR are in the process of modification and a new system is planned to be enacted. Sofar, the leading acts in the scope of the regulations concerning protected areas are as follow:

Environment act no 2872;
Forest act no 6831;
National Park act no 2873;
Legislative decree no 383 on establishment on Environmental Protection Agency for Special Areas;
Terrestrial hunting act no 4915;
Law no 2863 on Conservation of Cultural and Natural Property;
Law no 1634 on encouragement of tourism;
Law no 5312 on Principles of Emergency Response and Compensation for Damages in case of Pollution of Marine Environment by Oil and Other Harmful Substances;
Coastal law no 3621;
Fisheries law no 1380;
Legislative decree no 644 on the Organization and Functions of Ministry of Environment and Urban Planning and
Legislative decree no 645 on the Organization and Functions of Ministry of Forest and Water Affairs.

The statutes of protected areas in this framework are;
National Park,
Nature Reserve Area,
Natural Park,
Natural Monument,
Archaeological Protected area,
Urban Protected Area,
Historical Protected Area,
Natural Protected Area,
Special Environmental Protection Area,
Wetland,
The protected area statutes as required by Bern Convention on the Conservation of European Wildlife and Natural Habitats,
Areas of special conservation interest (emerald network areas),
Biosphere reservation areas,
World Cultural and Natural Heritage Sites.

More than one statute in the above mentioned areas and their attribution to various legal regulations cause management problems in practice. Therefore, the attitude of different institutions, even different departments in a single institution in charge with the management of “protected area” prevents constitution of standards and rules compatible with each other. The deficiencies in the TR legislation concerning nature protection reveal that a framework law is essential relating to the elements of nature and biodiversity such as species, habitats, and protection of genetic resources.

Legal arrangement should be based on a holistic approach of conservation of all the living beings and ecosystems and the acceptance that all living creatures have the right to live in natural habitats. However, many protected areas in TR are under stress due to anthropogenic activities such as unplanned urbanization, agriculture, tourism, mining and other industries. In this respect, it is impossible to expect a protect-use balance to occurre as the principles of sustainable development are not observed both in regulations and in practice.

The TR Draft Law on Conservation of Nature and Biodiversity has deviated from its actual aim by rather supporting bioesources exploitation instead of their protection. Hence, it may not help to control the already existing illegal fishery but give it freedom to further develop. On the other hand, in the framework of the harmonization process of Turkish legislation with EU aquis in the process of accession, TR had to consider the Birds and Habitats Directives. Although not clearly mentioned in the draft law, it is understood that several provisions had been included to transpose the requirements of these two directives. However, the draft law underwent some modifications due to political and other pressures (e.g. industry) since the first draft. Presently, the TR Draft Law seems to be far away from the aspects that can set up and operate a proper system of biodiversity protection. In addition, it was discussed that, besides an organization which determines the environmental policies and plans, the natural conservation statutes have to be gathered under a single roof. However, this framework was argued not to be a ministry department, but instead a central organization with financial and administrative autonomy, reduced bureaucracy, monitoring and controlling at the

local scale. On the other hand, it is clearly understood from the structure of the novel Ministries and legislative decrees of 2011 that such an organization is not possible and the suggestion is declined politically. However, existing confusion and authority conflicts in organizations dealing specifically with nature conservation reveals incoherency and problems in policies regarding nature protection. In Biodiversity Protection TR should also identify the mandate of the different ministries – who is responsible for what: Ministry of Environment and Urbanization, Ministry of Forestry and Ministry of Water Affairs? There is no clear understanding which of the Ministries is the leading one in biodiversity conservation. The Draft Law on Conservation of Nature and Biodiversity should deal with all these deficiencies identified so that to really contribute to nature conservation of Turkey. The Law will be soon opened up to debates and feedbacks are expected to improve the document and make it working. .

In Turkey, it is necessary to prepare inventory of habitats and update list of species, work to create the national Red Data Book, and get it approved by IUCN. In TR there is a need to establish a monitoring system for habitats. Many species need further investigations to properly assess their status. The flora and fauna protection should become indispensable part of to land plans. In general, biodiversity protection in TR is in need for improvement, especially considering requirements of the relevant international conventions to which TR is a party.

Needs in harmonization of policies required to identify, designate and manage MPAs in the Black Sea region

The definition of a protected area adopted by IUCN is: "*A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values".*
An MPA is defined more specifically by IUCN as: „*Any area of intertidal*[23] *or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment*".
MPA is thus a generic term for any marine area that is protected for the primary objective of biodiversity
conservation, and includes protected areas differing in purpose, design, management approach, and name (e.g.marine reserve, sanctuary, marine park).

Knowing the history of PAs and MPAs, it is clear that the Black Sea countries, as any other country in Europe, were on the path towards gradual development of categories of protected areas. They were designed by adhering to National Acts and different international systems such as EMERALD network, NATURE2000 sites, Biosphere Reserves, World Heritage (WH) sites, Ramsar sites, etc.

In Bulgaria, designation of protected areas, mainly on land, started as early as in the 1940's, the first recorded being Kaliakra Reservation, which underwent several statutes and habitat extension changes since then (for details see Chp. 2- Bulgaria).

[23] The **intertidal zone**, also known as the **foreshore** and **seashore** and sometimes referred to as the littoral zone, is the area that is above water at low tide and under water at high tide (in other words, **the area between tide marks**).

In Romania, the first marine protected area was designated in 1980's under the statute of Marine Reserve, namely 2 Mai - Vama Veche. In Turkey, the process of designation started in the Mediterranean Sea first. Before the NATURE2000 introduction, the national legislation related to protected areas in each country was developed under several international agreements or Conventions, such as RAMSAR, Bern Convention, Bonn Convention, etc. (a full range of Conventions and years of adoption is given in the text above for Romania and Turkey).

In Bulgaria, there are actually 6 types of protected areas regulated by legislative acts. The newly proposed protected marine areas (in 2012) are coming to fulfil the requirements regarding the territory/aquatory occupied by protected areas so that Bulgaria to fully comply with the CBD Convention[24], and Habitats and Birds Directives. In Romania, according with the legislation adopted before 2000, 6 types of protected areas were known. NATURE2000 network constituted a step forward for marine protected areas proposal. Along Turkish Black Sea Coast, the statute of marine protected areas was defined mainly under the Ramsar Convention on Wetlands (**www.ramsar.org**) (it defines a wetland to include "areas of marine water the depth of which at low tide does not exceed 6m") and Bern Conventions (National Parks, Ramsar sites, Nature parks etc).

In all countries, there is a good legislative basis for continuing the process of designation of marine protected areas. As long as NATURE2000 network, Habitat Directive and CBD are in force in all 3 countries, a better implementation of them is needed ensuring support at the political, administrative, managerial and scientific levels. Thus, low compliance with the existing legal/policy documents is the main impediment to the effective enlargement of the size of protected areas and to provision of adaptive (or any) management in the designated PAs (or MPAs).

In Romania and Bulgaria, when proposing MPAs, the ecological criteria recommended in the IUCN guidelines for MPAs designation are applied. In Turkey, there is no sufficient data/information for the Black Sea to apply the IUCN criteria and justify the eligibility of an area to be designated as an MPA. Nevertheless, on the Black Sea coast Turkey proposed as many as 6 marine areas for protection and one TBA at the border with Bulgaria. But the process of designation of the proposed areas is expected to be long as the adoption of the Law on Conservation of Nature and Biodiversity has been delayed. As mentioned already, the draft law raised many doubts about its intentions to ensure protection and sustainable development within protected areas.

In Bulgaria and Romania the practices of designation of marine protected areas follow the procedures imposed by the national legislation after the transposition of the Habitats and Birds Directives (referring to NATURE2000 sites), (Figure 12). The regular process consists of: initial assessment of the areas proposed for protection, completion of NATURE2000 official forms (reporting sheets), analyses of data/information by superior forum, which could be a scientific authority and then submission to responsible governmental authority that is also in charged with the presentation of the request to EC for the final decision. In Turkey, a slower decision

24 At the 8th Ordinary Conference of the Parties to the Convention on Biological Diversity (CBD) in 2006, a target that 'at least 10% of each of the world's ecological regions [including marine and coastal be] effectively conserved [by 2010] was adopted (CBD, 2006).

process made difficult the designation of protected areas on and in front of the coast of the Black Sea. So far measures are being taken to simplify the procedures and fasten decision-making; however, the process goes with certain difficulties mainly due to conflicts of interest (e.g. environment protection versus economic interests).

