Saving The Black Sea

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Ministerial Meeting / Diplomatic Conference, Sofia, Bulgaria, 17 April 2009

The Commission on the Protection of the Black Sea Against Pollution has the pleasure to announce that the Contracting Parties of the Convention on the Protection of the Black Sea Against Pollution will have a Ministerial Meeting / Diplomatic Conference on 17 April 2009 in Sofia, Bulgaria. The contracting parties to the Convention are Bulgaria, Georgia, Romania, the Russian Federation, Turkey and Ukraine.

The aim of this meeting is for the contracting parties to discuss the Implementation of the Strategic Action Plan (SAP IR) and adopt the several legal documents to the Convention.

For the SAP IR, there will be a presentation of the Report of "The Implementation of the Strategic Action Plan for the Rehabilitation and Protection of the Black Sea during 2000 – 2006/2007."

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Its contents can in no way be taken to reflect the views of the European Union.

Another related report entitled "*The State of the Environment during 2000 – 2006/2007*" prepared by tens of prominent scientists working on the Black Sea will be revealed during the Ministerial Meeting.

The Ministerial Meeting/Diplomatic Conference is expected to adopt the following documents:

- Adoption of the new Strategic Action Plan for Environmental Protection and Rehabilitation of the Black Sea
- Adoption of the Protocol on the Protection of the Marine Environment of the Black Sea from Land-Based Sources and Activities
- Adoption of the new Agreement on the Privileges and Immunities of the Commission on the Protection of the Black Sea Against Pollution
- Ministerial Declaration

Amendments to the Convention to enable the membership of the "Regional Economic Organisations" are also in the agenda of this meeting.

During the 21st Meeting of the Commission on the Protection of the Black Sea Against Pollution (BSC), which will be held back to back with the Ministerial Meeting / Diplomatic Conference in Sofia is expected to adopt the *"Black Sea Contingency Plan to the Protocol on Cooperation in Combating Pollution of the Black Sea by Oil and Other Harmful Substances in Emergency Situations."*

During the Ministerial Meeting / Diplomatic Conference, Georgia as a contracting party will sign "The Black Sea Biodiversity and Landscape Conservation Protocol to the Convention on the Protection of the Black Sea Against Pollution", which was already signed by Bulgaria, Turkey, Ukraine and Romania. The former three countries also ratified it.

The last Ministerial Meeting / Diplomatic Conference of the Bucharest Convention was held in 2002.

The detailed information, including the draft agenda of the meeting, is available on the web page specially designed for this meeting by the Permanent Secretariat of the Black Sea Commission. This web page can be reached via the Commission's website

http://ps.blacksea-commission.org/ministerialmeeting2009

Environmental Collaboration for the Black Sea

One of today's most acute challenges - the environmental degradation of the Black Sea and its main contributing rivers – evokes major concerns in the basin countries and the wider international community. A recent EU-funded study involving more than 100 scientists from 15 nations listed the Black Sea as one of several seas in "a serious state of decline" as a result of coastal development, overfishing and pollution from agriculture.

The recovery and conservation of this unique ecosystem require adequate institutional capacity and financial resources. Support and partnership with the international community, as well as their own efforts, are essential for the Black Sea countries to muster the capacity and resources to achieve progress. In the last decade, collaborative efforts to protect the Black Sea have brought some positive results but still more needs to be accomplished. Towards this end the EU is continuing to provide support in the region. One of the recent projects initiated by the EU through the European Commission (EC) is Environmental Collaboration for the Black Sea in the four EECCA countries eligible for support under the Tacis program:

Georgia, Russian Federation, Ukraine (coastal countries) and Moldova (which is in the Black Sea basin with borders very near the coastline). This 30-month, 2.2 million Euro project launched in March 2007, is being implemented by the Consortium of Euroconsult Mott MacDonald (The Netherlands), Mott MacDonald Ltd (UK) and Milieu Ltd. (Belgium). The Project seeks to improve regional co-operation and regional agreements for protection of the Black Sea, most importantly the Convention on the Protection of the Black Sea Against Pollution (the Bucharest Convention) and related documents. It works in connection with the Permanent Secretariat of the Commission on the Protection of the Black Sea focusing on improving national capacities to develop and enforce environmental legislation to implement the Bucharest Convention. The documents developed under the Project take into account convergence with the water related EU legislation, in particular the Water Framework Directive and the recently adopted EU Marine Strategy. The Project includes specific activities from BSC annual work plans, and supports through pilot projects and other methods integrated coastal zone management for sustainable development of the Black Sea communities, and the preparation of

documents for the establishment of marine reserves.

The Project partners in beneficiary countries are: Ministry of Environment Protection and Natural Resources in Georgia; Ministry of Environment and Natural Resources in Moldova; Ministry of Environmental Protection in Ukraine. Information about the Project is disseminated to interested stakeholders through media and Internet. The stakeholders, ministries and agencies, local authorities, NGOs, academia, local private sectors and ordinary citizens are involved in consultations and discussions of the Project documents. The Project website (www.ecbsea.org) provides up-to-date information on Project activities and relevant events.

The Project is guided by a Steering Committee (SC) made up of officials of the European Commission and of the above mentioned environmental ministries in the beneficiary countries. At the first meeting (November 9, 2007, Brussels), the Steering Committee approved the Project's Inception Report, which defines activities and results to be achieved, and authorized the Project team to further elaborate activities bilaterally with the beneficiaries. The Steering Committee supported the decision of the European Commission to add the Permanent Secretariat of the BSC as a beneficiary of the Project, and took positive note of the work done on drafting amendments to the Bucharest Convention. At the second Steering Committee meeting (May 19, 2008, Brussels) it was agreed to focus on technical amendments to the Bucharest Convention with a view to reach a political agreement at the Black Sea Ministerial Conference in October 2008 in Kyiv and to terminate activities on Biological Monitoring. The Progress Report on Project activities was approved. It was also decided to expand the Legal Component activities in Moldova and to conduct regulatory impact assessment for the two draft regulations to be developed. Additionally, the Project was also to provide expert assistance to Ukraine and the BSC Permanent Secretariat with preparation of the documents for the BS Ministerial Conference initially planned to be conducted on 30-31 October 2008 in Kyiv.

As a result of these SC decisions, Project activities currently include Legal, Integrated Coastal Zone Management (ICZM), and Marine Protected Areas (Biodiversity) Components. These are implemented in the beneficiary countries with an emphasis on their regional dimension. In Ukraine, the Draft Law on Coastal Zone was prepared and passed to the Ministry of Environmental Protection for review and comments. Project work on the related secondary legislation is underway. The Draft Guiding Principles for the Establishment of Marine Protected Areas in the Black Sea were developed through a stakeholder consultation process. They were also discussed and approved by the CBD Advisory Group of the Black Sea Commission. Pilot projects on the establishment of the first marine protected area in the Black Sea (Small Phillophora Field) in Karkinitsky Bay are being finalized and the development of the designation dossier for the protected area is completed. In Georgia, ICZM pilot projects have been implemented in the local coastal community of Tskaltsminda village, near Poti. The Project also assists Georgia in developing a National ICZM Strategy, the first one in the region. The IZCM Working Group was established to facilitate this process. The Draft ICZM Strategy was discussed at a Public Hearing on 26 September 2008 in Tbilisi. In Moldova, project experts are helping to improve water legislation working on its convergence with the EU requirements, in particularly with the EU Water Framework Directive and other water related EU Directives. The first drafts of regulations and convergence plans as well as regulatory impact assessments were discussed at a multi-stakeholders workshop in Chisinau on October 30, 2008.