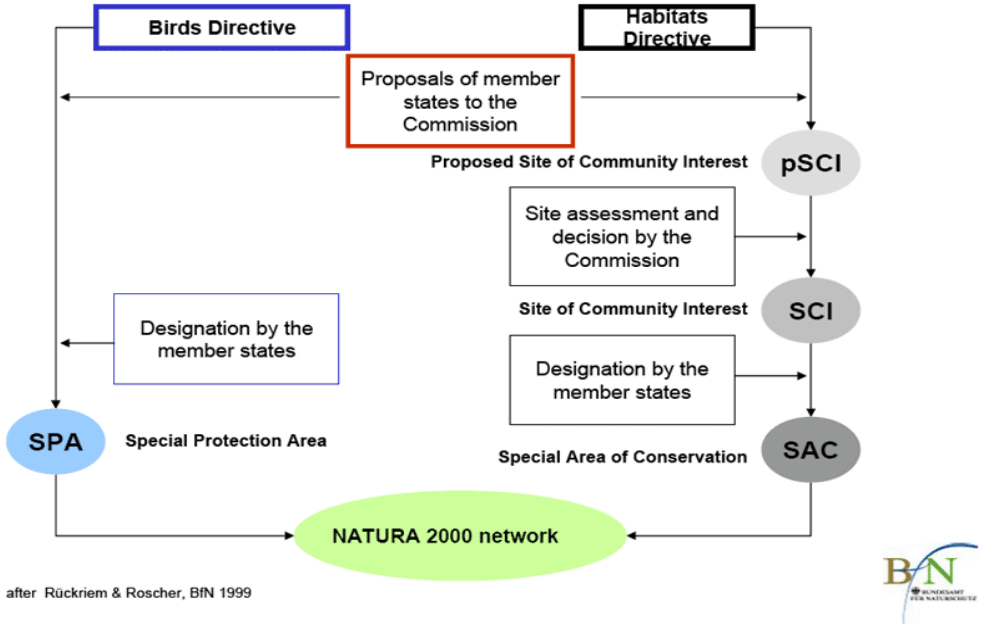


Figure 12. The process of designation of marine protected areas (SPAs, SCI and SAC from Natura 2000 network) after Rückriem and Roscher, BfN, 1999

In TR, a number of RAMSAR sites have been designated on the BS coast and this is a good basis to proceed with their projection into the Sea, gradually creating an MPAs network. Of course, relevant scientific studies should be conducted to apply the IUCN criteria and ensure well justified designation of MPAs with relevant management plans prepared in result.

Romania, Bulgaria and Turkey, and generally all Black Sea countries, should follow common approaches in establishing an MPA.The following should be specified, whether in umbrella legislation or in site-specific legislation (Kelleher, 1999):
a) Objectives;
b) Management rules and penalties applied (with any special rules and administrative measures that may be needed, and safeguards to ensure and enhance compliance by Government, including transparency of decision-making and provision for NGOs);
c) Delineation of boundaries;
d) Providing adequate statements of authority, precedence and procedures;
e) Advisory and consultation processes ;
f) Criteria for decision-making;
g) Relationship with other national and local authorities, and procedures for coordination
and conflict resolution;
h) Management plans, zoning and regulation;
i) Monitoring and review; and
j) Compensation.

Building of management plans does not represent an obligation for management of protected areas as the Art. 6 of the Habitat Directive stipulates. But it is certainly a necessity for a better management of the protected areas keeping in mind the objectives of conservation and protection for which the areas were designated and measures that should be taken for remediation and/or conservation. The necessary conservation measures can involve"*if need be, appropriate management plans specifically designed for the sites or integrated into other development plans". Such management plans should address all foreseen activities, unforeseen new activities being dealt with by Article 6(3) and (4) ("Managing NATURE2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC"*).

There is no universal recipe for such a plan but recent practices have shown that the involvement of local stakeholders from the very beginning leads to a successful implementation of MPAs in many parts of the world (e.g. Belgian process of MPAs designation – Cliquet et al, 2007; Great Britain). Management should be responsive and adaptive, working with local interests in a way that builds support for the conservation objectives.

The management plans must provide tools for applying the regulations for that type of protection
(e.g., strictly protected areas, multiple-use areas) that was instituted within the area (according to IUCN categories, 1994:
http://www.iucn.org/about/work/programmes/gpap_home/gpap_quality/gpap_pacategories/).
An example of management plan content could be consulted in the Annex 2 of the *Guidelines for Marine Protected Areas* (Kelleher, 1999).

Only Romania reported the existence of one management plan in force for the Danube Delta Biosphere and other 8 plans in the course of approval by superior fora. Bulgaria did not mention any management plan put in place for the marine protected areas (SCI/SPA, natural reserves, etc.), even though they are foreseen in their national strategy for biodiversity and related action plan (*National Biological Diversity Conservation Strategy, National Biological Diversity Conservation).*
In Romania, regular monitoring of conservation status and measures taken for protection of species of interest and habitats within the protected areas is performed by the custodians of the areas (NIMRD or GeoEcoMar for the MPAs, for instance). The custodians report regularly the evolution of plans, programs or measures of protection taken to the Environmental Agency and Minister in the field. Bulgaria and Turkey did not report on any monitoring program referring to management performed within the protected areas.

MPAs in transboundary areas (i.e. across national jurisdictions) have many potential advantages, but face special challenges because responsibilities and authorities are shared by the countries. Transboundary collaboration becomes particularly important in designating MPA networks.

The regional seas conventions of the United Nations Environment Programme (UNEP), designed to promote regional cooperation on marine and coastal environmental issues, are also an important mechanism in the establishment of transboundary MPAs.

The process for establishment of Transboundary Protected Areas Strandzha–Igneada proposed through the MISIS project will start with an initial assessment of habitats and species existed in the areas that will be carried out in both countries (Bulgaria and Turkey). In the process, ecological criteria will be used to verify the eligibility of the area for designation as a TBPA and the type of protection to be proposed. Local communities shall be consulted and officials from competent authorities shall be invited to discuss on the terms of bilateral cooperation. Reaching agreement at the governmental level[25] is beyond the scope of the MISIS Project, however, promotion of the idea and preparation of all needed documents to proceed with the designation of the proposed area (Strandzha-Igneada) will be ensured.

Still, given the political, social and economical discrepancies between Bulgaria and Turkey, it is expected that the decision on the designation of the proposed TBPA will not be taken fast and easy. Therefore, the stakeholders (especially local communities) from both countries should play a significant role in the process. *Much effort is needed from both sides, as well as the support of international organizations dealing with TBPAs, to promote such a rather new idea for the BS region*.

Even in the Black Sea this process might be at its very beginning (with the exception of the TBPA Danube Delta Biosphere at the border between Romania and Ukraine, no other TBPA is known for the Black Sea), TBPAs were earlier promoted in other regional seas. For example, Denmark, Germany and Netherlands have collaborated for many years over the conservation of the Wadden Sea, with active NGOs involvement. There is a strong programme for cooperation on marine conservation under the Arctic Council. In the Baltic, the surrounding nations have created a large network of MPAs under the Helsinki Convention. In 1999, France, Italy and Monaco declared the Ligurian Sea (85,000km^2 of the Mediterranean in the angle between France and Italy) to be a cetacean sanctuary, much of which is in international waters.

[25] According to experience from other regions, these can be in the form of overarching joint marine spatial planning frameworks, facilitating shared MPA management or through the establishment of specific agreements between states and between the competent authorities in the concerned countries, referring specifically to the MPA. As in the BS region marine spatial planning is not yet attended, obviously, the easier way is to achieve a specific agreement on the TBPA proposed where responsibilities are identified and interests are observed.

Conclusions and Recommendations

This report highlights the legislative and institutional frameworks in BG, RO and TR in the field of biodiversity protection and conservation with a focus on PAs. In BG and RO, national legislation has rapidly evolved in response to obligations stemming from EU and global level Law or international soft-Law[26]. Bulgaria and Romania, as European Union Members, have already adopted Laws and National Strategies for Biodiversity, and have authorities in charge with application of plans and programmes. However, these Biodiversity Strategies are rather outdated and in need for revision to reflect the new challenges in biodiversity protection (ecosystem-based, adaptive management, integrated coastal zone management, marine spatial planning, principles of sustainable development, recognition of habitats connectivity and creation of MPAs networks, etc.).

In TR the process of development of biodiversity protection legislation/policy is slower. The draft law on nature protection and biodiversity, submitted to the Turkish parliament, raises concerns, in particular as regards the abolition of the current protection status of many sites that would have been a valuable contribution to the Turkish NATURE2000 network. The national biodiversity strategy and action plan, and implementing legislation on birds and habitats remain to be adopted. The list of potential NATURE2000 sites has not yet been compiled. An amendment to the by-law on the protection of wetlands has weakened the protection status of wetlands (Ramsar sites).

All three countries have established protected areas in the sea (TR – in the Mediterranean, not in the Black Sea), the categories of protection being quite similar. The process of identification and designation of protected areas has been carried out mostly in the frames of NATURE2000 in Bulgaria and Romania, and under the Emerald Network (Bern Convention) and RAMSAR Convention in Turkey. Bulgaria already has an overall of 15 marine protected areas, which comprise parts of both marine and terrestrial environments. Currently, several are being in the process of extension (6 sites) while proposals for 3 new sites have been elaborated in 2012 and submitted to the Ministerial Council for approval.

Romania has 2 marine protected areas/nature reserves, the greatest being the marine part of the Danube Delta Biosphere, which also have a management plan in place, 8 sites are under the Habitats Directive and 1 is under the Birds Directive.

Currently, Turkey has in total 13 RAMSAR sites, area 179 898 hectares, and only one of them is on the coast of the Black Sea (the Delta of the Kizilirmak River). Romania is with 19 RAMSAR sites with the total area of 1 156 448 hectares, and one site is bordering the Black Sea (the Danube Delta). Bulgarian RAMSAR sites are 11, area 35 381 hectares, 3 of them border the Black Sea, 4 are in close proximity to the coast.

[26] Soft-Law are non-legally binding international agreements, such as Agenda 21 http://www.unep.org/documents.multilingual/default.asp?documentid=52, the Johannesburg Plan (http://www.un-documents.net/jburgpln.htm), various Declarations, etc.

The improve the MPAs process, especially in the field of management (not only designation), BG, RO and TR need to develop inter-sectorial cooperation and the relevant policy to regulate it, as well as to strengthen international collaboration and compliance with legal obligations stemming from EU Directives and European or Global level Conventions. TR is in need for improvement of the specific umbrella legislation in the field, where the following objectives merit consideration (Kelleher,1999):

Provide for conservation management regimes over as large areas as practicable;
Provide several levels of access, such as strict protection, fishing and collecting in different zones;
Provide for the continuing, sustainable harvesting of food and materials over most of the country's marine areas; and
Address national legislative and juridical loopholes that allow destructive practices to continue.

Other developments recommended, based on the analysis conducted, are listed below:

Avoid spatial overlap of jurisdiction between agencies;
Improve scientific knowledge based on regular monitoring in the existing and potential MPAs
Agree on and apply ecological, social and economic criteria for MPAs designing
Improve the process of management plans elaboration based on all elements needed for achievement the concrete objectives of conservation and protection
Improvef collaboration with all local and national level stakeholders, ranging from policy and decision-makers to local communities.
Improve international cooperation for creation of transboundary protected areas

The EU habitats Directive currently lists nine main categories of marine habitats for which sites should be identified and conservation measures taken. While many of these habitats are found in the Black Sea, there are some other habitats types which are found in the Black Sea only and which also deserve protection.

The Black Sea TDA 2007 admits that the list of threatened species in the Black Sea is far from being complete. The Annex II to the BS Biodiversity Protocol includes species of BS importance that are rare or endangered (with different level, see IUCN criteria) or important by reason of their role in ecosystems , they are subject to special measures as described in Annex III to the BSBLP. However, Annex I, Habitats of Black Sea importance, is not yet developed and this should be attended as soon as possible. The same stands for the Landscapes of Black Sea Importance. There is no such list and besides, integrated costal zone management and functional zoning a poorly attended in the region. Marine spatial planning is not attended at all.

For most Black Sea taxonomic groups additional surveys and assessment efforts are needed. Aso far, Annex II contains mainly species which are rare or endangered. Species which are key to the Black Sea ecosystem (e.g. engineering, etc.) should be also specified and taken into consideration in conservation/protection measures.
Experience with proposing EU Natura 2000 sites in the marine environment has shown that this exercise presents more of a challenge than originally expected

because of a general lack of scientific knowledge on the distribution and abundance of species and habitats, and the high costs of carrying out research and surveys in offshore marine areas. Further, assessment should be carried of the adequacy and viability of selected MPAs in terms of their size, shape, boundaries, buffering zones and appropriateness of proposed site management regime.

Undoubtedly, the act of designation of an MPA is a sort of 'declaration' of good intentions. However, good intentions are not enough, as the practice shows – networks of 'paper park' marine protected areas are the best developed networks in the world. The CBD Convention has already moved the goal of establishing marine protected areas to cover 10% of the ocean from 2012 to 2020. Why such adjustment? Because by 2010, approximately 6 000 MPAs covering only 1.17% of marine area have been decreed (Toropova *et al*., 2010). Besides, there is no sense to establish MPAs without having the proper resources (human and funding) to deal with conservation problems. In general, MPAs fail because there is no proper functional zoning in them, and clear specification of environmental targets. Besides, there are conflicts of interest, lack of enforecment, poor governance and minimal community involvement. In the MISIS beneficiary countries the situation is no different, may be even worse. The designated MPAS are indistinguishable from surrounding areas and socio-economic insentives fo compliance are not used.

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Annexes

ANNEX I. National Stakeholders Bulgaria

Organization	Cat.	Sector	CO.	City	Web page	Title	Contact Name	Position	email	Phone	Comments
*Ministry of Environment and Water	public	Government	BG	Sofia	www.moew.government.bg	Mrs	Marinka Bogdanova	MFSD coordinator Expert Water management Directorate	bogdanovam@moew.government.bg	00359 2 940 6644	Contact persons (*) are members of the Expert Council on the protection of Black Sea environment, established by Decree № 273 of the Ministerial council/ 23.11.2010 www.saveti.government.bg
*Ministry of Regional development and Public Work	public	Government	BG	Sofia	www.mrrb.government.bg	Mrs.	Ekaterina Zaharieva	Deputy Minister	ezaharieva@mrrb.government.bg	00359 2 9405 9	
*Ministry of economy, energy and tourism	public	Government	BG	Sofia	www.mi.government.bg/bg	Mr.	Nikolai Nalbantov; Alexandrina Ivanova	Director "Energy and environment protection"	n.nalbantov@mee.government.bg	00359 2 9263 208	
*Ministry of Health	public	Government	BG	Sofia	www.mh.government.bg	M.D.	Dimitar Dimitrov	Head "Public health directorate"	dimdimitrov@mh.government.bg	00359 2 930 11 59	
*Executive Environmental Agency	public	Government	BG	Sofia	eea.government.bg	Mr.	Velcho Kuyumdjiev	Head Dep. "Water monitoring"	blacksea@eea.government.bg.	00359 2 9559 818	
*Ministry of foreign affairs	public	Government	BG	Sofia	www.mfa.bg	Mr.	Ivan Petkov	Ambassador for special cases for the Black Sea region	iprd@mfa.bg	00359 2 971 14 08	
*Ministry of transport, information technology and communications	public	Government	BG	Sofia	www.marad.bg	Mr.	Петър Киров	Deputy Director "Executive Agency Maritime Administration"	pkirov@marad.bg	00359 2 930 09 41	
*Ministry of Agriculture and Food/National Agency for Fishery and Aquaculture	public	Government - Fishery & Aquaculture	BG	Sofia	iara.government.bg	Mr.	Ivailo Simeonov	Head Dep. "Fisheries and control"	office@iara.government.bg Ivaylo.simeoonov@iara.government.bg	00359 2 80 51 666 00359 2 80 51 674	
Ministry of culture	public	Government	BG	Sofia	mc.government.bg	Mr.	Georgy Stoev	Deputy Minister	g.stoev@mc.government.bg	00359 2 9400916	
*Basin directorate for water management in black sea region/Ministry of Environment and water	public	Government	BG	Varna	www.bsbd.org	Eng.	Ventzislav Nikolov Desislava Konsulova	Director Head Dep."Management"	bsbd_mp@bsbd.org	00359 52 631447	
*Institute of Oceanology-BAS	public	Research	BG	Varna	www.io-bas.bg	Prof.	Snejana Moncheva	Head Dep. "Marine biology and Ecology"	snejanam@abv.bg	00359 52 370485	
National Institute of	public	Research	BG	Sofia	www.meteo.bg	Assoc.	Dobri Dimitrov	Deputy General Director	office@meteo.bg	00359 2 9753996	

Organization	Cat.	Sector	CO.	City	Web page	Title	Contact Name	Position	email	Phone	Comments
Hydrology and Meteorology-BAS						prof.					
Center of hydro-and aerodynamics-BAS	public	Research	BG	Varna	www.bshc.bg	Assoc. prof.	Konstantin Josifov	Director	office@bshc.bg	00359 52 370500	
LUKOIL Bulgaria Ltd	private	Gas and oil	BG	Sofia	www.lukoil.bg	Mr.	Valentin Zlatev	General Director	office@lukoil.bg	00359 2 9174100	
Petrol-AD Bulgaria	private	Gas and oil	BG	Sofia	hwww.petrol.bg	Mr.	Svetoslav Yordanov	Executive Director	office@petrol.bg	00359 2 4960300	
Navy Academy "N. Vaptzarov"	public	Education	BG	Varna	www.naval-acad.bg	Prof. D.sci.	Boyan Mednikarov	Dean	dean-eng@naval-acad.bg	00359 52 632015	
Bulgarian Association of Tourist Agencies	other	NGO - tourism	BG	Sofia	www.batabg.org	Mrs.	Donka Sokolova	Chair of the Steering Committee	bata@mail.orbitel.bg	00359 2 980 6929	
Bulgarian Tourist Chamber	other	NGO - tourism	BG	Sofia	www.btch.org	Assoc. Prof.	Tzvetan Tonchev	Chair of the Steering Committee	btch@btch.org	00359 2 9874059	
Black Sea Institute	other	NGO - environment	BG	Burgas	bs-ml.eu	Assoc. prof.	Maruysya Lyubcheva	President of the Administrative council	mar_lyb@yahoo.com	00359 56 843 667	involved in litter assessment
Consultancy Center for sustainable Development (CCSD) Geopont-Intercom Ltd.	private	Environment	BG	Varna	geopont.enviro-link.org	Eng.	Lyudmil Ikonomov	General Manager	ikonomov@enviro-link.org	00359 52 612858	
Black Sea NGO Network (BSNN)	other	NGO - environment	BG	Varna	www.bsnn.org	Mrs.	Emma Gileva	Head Regional office	bsnn@bsnn.org	00359 52 615 856	
Association of Fish Products Producers BG Fish (AFPP BG Fish)	other	NGO - Fishery	BG	Sofia	www.bgfish.com	Dr.	Dr. Yordan Gospodinov	Executive Director	bgfish@bgfish.com	00359 2 9817589	
Fisheries Association "BLACK SEA SUNRISE"	other	NGO - Fishery	BG	Varna	www.bssfishing.com	Mr.	Emil Milev	President	bss.varna.bg@gmail.com	00359 898699060	
Union of the Bulgarian Black Sea local authorities (UBBSLA)	other	NGO	BG	Varna	www.ubbsla.org	Mrs.	Mariana Kancheva	Direktor	office@ubbsla.org	00359 52 600 266	
Bulgarian Association for Plastics	other	NGO - Industry	BG	Sofia	www.bap-bg.org	Mrs.	Antoaneta Pernikova	Executive Director	e-mail: bap@mail.bg	00359 2 9430500	litter pollution (microplastics)
Ministry of Environment and Water	public	Government	BE	Brussels		Mrs	Violeta Popova	Environment attachee Permanent Representation of BG to EU	violeta.popova@bg-permrep.eu	00322 280 31 62	