The Project provided support to the BSC Permanent Secretariat in preparing and conducting a Regional NGO Workshop on 12-13 March 2009 as a public event towards the BS Ministerial Conference (postponed to 15-17 April 2009). In light of the Project's commitment to openness and transparency, public outreach events were conducted on the Black Sea Day 2008 in Batumi, Georgia and in Odessa, Ukraine. To discuss project progress and give further guidance, the third SC meeting took place in Brussels on November 17, 2008. The Progress Report was positively accepted by the members of the Steering Committee. The intermediate Project outputs include:

- Guidelines for the Establishment of Marine Protected Areas in the Black Sea
- Draft Strategy on Integrated Coastal Zone Management in Georgia
- Draft Law of Ukraine on Coastal Zone
- Draft Guidelines on Territorial Planning in Coastal Zone in Ukraine

- Convergence Plans for Moldova on three EC Directives:

Directive 2000 / 60 / EC Concerning the Establishment of a Framework for Community Action in the Field of Water Policy;

Convergence Plan for Council Directive 91/271/EEC Concerning Waste Water Treatment;

Convergence Plan for Council Directive 91/676/EEC Concerning the Protection of Water Against Pollution Caused by Nitrates from Agricultural Sources;

- Draft Regulations on Surface Waters and on Delimitation and Classification of Water Bodies in Moldova;
- Report on Regulatory Impact Assessment of Regulations above.
- The text of their most recent versions can be found at the Project web site www.ecbsea.org

For more information, please visit the Project website www.ecbsea.org where the written outputs of the project activities to date are placed and periodically updated, or write to ecbsea@ecbsea.org

Kyiv Office of ECBSea Project

BSERP Concluding After 15 Years of Joint Efforts for the Back Sea

After 15 successful years of contribution to the reinforcement of cooperation and capacities of the Black Sea countries directed at the reduction of nutrients and other hazardous substances to acceptable levels, the Black Sea Ecosystem Recovery Project (BSERP) is finally coming to a conclusion. BSERP has worked to reform agricultural policies; improve industrial and municipal wastewater treatment (including private sector incentives to invest in wastewater facilities); rehabilitate key basin ecosystems such as wetlands to act as nutrient sinks (including the creation of artificial wetlands); and to strengthen both the region's legislative framework and its enforcement. The project has been a pilot and a model in partnership building and bringing about a concerted action around an urgent human development problem.

The completion of the project was celebrated with a two-day symposium held in Swissotel, Istanbul, with participation of representatives from the key beneficiary and partner organisations and projects, as well as UN Agencies, such as the Black Sea Commission (BSC), BSC/PS and AG Chairs, International Commission for the Protection of the Danube River (ICPDR), Global Environment Facility (GEF), United Nations Office for Project Services (UNOPS), World Bank, International Atomic Energy Agency (IAEA), United Nations Environment Program (UNEP), United Nations Development Program (UNDP), European Commission (EC), International Waters Learning Exchange and Resource Network, UNDP-GEF Dniepro Project, EuropeAid BS Project, selected representatives of scientific community, NGO representatives, Regional Environment Centre (REC) Turkey, final evaluators, BSERP staff, Country Team Leaders and selected consultants. The symposium was organized not only to officially conclude the implementation phase of the BSERP, but also to take stock and assess the impact of the whole 15-year GEF intervention in the Black Sea region.

The two-day symposium aimed at creating greater awareness and better understanding of BSERP results and achievements, and a way forward of handing over the BSERP results to the main partners, the Black Sea Commission and Black Sea countries. The symposium was also used as a platform to provide feedback to the BSERP/BSC from the countries and individuals, and to discuss the lessons learned along the way.

Besides plenary sessions the agenda of the symposium also included an exhibition, poster presentations, project management sheets of the technical components, a film festival, and an official dinner with an entertainment programme.

Thanks to the BSERP and support of the Global Environment Facility (GEF), the countries of the Black Sea basin have made tremendous progress over the last fifteen years in establishing demonstrably effective and sustainable policy, legal, institutional and financial mechanisms to restore and protect the invaluable environmental, economic and cultural resources of the basin for current and future generations.

EuropeAid Joint Workshops on Marine Protected Areas with the BSC Advisory Group on Conservation of Biodiversity

The Environmental Collaboration for the Black Sea Project (ECBSea, EuropeAid), funded by the European Union, held two meetings on Marine Protected Areas in the Black Sea (MPAs) region jointly with the Black Sea Commission. Both events took place in Odessa - on the 15th of April and on the 4-5th of September 2008.

During the first meeting a new policy on the establishment of Marine Reserves in the Black Sea was discussed. This is a novel approach

in the region, but much needed to preserve aquatic flora and fauna in the Black Sea. Various environmental national and international conventions and agreements support the establishment of marine reserves, and worldwide it has been done successfully. In the Black Sea region the designation of MPAs is a relatively recent issue and the relevant policy is still in the process of development.

EuropeAid supported the idea of a practical experience development in MPAs in the Black Sea region and after the April 2008 meeting it launched a pilot project in cooperation with the Ukrainian Ecological Center (http://www.sea.gov.ua).

The project chose as an area of study the Karkinitsky Bay, located between northwest Crimea and Kherson oblast, known as Small Phyllophora Field. The Project concentrated on:

- Gaining experience in the establishment of MPAs in the Black Sea
- Preparation of a management plan for MPA in Ukraine.

Studies were undertaken to evaluate the biodiversity value of the Small Phyllophora Field, and to determine the management and research activities needed to sustain this area as protected in future.

In September 2008 the ECBSea project experts (Biodiversity Working Group, BWG), representatives of the Ministry of Environmental Protection in Ukraine (MoE), the Permanent Secretariat of the Black Sea Commission and the BSC Advisory Group on Biodiversity Conservation met in Odessa to discuss a draft policy document - Guiding Principles for Establishing Marine Protected Areas in the Black Sea - developed by the ECBSea project and drafted by Mr. Paul Goriup, Key Project Expert on Biodiversity. The document describes the current situation with the Black Sea MPAs, provides legal and methodological background for development of the Black Sea MPAs network and presents recommendations on such network effective establishment and maintenance. Based on the meeting discussions and results all participants came to the conclusion that the Guiding Principles for Establishing MPAs would be a useful tool for the next steps in biodiversity conservation in the countries of the Black Sea region. Another subject of discussion was the progress achieved within the Karkinitsky pilot project. The meeting's participants considered the management plan for the Karkinitsky Bay in terms of desk and field studies results, stakeholder analysis, and GIS mapping.

Also during the September meeting the ECBSea National Team Leader in Ukraine drew the attention of the participants to the work on the Draft Law of Ukraine on Coastal Zone implemented by a team of Project experts. The Draft Law is currently submitted to the Ukrainian Ministry of Environment for commenting.

The third and the final Regional BWG meeting on MPAs will take place in March 2009 where next important steps will be undertaken, such as review of methodologies for MPAs identification, as well as establishment and endorsement of the final Management Plan for the MPA in Karkinitsky Bay. The aim is to achieve the designation of the Small Phyllophora Field in Karkinitsky Bay as a Marine Reserve to give it the protection, management and research activities it needs for sustainable development.

The International Expert Conference on "Safety of Navigation and Environmental Security in a Transboundary Context in the Black Sea Basin"

This conference, organized by the Finnish OSCE Chairmanship and the Government of Ukraine as a direct follow-up to the 16th OSCE Economic and Environmental Forum, with significant support from the Permanent Secretariat of the Commission on the Protection of the Black Sea Against Pollution (BSC) took place in Odesa, Ukraine, on 24-26 June 2008. It highlighted that the growing transportation flows between Europe and Asia would increase environmental pressures on the Black Sea basin through oil spills and other contaminations, the introduction of invasive species through ships' ballast water, coastal transformation linked to the development of port infrastructure, air pollution etc.