ANNEX II. List of Romanian Stakeholders

No	Ministry name (en)	Department (en)	Address	Contact	Phone	Mail	Web	Fax
MUNICIPALITY								
1	Constanta City Hall	Environmental Department - Urban Ecology	Bd. Tomis no. 51, Cod 900725	Octavia BARDASU - counselor	0040 241 488195; 0040 241 708143	octavia.Bardasu@primaria-constanta.ro mediu@primaria-constanta.ro	www.primaria-constanta.ro	0040 241 708101
2	Prefecture Constanta	Environmental Department	Bd. Tomis no. 51, Cod 900725	Mihaela OPREA -counselor	00 40 241 488486	cancelarie@prefecturaconstanta.ro	www.prefectura-ct.ro	0040 241 617245
3	Tulcea City Hall	Environmental Department - Urban Ecology	St. Pacii no. 20, Cod 820033	Gabriela ZUCA - counselor; Maria ZAHARIA - counselor	0040 240 511440 Int 247	gabriela.zuca@hotmail.com zahariam@ymail.com cabinetprimar@primaria-tulcea.ro	www.primariatulcea.ro	0040 240 517736
4	Prefectura Tulcea	Environmental Department	St. Pacii no.18, Tulcea	Daniela Camelia PETROSCHI - counselor	0040 240 511042	relatiipublice@prefecturatulcea.ro prefectura@prefecturatulcea.ro	www.prefecturatulcea.ro	0040 240 513036
5	Mangalia City Hall	Environmental Department - Urban Ecology	St. Constantei no.13, Cod 905500	Cristian RADU - primar	0040 241 750199 751011 751030 751060	secretariat@primaria.mangalia.ro primaria@mangalia.ro pollocmg@yahoo.ro	www.mangalia.ro	0040 241 755606
6	S.C. RAJA S.A. Constanţa		St. Calarasi, no. 22-24, Constanta	Felix STROE - Director	0040 241 664046	raja1@rajac.ro	www.rajac.ro	0040 241 662577
7	S.C. Aquaserv S.A. Tulcea		St. Rezervorului no. 2, Tulcea	Ionel CARAIMAN - Director	0040 240 524042	aquaserv_tl@yahoo.com	www.aquaservtulcea.ro	0040 240 524104
8	Constanta County Council	IT, Black Sea Cooperation and Quality Management Department	Bd. Tomis no. 51, Cod 900725	Sevil SHHAIDEH, Director General al Directiei Generale de Proiecte	0040 241708442	sevil@cjc.ro	www.cjc.ro	
9	Sulina City Hall	Municipality	St. I, no. 180, Cod 825400	Aurel Dimitriu - Mayor Laurentiu Iacovici vicemayor	0040 240543001	sulina_prim@yahoo.com	www.primaria-sulina.ro	0040 240 543661
NGOs								
1	ONG Mare Nostrum		Bd. 1 Decembrie 1918, no. 3, Bl. F17, Sc.A, Ap.3, Cod 900711, Constanta	Mihaela CANDEA - Director; Manuela SAMARGIU - Presedinte	0040 241 612422	office@marenostrum.ro mihaela_candea@marenostrum.ro	www.marenostrum.ro	
2	Societatea de Explorari Oceanografice si protectie a Mediului Marin “Oceanic Club”		St. Decebal no. 41 Constanta	Razvan POPESCU-MIRCENI - Director	0040 241 661956	club@oceanic.ro oceanic.club@gmail.com	www.oceanic.ro	
3	Asociaţia Balcanică de Mediu - Balkan Environmental Association (B.E.N.A.)		St. Panduri no. 90-92, Sector 3, Bucharest	Dr. Carolina Constantin	0040 744 213026	carolina_constantin@yahoo.com	www.incdecoind.ro	
4	Societatea Ornitologică Română		Bd. Mărăşti no. 61, Sector 1, Bucharest		0040 31 4255657	office@sor.ro	www.sor.ro	
5	Centrul Carpato-		St. Grădiştea no. 14, bl B14, sc.	Cornelia DINCA - Presedinte	0040 31 4103524	ccdgro@yahoo.com	www.ccdg.ro	

No	Ministry name (en)	Department (en)	Address	Contact	Phone	Mail	Web	Fax
	Danubian de Geoecologie (CCDG)		4, ap. 36, Sector 4, Cod 040946 Bucharest					
6	Asociaţia "Salvaţi Dunărea şi Delta "		Bd. Regina Elisabeta 7-9, Bucharest / St. Alunişului no. 8, bloc D3, ap. 10, Tulcea	Liviu MIHAIU - Presedinte, Dan BĂRBULESCU - Tulcea branch	0040 21 3194931	office@salvatidelta.ro secretariat.tehnic@actionamresponsabil.ro	www.salvatidelta.ro	
7	Fundaţia Eco Pontica - Tulcea		St. Babadag no. 6, bl. A4, ap. 14, Tulcea	Irina VADINEANU	0040 240 511261	contact@eco-pontica.ro	www.eco-pontica.go.ro	
8	Asociaţia VOX DELTAE - Tulcea		Crişan, Tulcea, 827060	Dragoş OLARU	004 745 0260307	crisan@x3m.ro	www.deltavox.ro	
UNIVERSITY								
1	OVIDIUS University Constanta	Natural Science and Agriculture Faculty, Department of Biology-Ecology-Geography	St. Universitatii no. 1, Constanta	Conf.dr. Liliana Panaitescu -Decan / Daciana SAVA - Conf. univ. dr. / Teodora ONCIU - Conf. univ. dr.	0040 241 605060	lilipanaitescu@yahoo.com	www.univ-ovidius.ro	
2	OVIDIUS University Constanta			Eden MAMUT - Prof.		emamut@univ-ovidius.ro	www.univ-ovidius.ro	
3	Universitatea Maritima din Constanta	Rectorat Electromecanical Nautical Faculty/ Research Department	St.Mircea cel Batran no. 104, Constanta	Prof.dr. Cornel Panait, Rector	0040 241 664740 Int.143 Int.204	info@imc.ro popad@imc.ro	www.cmu-edu.eu	
4	Academia Navala Mircea cel Batran	Merchant Marine/Departme nt of Naval Systems and Machinery	St. Fulgerului no. 1, 900218, Constanta	Conf.dr. Florin Nicolae	00 40 241626200	nicolae_florin_m@yahoo.com	www.anmb.ro	
PUBLIC INSTITUTE								
1	National Institute for Marine Research and Development "Grigore Antipa" (NIMRD)		Bd. Mamaia No. 300, Cod 900581, Constanta	Simion NICOLAEV - Director	0040 241 540870	office@alpha.rmri.ro	www.rmri.ro	
2	National Research and Development Institute for Marine Geology and Geoecology - GeoEcoMar		Bd. Mamaia No. 304, Cod 900581, Constanta	Gheorghe OAIE - Director; Tatiana BEGUN	0040 21 2523039 0040 241 690336 0040 241 510115	headquarter@geoecomar.ro branch.constanta@geoecomar.ro	www.geoecomar.ro	
3	National Institute for Danube Delta Research and Development (INCDDD)		St. Babadag no. 165, Cod 820112, Tulcea	Liliana TOROK - Scientific Director	00 40 240 531 520	office@indd.tim.ro liliana@indd.tim.ro	www.ddni.ro	