The Bucharest Convention on the Protection of the Black Sea Against Pollution (1992) and its Protocols as well as the Strategic Action Plan

for the Rehabilitation and Protection of the Black Sea (SAP) adopted in 1996 represent the regional legal framework for environmental co-operation and for the protection of the this ecosystem.

Participants were informed that a new SAP was being developed, which would include a series of management targets agreed by the coastal states and based on major principles such as: Integrated Coastal Zone Management (ICZM); Ecosystem Approach; and Integrated River Basin Management (IRBM). The important work carried out in a number of areas by the BSC as well as by the Organization of the Black Sea Economic Cooperation (BSEC), the Commission on the Protection of the Danube River (ICPDR) and Port State Control in the Black Sea Region was also underlined.

A number of areas for further focus were also identified by the participants in the conference. These areas were ship surveillance and monitoring, Search and Rescue (SAR) activities, control of ships' ballast water and sediments, oil pollution prevention, preparedness and response, addressing marine pollution from harmful and noxious substances other than oil, development of a Black Sea strategy for port reception facilities for ship-generated wastes and river basin cooperation.

The Odesa Conference also emphasized the need to further strengthen ecological monitoring and risk assessment activities in the region. The existing gaps include the lack of a recent assessment of oil pollution coming from Land Based Sources (*LBS*), rivers and illegal discharges and the lack of operational monitoring and responsible institutions for in situ sampling agreed in cases of accidents.

Further areas of action include the necessity of developing Guidelines for the Use of Dispersants, reduction of air pollution by ships, combating eutrophication, etc.

BS-HOT Black Sea Conference on Climate Change

The Black Sea Commission's (BSC) scientific conferences are provisioned in the Black Sea Strategic Action Plan (SAP) to take place every 2 years. The second of these conferences was held as a joint effort of the Black Sea Commission and the Institute of Oceanology-BAS, in 6-9 October 2008, in Sofia, Bulgaria. This 2nd Biannual and Black Sea Scene EC Project Joint Conference was titled "Climate Change in the Black Sea: **H**ypothesis, **O**bservations, **T**rends, Scenarios and Mitigation Strategy for the Ecosystem", and was abbreviated as BS - HOT 2008.

GEF/UNDP/BSERP, Balkan Environment Association (B.E.N.A), Turkish Marine Research Foundation (TUDAV), British Embassy in Ankara (for the participation of some Turkish Officials and Academia) and Istanbul University were among the sponsors.

The conference provided the scientists with the opportunity to share new knowledge and experiences, discuss "hot" ideas and address urgent questions, formulate adaptation strategies and contribute to further advancement of science and management with respect to climate change.

The preliminary hard work for this conference had started more than one year before it took place. Many scientists and institutions contributed to the successful preparation and holding of the conference.

A special web page of the conference (www.blacksea-commission.org/bs-hot/) was designed for on-line registration and abstract submission. The interest of scientists and decision-makers from within and outside the Black Sea region was remarkable. Over 160 scientists participated in the conference, arranged in four major sessions:

1. Climate forcing mechanisms in the Black Sea

2. Black Sea ecosystem responses to climate change

3. Data availability and database management – what data we still needed to find, digitize and make available

4. Economic and sociological impacts on the coastal Black Sea communities and resource users – management scenarios and measures

Thus, the conference initiated a concerted effort to use science, information technology and policy measures to understand and deal with the consequences of global warming in the Black Sea region towards better governance, sustainable use of resources and conservation of the marine environment.

Outcomes

The conference strengthened the cooperation between decision-makers and scientists in the Black Sea region and thus facilitated Black Sea environmental protection based on sound scientific investigations. The conference brought expertise from outside of the region and improved the collaboration with European scientific and environmental protection institutions whose representatives were

invited as keynote/oral speakers and participants.

All authors will have an equal opportunity to have their contributions published in the B.E.N.A International Journal on Environmental Protection and Ecology (JEPE). The publication process is going on based on peer-review of the manuscripts by the members of the International Scientific Committee.

The anticipated HOTs (Hypothesis, Observations, Trends) related to climate change impacts and relevant recommendations for decision-making were important outcomes. Scientists and the high level officials from the Ministry of Environments of the riparian countries had a chance of direct communication during the roundtable discussion at the conference.

Conclusions

The conference was a truly successful event, as recognized by all participants despite the ever challenging and poorly understood topic of 'Climate Change'. The main conclusions of the conference could be summarised as below:

What we know:

- The Black Sea is in a process of warming up both on the surface as well as in the deep layers
- The consequences of this warming are reflected with some changes in the Black Sea ecosystems
- The sea level is rising slowly but constantly
- The number of floods in the region is increasing
- The relationship between the temperature rise and phytoplankton production (reaction of primary production, which is the basis for the carbon cycle)
- A possible correlation between the increase in water temperature and nutrients evolution

What to do in the near future considering Gaps in knowledge:

- Combine all the data and information on the Black Sea (from coastal laboratories and international projects) in order to enable the scientists to come to the right conclusions
- Design a monitoring system capable of investigating climate change
- Sustain the long-term observations on the Black Sea
- Develop different scenarios of the evolution of the state of the ecosystem correlated to climatic change
- Propose to the decision-makers measures to mitigate the effect of climate change.

During the conference, the following scientists were presented awards by the Black Sea Commission for their achievements in the Black Sea region:

Prof. Adriana Cociasu (Romania) – Award for Outstanding Scientific Achievements and Overall Contribution to the Study of the Black Sea

Prof. Georgy Shulman (Ukraine) – Award for Outstanding Scientific Achievements and Overall Contribution to the Study of the Black Sea

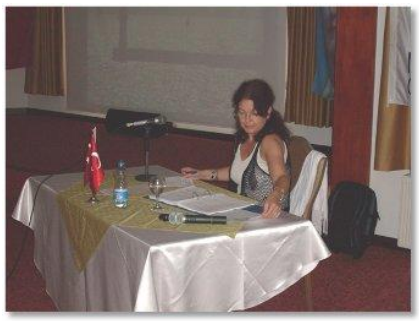
Dr. Murat Sezgin (Turkey) – The Erdogan Okus Award to Most Promising Young Scientist in the Field of Marine Ecology of the Black Sea

Dr. Elina Bakradze (Georgia) – The Kamen Prodanov Award to Most Promising Young Scientist in the Field of Ichthyology of the Black Sea

2nd International ICM Conference and BSC AG ICZM Meeting

The First International Conference on Integrated Coastal Management (ICM) in the Mediterranean and Black Seas was organised by the M E D C O A S T Foundation (www.medcoast.org.tr) in Sarigerme (Turkey) during 2-5 November 1996 in collaboration with the Mediterranean Action Plan/ Priority Action Programs Regional Activity Centre of UNEP, and the GEF Black Sea Environmental Programme. Significant progress has been made in the management of coastal areas of both basins at both national and regional levels since the first conference as a result of work supported and carried out by national, regional and international organizations and the efforts of the NGO community.

After 12 years, it was considered timely to review the state-of-the-art of ICM in the Mediterranean and the Black Sea countries by utilizing the format of the first con-



ference and by making reference to the findings in 1996. Similar to the 1996 conference, the aim of the second conference was to provide a platform for the Mediterranean and the Black Sea countries to share their problems and successful experiences for ICM and to contribute to bi-lateral and regional collaboration for joint efforts to enhance ICM in both basins. The second MEDCOAST ICM Conference took place in Akyaka, Turkey, on 14-18 October 2008. It was co-organised by two prominent international organisations for the Mediterranean and Black Seas, namely the Mediterranean Action Plan/ Priority Action Programs Regional Activity Centre of UNEP, and the Commission on the Protection of the Black Sea Against Pollution, and supported by the UNEP MAP Coordinating Unit, the Municipality of Akyaka and two Turkish universities.