No	Ministry name (en)	Department (en)	Address	Contact	Phone	Mail	Web	Fax
4	National Institute for Research and Development in Tourism		St. Apolodor No. 17, Cod 050741, Bucharest	Dir. Ovidiu Teodorescu	0040 21 3162565 0040 21 3162535	office@incdt.ro	www.incdt.ro	
5	National Institute of Statistics	Environmental Department	Bd. Libertatii no. 16, Sector 5, Bucharest	Vergil Voineagu - Director	0040 21 3181824 Int. 1426	Vergil.Voineagu@insse.ro romstat@insse.ro datestat@insse.ro		
6	Constanta County Department for Statistics	Department for synthesis and dissemination of statistical data	Bd. Tomis No. 51, Constanta	Enache BUSU - Director; Nicoleta Trandafir - Counselor	0040 241 616849	tele@constanta.insse.ro nicoleta.trandafir@constanta.insse.ro	www.constanta.insse.ro	
7	National Institute for Environmental Protection	Director general	St. Splaiul Independentei, Bucharest	Dr. Georgy Deak - General Director	0040 21 3052600	georgydeak@incdpm.ro	www.incdpm.ro	
GOVERNMENTAL AGENCIES								
1	Environmental Protection Agency Constanta	Monitoring Department	St. Unirii no. 23, Cod 900532, Constanta	Monica ZAHARIA - Director; Daniela SERBAN - couselor	0040 241 546596	office@apmct.anpm.ro daniela.serban@apmct.anpm.ro	apmct.anpm.ro	
2	Romania National Water Administration (RNWA)	Department for Management Plans	St. Edgar Quinet, No.6, Sector 1, Bucharest	Elena TUCHIU - Director	0040 21 3122174	elena.tuchiu@rowater.ro	www.rowater.ro	
3	Romanian Water Administration - Dobrogea Litoral (ABADL)		St. Mircea cel Batran No.127, RO-900592, Constanta	Camelia PULBERE - Director	0040 241 673036 0040 241 673025	camelia.pulbere@dadl.rowater.ro	www.rowaterct.ro	
4	National Company "Maritime Ports Administration"	Environmental Department	Constanta, Port, Maritime station	Serban DECEBAL - Director; Paul IONCESCU	0040 241 601624	apmc@constantza-port.ro pioncescu@constantza-port.ro	www.portofconstantza.com	
5	Romanian Naval Authority (ANR)		Incinta Port Constanta no. 1, Cod 900900	Mihai SAGAN - Director; Mona PARASCHIV	0040 241 616147 0040 241 616124	rna@rna.ro relatiipublice@rna.ro mparaschiv@rna.ro	www.rna.ro	
6	Constanta County Department of Public Health		St. Lăcrămioarei No.1, Constanta	Luiza CARUCERU	0040 241 480939 0040 241 480946	secretariat@dspct.ro igiena_mediului_cta@yahoo.com	www.dspct.ro	
7	Tulcea County Department of Public Health		St. Viitorului No. 50, Tulcea	Laurentia Mariana MILITARU - Director; Giorgiana Maria Ghigu	0040 240 534134 0040 240 534404	dspj.tulcea@x3m.ro giaa_2004@yahoo.com	www.dspjtulcea.ro	
8	National Agency for Fishery and Aquaculture (Dobrogea branch)	Maritime Division	St. Tudor Vladimirescu No. 52, Constanta	Marian Sorinel MANAILA - Director	0040 241 555343	anpadobrogea_ct@anpa.ro anpadobrogea_tl@anpa.ro		
9	National Agency for Fishery and Aquaculture		Bd. Carol 1 No. 2-4, Sector 3, Bucharest	Carmen STOICA - President	0040 21 6344429 0040 21 6344430 0040 21 3079821	anpa@anpa.ro secretariat@anpa.ro		
10	Nuclear Agency for Radioactive Waste		St. Mendeleev No. 21-25, Sector 1, Cod 010362, Bucharest	Augustin Aculai - Director	0040 21 3168001 0040 21 3168002 0040 21 3168003	contact@nuclearagency.ro aculai@agentianucleara.ro	www.andrad.ro; www.nuclearagency.ro	

No	Ministry name (en)	Department (en)	Address	Contact	Phone	Mail	Web	Fax
11	Danube Delta Biosphere Reserve Authority (ARBDD)		St. Portului No. 34A, Cod 820243, Tulcea	Edward BRATFANOF - Governor	0040 240 518945	arbdd@ddbra.ro	www.ddbra.ro	
12	Administratia Nationala de Meteorologie		Sos. Bucuresti- Ploiesti No.97, Sector 1, Bucharest	Ion SANDU - Director	0040 21 3183240 Int. 210	relatii@meteoromania.ro	www.meteoromania.ro	
13	Environmental Protection Agency Tulcea	Monitoring Department	St. 14 Noiembrie No. 5, RO-820009, Tulcea	Niculai GHEORGHE - Director	0040 240 510620 0040 240 510622	office@apmtl.anpm.ro monitoring_integrat@anpm.ro	apmtl.anpm.ro	
14	National Environmental Protection Agency		St. Splaiul Independentei No. 294, sector 6, Bucharest	Mihail FÂCĂ - President	0040 21 2071101 0040 21 2071102 0040 21 2024790 (Magdalena Tutovanu)	office@anpm.ro	www.anpm.ro	
15	Romanian Space Agency (ROSA)		St. Mendeleev, No. 21-25, Cod 010362, Sector 1, Bucharest	Marius Piso - President; Iulia DANA	0040 21 3168722	rosa-hq@rosa.ro marius-ioan.piso@rosa.ro	www.rosa.ro	
16	Regional Environmental Protection Agency Galati			Carmen Elena SANDU - Director		office@arpmgl.anpm.ro		
17	Directia Hidrografica Maritima Constanta		St. Fulgerului No. 1, Constanta	Adrian FILIP - Director Capt.	0040 241 513064 0040 241 651040	hidro@dhmfn.ro adi_filip08@yahoo.com	www.fortelenavale.ro	
18	Border Police Inspectorate	Coast Guard	St. Zmeurei No. 3, Cod 900433, Constanta	Dumitru RADU - Director	0040 241 641188 0040 241 641038 Int. 26084	contact@garda-de-coasta.ro	www.ijpfconstanta.ro	
19	National Environmental Guard, Bucharest		Bd. Unirii No.78, bl. J2, Sector 3, Bucharest	Ovidiu Constantin DAESCU - Comisar General	0040 21 3268970 (centrala)	gardamediu@gnm.ro	www.gnm.ro	
20	Environmental Guard Constanta		Bd. Mamaia No. 300, Constanta	Cristian RASNOVEANU - Director	0040 241 690990 0040 241 698555 (informatii)	cjconstanta@gnm.ro	www.gnm.ro	
21	Environmental Guard Tulcea		St. 14 Noiembrie No. 5, Tulcea	Simona CONSTANTINESCU Comisar	0040 240 517321 0040 240 512681	cjtulcea@gnm.ro	www.gnm.ro	
22	Environmental Guard for Biosphere Reserve Danube Delta Tulcea		St. Portului No.34, Tulcea	Costel IFRIM - Prim Comisar	0040 240 519419	crbdd@gnm.ro	www.gnm.ro	
23	The Museum of Natural Sciences Constanta		Bd. Mamaia No. 255, Constanta	Adrian BILBA - Director General Dr. / dr. c.s. I Nicolae C. Papadopol - Director Ştiinţific / Angelica CURLISCA	Papadopol: 0040 751 301710 Angelica Curlisca: 0040 742 147889 Secertariat: 0040 241 481230	office@delfinariu.ro angysan2002@yahoo.com	www.delfinariu.ro	
MINISTRY								
1	Ministry of Environment and Climate Change	Directia Managementul Resurselor de Apa		Gheorghe Constantin Otilia Mihail	0040 21 4089514 0040 21 4089607	gheorghe.constantin@mmediu.ro gigelconstantin@yahoo.com gconstantin63@gmail.com otilia.mihail@mmediu.ro	www.mmediu.ro	

No	Ministry name (en)	Department (en)	Address	Contact	Phone	Mail	Web	Fax
2	Ministry of Agriculture and Rural Development	Directorate General for Fisheries	Bucuresti, B-dul Carol 1, nr.2-4, sector 3,	Ministru Daniel Constantin / Secretar de Stat Achim Irimescu	0040 21 3078584 0040 21 3072446 0040 21 3072433 0040 21 3079821 (secr AgPesc Acv)	relatii.publice@madr.ro pescuit@madr.ro secretariat@anpa.ro	www.mard.ro	
3	Ministry of Internal Affair; General Inspectorate of Border Police		St. Răzoare no. 5, sector 6, Bucharest	Ioan BUDA - Inspector general	Central: 0040 21 3162598 0040 21 4087400 0040 21 3162598 Int. 19409	presa.igpf@mai.gov.ro ionel.pavel@igpf.ro	www.mai.gov.ro	
4	Ministry of Transport		Bd. Dinicu Golescu no. 38, Sector 1	Secretar de stat Septimiu Buzasu, Preda Valentin / Camelia Bus	0040 750 032105 0040 21 3196124; 0040 750 032433 (Camelia Bus)	relpub@mt.ro camelia.bus@mt.ro	www.mt.ro	
5	Ministry of Economy	General Directorate of Mineral Resources		Corneliu CONDREA - Crude Oil and Natural Gas Division, Responsabil pe mediu - Doina Constantinescu; Dir. Gen. Adj. Mihai Sorin Gaman; Daniela Galateanu, Consilier superior Serviciul Protectia Mediului	0040 21 2025281	doina_constantinescu@minind.ro dezbateri_publice@minind.ro daniela_galateanu@minind.ro corneliu_condrea@minind.ro		
6	Ministry of National Defence / Research Center for Navigation		St. Stefanita Voda no. 4, Constanta, 900402	Capitan Georgica Slamnoiu	0040 241 671022 0040 241 641368 0040 723 381385	georgicaslamnoiu@yahoo.com slamnoiu@ccstm.ro		
PRIVATE COMPANIES								
1	OMV Petrom SA	Senior Manager / Director Departament Mediu	Constanta, the Port - Dana 34	Wolfgang Leeb / Gratiela Sandu	0040 372 824366 0040 241 585420	niculai.dedu@petrom.com gratiela.sandu@petrom.com wolfgang.leeb@omv.com		
2	S.C. Thermo-electric factory Midia S.A.	Environmental Department	Bd. Navodari, No. 9A, RO-905700, Navodari, Constanta	Dana Rasica	0040 241 486235	cetmidia@utmidia.ro dana.rasica@utmidia.ro	www.utmidia.ro	
3	Societatii Nationale Nuclearelectrica SA		St.Polona no.65, Sector 1, Bucharest, Cod 010494, PO Box 22-102	Dina Dumitru (Director General Interimar)	0040 21 2038200	office@nuclearelectrica.ro gspirea@nuclearelectrica.ro	www.nuclearelectrica.ro	
4	Societatii Nationale Nuclearelectrica SA Cernavoda	Department of Development and Monitoring Management Systems	St. Medgidiei No. 2, Cernavoda, RO-905200	Ionel BUCUR (Director CNE Cernavoda); Florentina MARIN	0040 241 239266	fmarin@cne.ro; tudorm55@yahoo.com		
5	OIL TERMINAL	Director General	St. Caraiman no. 2, Constanta, 900117	Sorin Viorel CIUTUREANU, Claudiu Protopopescu Departamentului Securitate Nucleara al SN Nuclearelectrica S.A.	0040 241 702600 0040 241 694833	office@oil-terminal.com	www.oil-terminal.com	
6	SANTIERUL NAVAL MANGALIA		Mangalia, Intrarea Portului no. 1	Jianu Doru	0040 241751132, 0040 241 751390	infosnm@rdsct.ro office@snmangalia.ro	www.mangaliashipyard.tomrad.ro	

No	Ministry name (en)	Department (en)	Address	Contact	Phone	Mail	Web	Fax
7	ExxonMobil Exploration and Production Romania Limited	Environmental Department	St. Floreasca 169 A, Building A, 4th floor, sector 1, Bucharest	Alin Stirbu	0040 745 327291	alin.stirbu@exxonmobil.com		
8	SC DAEWOO-MANGALIA HEAVY INDUSTRIES SA		St. Portului no. 1, 905500 Mangalia	Florinel Cozma florinel.cozma@dmhi.ct.ro	0040 241 706200	dmhi@dmhi.ct.ro	www.dmhi.ct.ro	
9	LUKOIL	Authorities relations manager	St. Elena Vacarescu no. 6, sector 1, Bucharest	Alissa Larisa Ionescu	0040 21 2272297	alissa.ionescu@lukoil-overseas.com	www.lukoil.ro	
10	SC ROMPETROL RAFINARE SA / Rafinaria Petromidia	Dir. Departament Mediu (la nivel corporate)	Bd. Năvodari no. 215, Pavilion Administrativ, Năvodari	Mihaela Petcu / Corina Rugina	0040 241 506000 0040 21 3030873 0040 724 214633 (Corina Rugina)	office.rafinare@rompetrol.com office@rompetrol.com mihaela.petcu@rompetrol.com Corina.Rugina@rompetrol.com	www.rompetrol-rafinare.ro	
11	SC SANTIERUL NAVAL CONSTANTA SA	Dir. QA/QC ; Manager Departament QA/QC	INCINTA PORT 1 CONSTANTA 900900	dir. QA/QC Popescu Cristel, Munteanu Doina	0040 241 702600 0040 241 611651 0040 241 505500 0040 241 505267 (direct)	quality@snc.ro	www.snc.ro	

ANNEX III. List of Turkish Stakeholders

No	Ministry name (en)	Department (en)	Address	Contact	Phone	Mail	Web
MINISTRY							
1	Republic of Turkey Ministry of Environment and Urban Planning	General Directorate of Environmental Management	Vekaletler Caddesi No:1 Bakanlıklar 06573 Çankaya ANKARA TÜRKİYE		+90 312 586 30 00	cygm@csb.gov.tr	www.csb.gov.tr/gm/cygm/
2	Republic of Turkey Ministry of Environment and Urban Planning	Environmental Protection Agency for Special Areas	Alparslan Türkeş Caddesi 17. sokak 10 Nolu Bina 06510 Beştepe Yenimahalle/ANKARA		0 312 222 1234	tabiat@csb.gov.tr	www.csb.gov.tr/gm/tabiat/
3	Republic of Turkey Ministry of Transport, Maritime Affairs and Communications		Hakkı Turayliç Caddesi No:5 Emek 06510 ANKARA TÜRKİYE		+903122031000	bilgi@ubak.gov.tr okm@ubak.gov.tr	www.ubak.gov.tr
4	Republic of Turkey Ministry of Food, Agricultural and Livestock		Eskişehir Yolu 9 km. Lodumlu ANKARA Çankaya ANKARA TÜRKİYE		+903122873360		www.tarim.gov.tr
5	Republic of Turkey Ministry of Food, Agricultural and Livestock	General Directorate of Fisheries and Fishery Products	Eskişehir Yolu 9 km. Lodumlu ANKARA Çankaya ANKARA TÜRKİYE		+903122873360		www.bsgm.gov.tr
6	Republic of Turkey Ministry of Food, Agricultural and Livestock	General Directorate of Agricultural Research and Policy (GDAR)	Istanbul Yolu Uzeri Tarım Kampusu, P.K.51, 06171 Yenimahalle/ANKARA		+903123157623		www.tagem.gov.tr
7	Republic of Turkey Ministry of Forestry and Water Affairs		Söğütözü Cad. No: 14/E Söğütözü Çankaya ANKARA TÜRKİYE		+903122075000	bilgiedinme@cevreorman.gov.tr	www.ormansu.gov.tr
8	Republic of Turkey Ministry of Forestry and Water Affairs	General Directorate of Water Management	Söğütözü Cad. No: 14/E Söğütözü Çankaya ANKARA TÜRKİYE		+903122076330		suyonetimi.ormansu.gov.tr
9	Republic of Turkey Ministry of Health	General Directorate of Health for Borders and Coastal Areas	Kemankeş Cad. Karamustafapala Sk. No:21 Karaköy/Beyoğlu/ İSTANBUL		+902122933674	hssgm@hssgm.gov.tr	www.hssgm.gov.tr
10	Republic of Turkey Ministry for EU Affairs	Agriculture and Fisheries Directorate	Mustafa Kemal Mah. 2082. Cadde No: 4 06510 Bilkent, Ankara		+ 90 312 218 13 00	bilgiedinme@ab.gov.tr	www.abgs.gov.tr
UNIVERSITY							
1	Akdeniz University	Faculty of Fisheries	Akdeniz University Dumlupınar Boulevard Post Code: 07058 Campus ANTALYA, TURKEY		+ 90 242 310 1575	sufak@akdeniz.edu.tr	sufak.akdeniz.edu.tr/en
2	Ankara University	Faculty of Agriculture Department of Fisheries	Ankara Üniversitesi Ziraat Fakültesi 06110 Dışkapı - Ankara		903125961000 /01-02	agricul@agri.ankara.edu.tr	www.agri.ankara.edu.tr/su/index.php?&fNo=21
3	Atatürk University	Faculty of Fisheries	Atatürk Üniversitesi Su Ürünleri Fakültesi 25240 Erzurum		+90 442 2314726	suurunlerifak@atauni.edu.tr	www.atauni.edu.tr/#birim=su-urunleri-fakultesi