The conference was attended by 62 participants representing 22 countries, including the Black Sea Commission's Advisory Group on Integrated Coastal Zone Management, and the following Declaration was issued as an outcome of this very interesting and useful meeting (for the full text of the Declaration please visit www.medcoast.org.tr):

- Knowing the uniqueness of the Mediterranean and the Black Sea coastal environments, the importance of the coastal areas for economic development of the riparian states and their culture since antiquities, as well as for people from elsewhere who repeatedly choose these areas for recreation;
- Being aware of the Mediterranean countries under the framework of the UNEP's Mediterranean Action Plan (MAP) and the Black Sea countries under the system set forth by the Bucharest Convention and the Black Sea Commission for regional collaboration in various environmental issues including improvement of integrated coastal management in their regions;
- Congratulating the Mediterranean countries for preparing and accepting the recent Protocol on Integrated Coastal Zone Management for the Mediterranean and noting that this is the first ever international legal instrument targeting better management of coastal areas;
- Applauding the interest of the European Union in contributing to capacity enhancement of the non-EU states of the Mediterranean and Black Sea countries to better managing their coastal and marine environment;
- Concerned by the fact that the interest for economic development still overtaking from time to time conservation and protection concerns in both regions, which often result in unrecoverable, important losses;
- Appreciating the eighteen-year long MEDCOAST activities for advancing integrated coastal management in the Mediterranean and Black Sea countries by generating means for sharing data, information, knowledge and experiences and by offering opportunities for region-wide capacity building and welcoming the establishment of the Mediterranean Coastal Foundation.

The participants unanimously agreed to bring out the following observations and recommendations to the attention of the national, regional and international institutions dealing with coastal and marine issues, as well as of the public:

1. Despite significant work carried out by the Mediterranean Action Plan and the Black Sea Commission as well as other regional and other international programs, support of donor institutions, noteworthy efforts of non-governmental organizations for advancing integrated coastal management in the Mediterranean and the Black Sea countries, the progress has been desperately slow in developing national management structures capable for integrated management of coastal areas based on scientific data and information and involvement of major stakeholders. It is observed that thirteen findings of the 1996 Conference and fourteen recommendations are still valid after 12 years due to this extremely slow progress (see www.medcoast.org.tr).

2. The Protocol on Integrated Coastal Zone Management for the Mediterranean provides useful guidance to national, regional and local administrations of the Mediterranean countries in shaping their integrated coastal management systems, programmes and projects. It is at the same time a powerful instrument for academics, NGOs and the civil society in general for urging the authorities to initiate and implement an integrated coastal management system and programs in their specific countries. We urge the governments of the Mediterranean and Black Sea countries to ratify without delay all protocols under the Barcelona and Bucharest Conventions and to comply meticulously with the rules and regulations set forth by these regional legislative documents. At the same time, we call on the academics, NGOs and the civil society to work for speeding up the process of ratification and the implementation of the regional protocols by the authorities of their respective countries. It would be useful to organize a pan-

Mediterranean workshop to be attended by representatives of the governmental institutions, academics, NGOs and private sector for discussing the implementation issues of the ICZM Protocol with the goal of speeding up its enforcement.

3. We recommend comprehensive regional assessments, to be carried out by the regional institutions and the scientific community, of the state of integrated coastal management in the Mediterranean and the Black Sea countries together with successes and failures of the significant programs and projects carried out in the past or the problems and shortcomings of those in implementation today. This effort would no doubt be extremely useful for deriving a list of valuable "lessons learnt", shedding light to the areas where urgent improvement is needed and deducing a set of recommendations for designing new intergovernmental or donor-driven programs, projects and other actions in order to achieve best results from limited opportunities and scarce funds in the future.

4. European Union and other international donors are urged to support integrated coastal management projects in the Mediterranean and the Black Sea countries that are really demand-driven projects from local to national scale (rather than brought in from outside), target a change in the existing management system (rather than preparing just a plan), use the national expertise in full, invest in national capacity building in order to have a level of continuity after the project ends.