No	Ministry name (en)	Department (en)	Address	Contact	Phone	Mail	Web
4	Çanakkale Onsekiz Mart University	Faculty of Fisheries	Çanakkale Onsekiz Mart Üniversitesi Terzioğlu Kampüsü 17100 Çanakkale/TÜRKİYE		0 286 218 05 42	suurunleri@comu.edu.tr	suurunleri.comu.edu.tr
5	Çukurova University	Faculty of Fisheries	Ç.Ü. Su Ürünleri Fakültesi 01330, Balcalı/Adana/Türkiye		+90 (322) 338 60 84	suf@cu.edu.tr	suurunleri.cu.edu.tr
6	Dokuz Eylul University	Institute of Marine Sciences and Technology	Bakü Bulvarı No:100 35340 İnciraltı / İZMİR		+90 (232) 278 51 12	deuimst@deu.edu.tr	web.deu.edu.tr/deuimst/
7	Ege University	Faculty of Fisheries	E.Ü. Su Ürünleri Fakültesi 35100 Bornova / İZMİR TÜRKİYE		(232) 388 32 25 311 2988	sufak_dekanlik@mail.ege.edu.tr	egefish.ege.edu.tr
8	Fırat University	Faculty of Fisheries	Fırat Üniversitesi, Su Ürünleri Fakültesi PK: 23119 Elazığ-TÜRKİYE		+90 424 237 00 00	mncakmak@firat.edu.tr	portal.firat.edu.tr/WebPortal/?BirimID=84
9	Gaziosmanpaşa University	Faculty of Agriculture Department of Fisheries and Aquaculture	Gaziosmanpaşa Üniversitesi Ziraat Fakültesi Dekanlığı60240 Taşlıçiftlik Yerleşkesi – Tokat/Türkiye		+90 (356) 252 1616	ziraatdekanlik@gop.edu.tr	ziraat.gop.edu.tr/bolumDefault.aspx?dilId=1&birimlerId=13&bolumlerId=141&menuKod=unitetanitimi
10	İstanbul University	Faculty of Fisheries	Ordu Cad. No: 200 Laleli İstanbul 34130		(212) 455 57 00/16383	ozturkb@istanbul.edu.tr	www.istanbul.edu.tr/suurunleri/
11	İstanbul University	Institute of Maritime Sciences and Management	Müşküle Sok. No:1 Vefa- İstanbul		(212) 5282539	rapak@istanbul.edu.tr	www.istanbul.edu.tr/english/inst_maritime.php
12	Karadeniz Technical University	Sürmene Faculty of Marine Sciences	KTÜ. Sürmene Deniz Bilimleri Fakültesi, Çamburnu Kampüsü, 61530 Çamburnu/TRABZON		(462) 752 24 19	seyhan@ktu.edu.tr	www.deniz.ktu.edu.tr
13	Mersin University	Faculty of Fisheries	Mersin Üniversitesi Çiftlikköy Kampusu 33343 Yenisehir / Mersin		0 324 361 00 01	obasturk@mersin.edu.tr	www.mersin.edu.tr/akademikf/su-urunleri-fakultesi
14	Muğla University	Faculty of Fisheries	Muğla Üniversitesi Su Ürünleri Fakültesi 48000 Kötekli / MUĞLA		0 252 211 18 86	sufak@mu.edu.tr	akademik.mu.edu.tr
15	Mustafa Kemal University	Faculty of Fisheries	Meydan Mah. 512 Sk. İskenderun-HATAY-TÜRKİYE		(326) 614-1693	sufak@mku.edu.tr	suf.mku.edu.tr
16	Ondokuz Mayıs University	Faculty of Engineering Department of Environmental Engineering	Ondokuz Mayıs Üniversitesi Mühendislik Fakültesi Çevre Mühendisliği Bölümü Kurupelit Kampüsü 55139 Kurupelit/Samsun		(362)3121919	hbuyukg@omu.edu.tr	mf.omu.edu.tr/cevre/
17	Middle East Technical University	Institute of Marine Sciences	Middle East Technical University, Institute of Marine Sciences, P.O.Box 28, 33731, Erdemli-Mersin, TURKEY		+90-324 521 3434	adminims.metu.edu.tr	www.ims.metu.edu.tr/
18	Ordu University	Fatsa Faculty of Marine Sciences	T.C. ORDU ÜNİVERSİTESİ FATSA DENİZ BİLİMLERİ FAKÜLTESİ EVKAF MAH. 52400 FATSA / ORDU		(452) 4235053-4234722	fdbf@odu.edu.tr	fdbf.odu.edu.tr/Tr/
19	Recep Tayyip Erdoğan University	Faculty of Fisheries	Rize Üniversitesi Rektörlüğü 53100 Merkez Rize-TÜRKİYE		0 464 223 61 26-1636	nurhayat61@yahoo.com	suf.rize.edu.tr/tr/
20	Sinop University	Faculty of Fisheries	Akliman Mevkii Abalı Köyü 57000 – Sinop		0 368 287 62 54	oidb@sinop.edu.tr	www.sinop.edu.tr/akademikbirimler/fakulteler/su_urunleri/default.asp
21	Süleyman Demirel University	Eğirdir Faculty of Fisheries	Süleyman Demirel Üniversitesi Eğirdir Su Ürünleri Fakültesi 32500 Eğirdir ISPARTA		246 313 34 47/47	esuf@sdu.edu.tr	esuf.sdu.edu.tr/

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22	Tunceli University	Faculty of Fisheries	Tunceli Üniversitesi Rektörlüğü, Atatürk Mahallesi Muhlis Akarsu Caddesi, Tunceli / Türkiye		+90 428 213 33 93	tusuf@tunceli.edu.tr	www.tunceli.edu.tr/akademik/fakulteler/suurunleri/surunanasayfa.htm
INSTITUTE							
1	Trabzon Central Fisheries Research Institute		Su Ürünleri Merkez Araştırma Enstitüsü Vali Adil Yazar Cd. No:14 Kaşüstü, Yomra, 61250, TRABZON		(242)872 14 00	info@sumae.gov.tr	http://www.sumae.gov.tr
2	Elazığ Fisheries Research Station		Sürsürü Neighborhood, Martyr Police M.Lami KARAAĞAÇ Street, No : 9, P.O.Box : 62, Post Code: 23040 ELAZIĞ		+90 (424) 241 10 85 - 241 10 86	bilgi@elazigsuurunleri.gov.tr	www.elazigsuurunleri.gov.tr
3	Mediterranean Fisheries Research Production and Training Institute		Finike Karayolu 6 km Demre / ANTALYA		(242)872 14 00	info@akdenizsuurunleri.gov.tr	www.akdenizsuurunleri.gov.tr/index_tr.asp
4	TÜBİTAK Marmara Research Center, Institute of Environment		TÜBİTAK Marmara Araştırma Merkezi Çevre Enstitüsü 41470 Gebze / KOCAELİ		(262) - 677 20 00	ce.web@mam.gov.tr	www.mam.gov.tr/CE/index.html
Society							
1	Turkish Marine Research Foundation		P.O.Box: 10 , Beykoz, 81650, İSTANBUL		+ 90 216 424 07 72	info@tudav.org	www.tudav.org
2	Turkish Marine Environment Protection Association		Nakkaştepe, Aziz Bey Sokak No:1 34674 Kuzguncuk - İstanbul - Türkiye		(0216) 310 9301	info@turmepa.org.tr	www.turmepa.org.tr
3	United Nations Development Programme Turkey		Birlik Mahallesi, 415. Cadde (Eski 2. Cadde), No: 11, 06610 Çankaya, Ankara Türkiye	Harun GÜÇLÜSOY	+90 312 454 1100	registry.tr@undp.org	www.undp.org.tr
4	Underwater Research Society Mediterranean Seal Research Group		Akincilar sok. 10/1 Maltepe, Ankara, TURKIYE		+90 312 230 3520	afag@sad.org.tr	sadafag.org
5	Turkish Sturgeon Conservation Society		Gelincik Mah. Gelincik Yolu Dostlar Sitesi No: 49/4 MERKEZ / SİNOP		0 368 260 54 64	info@merkoder.org	www.merkoder.org
6	Word Wildlife Fund Turkey		Büyük Postane Caddesi No: 43-45 Kat:5 34420 Bahçekapı İstanbul		(0212) 528 20 30	info@wwf.org.tr	www.wwf.org.tr
7	Society of Fisheries Engineers		Su Ürünleri Mühendisleri Derneği PK: 76 Fatih/İstanbul		0 535 307 86 73	sumder@gmail.com	www.suurunleri.org.tr
8	Nature Conservation Center		Doğa Koruma Merkezi 1293 Sokak, No: 9/32, Beyazıt Apartmanı, Aşağı Öveçler 06830 Ankara		+90 (312) 287 40 67	dkm@dkm.org.tr	www.dkm.org.tr
NGOS							
1	Derinsu Underwater Engineering		Nilgün Sokak 5/1, 06650 Kavaklıdere ANKARA TÜRKİYE		(90) 312 467 3670	derinsu@derinsu.com	www.derinsu.com
2	Envy Energy and Environmental Investments Inc.		Çetin Emeç Bulvarı 1314. Cadde (Eski 8. Cadde) No:7 Aşağı Öveçler 06450 Ankara / TÜRKİYE		0 312 583 88 00	envy@envy.com.tr	www.envy.com.tr
3	DenAr Ocean Engineering Ltd. Co.		Gazeteciler Sitesi, Hikaye Sokak No:1/4 34394 Şişli İSTANBUL		0 212 216 64 82	info@den-ar.com	www.den-ar.com

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4	GeoMarine Land and Marine Engineering		Palmiye Mah. 1208 Sok. Necip Bey Apt. No:9/1 Yenişehir - Mersin		0324 325 26 86	bilgi@geomarine.com.tr	www.geomarine.com.tr
5	Detek Offshore Technology Ltd. Co.		Güzelyalı Mahallesi Aydınlı Koyu Batı Sahili Yosun Sokak No: 3 34480 Pendik, İSTANBUL		0216 494 0 828		www.detek-tr.com
6	ABALIOĞLU YEM SOYA VE TEKS.SAN.A.Ş.		KEMALPAŞA MAH. 7412 SK. NO:4 PINARBAŞI/İZMİR		0232 479 21 68	kursad.unal@abalioglu.com	www.abalioglu.com
7	AGROMEY GIDA VE YEM SAN.TİC.A.Ş.		AGROMEY GIDA VE YEM SANAYI TICARET A.S. Ismet Kaptan Mah. Sair Esref Blv. No:48 Kat:5 Tuzcuoglu Is Merkezi 35220 Alsancak, Konak - IZMIR / TURKEY		+90 232 4468811	info@agromey.com	www.agromey.com
8	Akuvatur Su Ürünleri Tic. San. A.Ş.		Mansuroğlu Mah. 295/2 Sok. No:1 Ege Sun Plaza A Blok Kat:2 Daire: 220 35010 Bayraklı İzmir/TÜRKİYE		+90 232 462 10 58-68-78	info@akuvatur.com	www.akuvatur.com
9	GÜMÜŞDOĞA SU ÜRÜN.ÜRETİM İHR VE İTH.AŞ		AKYOL KÖYÜ DİBECİK MEVKİİ MİLAS – MUĞLA		0 252 536 62 28 -29	info@gumusdoga.com.tr	www.gumusdoga.com.tr
10	KILIÇ DENİZ ÜRÜNLERİ ÜRETİMİ İHR.İTH.VE TİC.A.Ş.		Kemikler Köyü Mavkii, Milas Bodrum Karayolu 18. km 48200 Milas - Muğla / Türkiye		+90 252 559 0283	info@kilicdeniz.com.tr	www.kilicdeniz.com.tr
11	MARENOSTRO DIŞ TİC.VE PAZ.A.Ş.		Güllük Karayolu 2.km, Milas 48670 Muğla, TÜRKİYE		+90 (252) 522 24 07	info@marenostro.net	www.marenostro.net
12	ÖZPEKLER İTH.-İHR. SU ÜRÜN.SAN VE TİC.LTD.ŞTİ.		Bozburun Mh. A.Nazif Zorlu Sanayi Sitesi 7152 Sk.No.2 DENİZLİ		+90 258 3718338	info@ozpekler.com.tr	www.ozpekler.com
13	UĞURLU BALIK ÜR.SAN.VE TİC.A.Ş		Korutürk Mah. Poyraz Sokak No:3/A Balçova-İzmir - TÜRKİYE		+90.232.277 33 36		www.ugurlubalik.com
14	Kızılırmak Su Ürünleri San. ve Tic. LTD. ŞTİ		Samsun Ankara Yolu 15. km Sastaş Soğutma Tesisleri Çivril Köyü Altı / SAMSUN		+90 362 611 28 26	info@kizilirmaksuurunleri.com.tr	www.kizilirmaksuurunleri.com.tr
FISHERIES COOPERATIVES							
1	Adana Regional Union of Fsheries Cooperatives		Karataş Balıkçı Barınağı	Mithat Altunay	0.322.681 26 82		
2	Balıkesir Regional Union of Fsheries Cooperatives		Çınarlı Mahallesi Servet Çırpan Cad.No:64 Bandırma / BALIKESİR	Kenan Çınar	0.266.712 47 71		
3	Çanakkale Regional Union of Fsheries Cooperatives		Namık Kemal Mahallesi Köpübaşı Cad. Yeni Balık Hali No:12 ÇANAKKALE	Hasan Uysal	0.286.213 42 84		
4	Doğu Karadeniz Regional Union of Fsheries Cooperatives		Foroz Balıkçı Barınağı İçi TRABZON	Ahmet Mutlu	0.462.224 38 97		
5	Hatay Regional Union of Fsheries Cooperatives		İskenderun Su Ürünleri Balıkçı Barınağı Tay Mahallesi İskenderun/HATAY	Nihat Beyazıt	0.326.617 68 23		
6	İstanbul Regional Union of Fsheries Cooperatives		Kennedy Cad.Sahil Yolu Mendirek İçi No:38 Bakırköy/İSTANBUL	Erdoğan Kartal	0.212.572 63 80	info@istbirlik.com	www.istbirlik.com
7	İzmir Regional Union of Fsheries Cooperatives		Yalı Mahallesi Mithat Paşa Cad.No:228 İZMİR	Ahmet Yapıcı	0.232.234 24 30		
8	Kocaeli Regional Union of Fsheries Cooperatives			Şükrü İlikhan			

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9	Marmara Regional Union of Fsheries Cooperatives		Balık Hali İçi No:93 Kumkapı / İSTANBUL	Aytunç Toker	0.212.518 12 24		
10	Mersin Regional Union of Fsheries Cooperatives		Kiremithane Mah.4420 Sok. 2/20 MERSİN	Hüseyin Beşkardaş	0.324.231 33 90		
11	Muğla Regional Union of Fsheries Cooperatives		Tarım İl Müdürlüğü MUĞLA	Osman Demirkol	0.252.214 12 42		
12	Sinop Regional Union of Fsheries Cooperatives		Camikebir Mahallesi Derinboğaz Ağzı No:32 SİNOP	Ali Bayrak	0.368.261 87 83		
13	Tekirdağ Regional Union of Fsheries Cooperatives		Hoşköy Kas.Liman İçi Şarköy / TEKİRDAĞ	Mümin Yazır	0.282.538 61 00		
MUNICIPALITY							
1	Artvin Municipality		Çarşı Mah. Cumhuriyet Cad. Belediye İşhanı No:3 Kat:4 ARTVİN		+90 (466) 212 37 11	artvin@artvin.bel.tr	www.artvin.bel.tr
2	Rize Municipality		Piriçelebi Mh. Menderes Bulvarı No:82		444 50 53	belediye@rize.bel.tr	www.rize.bel.tr
3	Trabzon Municipality		Gülbaharhatun Mahallesi Kahramanmaraş Caddesi No:201 (Varlıbaş AVM Yanı) TRABZON		0-462-224 6161	belediye@trabzon.bel.tr	www.trabzon.bel.tr
4	Ordu Municipality		Belediye Sarayı ORDU		0452-2250104	belediye@ordu.bel.tr	www.ordu.bel.tr
5	Giresun Municipality		Belediye Sarayı GİRESUN		444 4 028	halklailiskiler@giresun.bel.tr	www.giresun.bel.tr
6	Samsun Metropolitan Municipality		Pazar Mah.Necipbey Cad.No:35 İlkadım / SAMSUN		+90 (362) 431 60 90	info@samsun.bel.tr	www.samsun.bel.tr
7	Sinop Municipality		Sinop Belediye Başkanlığı Merkez-SİNOP		0-368-261 1844	bilgi@sinop.bel.tr	www.sinop.bel.tr
8	Kastamonu Municipality		Kastamonu Belediyesi KASTAMONU		0 366 214 10 48	admin@kastamonu.bel.tr	www.kastamonu.bel.tr
9	Bartın Municipality		Bülentecevit Bulvarı Elmalık mevkii No:1 Merkez BARTIN		0 378 227 10 97	bartinbelediyesi@bartinbelediyesi.com	bartinbelediyesi.com/bel/
10	Zonguldak Municipality		Zonguldak Belediyesi, Belediye Bulvarı Acılık Cad. / ZONGULDAK		0372 259 67 67	info@zonguldak.bel.tr	www.zonguldak.bel.tr
11	Düzce Municipality		Cedidiye Mah. Hükümet Sok. / Düzce		0 380 524 5821		www.duzce.bel.tr
12	Kocaeli Metropolitan Municipality		Karabaş Mah.Salim Dervişoğlu Cad. No:80 41040 İzmit / Kocaeli		0 262 318 10 01	RasitFidan@kocaeli.bel.tr	www.kocaeli.bel.tr
13	İstanbul Metropolitan Municipality		İstanbul Büyükşehir Belediye Başkanlığı Kemalpaşa Mahallesi Şehzadebaşı Cad. No:25. 34134 Fatih / İST		+90 (212) 455 1300	webmaster@ibb.gov.tr	www.ibb.gov.tr
14	Tekirdağ Municipality		Mimar Sinan Cad. No:50 59030 TEKİRDAĞ		444 18 15	hesap@tekirdag.bel.tr	www.tekirdag.bel.tr
15	Kırklareli Municipality		Kırklareli Belediye Başkanlıpı KIRKLARELİ		0288 214 12 67	kirklarelibelediyesi@hotmail.com	www.kirklareli.bel.tr
MILITARY							
1	TURKISH COAST GUARD COMMAND		Deniz Arama Kurtarma Koordinasyon Merkezi,ANKARA		0312 425 33 37		www.sgk.tsk.tr
2	Coast Guard Blacksea District Command		1 Nolu Yardımcı Arama Kurtarma Koordinasyon Merkezi, SAMSUN		0362 445 29 08		www.sgk.tsk.tr
3	Coast Guard Trabzon Group Command		1 Nolu Arama Kurtarma Alt Merkezi		0462 328 07 93		www.sgk.tsk.tr
4	Coast Guard Amasra Group Command		2 Nolu Arama Kurtarma Alt Merkezi		0378 315 10 04/2102		www.sgk.tsk.tr
5	Coast Guard Marmara and Straits District Command		2 Nolu Yardımcı Arama Kurtarma Koordinasyon Merkezi, İSTANBUL		0212 242 40 00		www.sgk.tsk.tr

Conservation and Protection of the Black Sea Biodiversity

MSFD Guiding Improvements in the Black Sea Integrated Monitoring System

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