Prof. Erdal Ozhan

MEDCOAST

DABLAS Task Force Meeting

The 7th Meeting of the DABLAS Task Force was held during 28-29 October 2008 in Kiev, Ukraine. The DABLAS Secretariat explained how the DABLAS context had changed since the creation of the Task Force in 2001. It was proposed that DABLAS should focus on placing water-related investment projects identification and preparation in a river basin context. This and other presentations of the meeting could be found at http://ec.europa.eu/environment/ enlarg/dalas/ 20081028_meeting_en.htm.

Mr. Ahmet Kideys from the Black Sea Commission Permanent Secretariat provided an update about the implementation of the Bucharest Convention and the work they were undertaking to revise some of the major documents prepared under the Convention. He mentioned that a concrete proposal of amending the Bucharest Convention to enable European Commission to be a member is on the Agenda of the Ministerial Meeting/Diplomatic Conference to be held in April 2009.

Among the main conclusions of the meeting were:

1. DABLAS activities should be further developed along the following lines:

- Investment planning should take place in a River Basin context
- The tools for financial and economic analysis should be further developed within the current PHARE contract
- Capacity building should take place inter-alia through the development of pilot projects in other Black Sea countries and new grant financing should be directed towards this where possible
- International best practices should be studied further with a view of transferring experience to the Black Sea basin;

2. The European Commission to look at opportunities for promoting DABLAS activities under the ENPI, the Black Sea Synergy and the Eastern Partnership.

3. The European Commission to look into ways of supporting Black Sea countries to develop their basin management and implement legislation (not exclusively through DABLAS).

2012 Marine Targets: European Marine Strategy and Issues in the High Seas

On 9-11 December 2008, international experts met in Brest at the Oceanopolis to launch a debate which served as an inquest into the global conservation policies of marine ecosystems. The event was organised jointly by the French Ministry for Ecology, Energy, Sustainable Development and Town and Country Planning (Regional Development), the Protected Marine Areas Agency and IFREMER (French Research Institute for Exploitation of the Sea). France hosted the meeting as part of the French Presidency of the European Union in 2008 and the four EU Regional Conventions (namely, OSPAR, www.ospar.org; HELCOM, www.helcom.fi; MED POL, www.unepmap.gr and the Commission on the Protection of the Black Sea Against Pollution) actively participated.

The conference pursued two main goals: launching technical work on the definition of "Good Environmental Status" (GES) in marine waters, which is the first stage of implementing the EU Marine Strategy Directive (http://ec.europa.eu/ environment/water/marine); and contributing to improving the understanding of the issues in high seas - be they ecological, economic or social - with a view to strengthening EU Member States' ability to act on the international scene to protect biodiversity beyond the areas under their jurisdiction.

The first topic provided an opportunity to share experiences on the existing tools that can be used to define GES. The descriptors used

to define "good environmental status", listed in Annex 1 of the "Marine Strategy Framework Directive", have been united into four themed workshops: "healthy sea", "productive sea", "clean sea" and "habitats". The participants in the GES workshops during the meeting in Brest worked towards finding answers to the following questions:

- To what extent do the existing tools enable us to define good environmental status in the meaning set out by the Marine Strategy Framework Directive?
- What can we draw from these experiences and what recommendations for scientists to propose on the basis of their recent studies?
- What is the best way to progress within the Community towards defining methodology criteria and standards which will enable us to ensure coherence from one marine region or sub-region to the next?
- What organisations (national and international) should be involved in this pan-European task?

The second topic on high seas involved engaging forward thinking, facilitated by a presentation of the issues on natural heritage, ecosystems and uses. The high seas are located beyond the 200 nautical miles zone, outside and beyond national jurisdictions. In the Black Sea there are no high seas.

2012 is the deadline set for the initial technical work planned by the European Marine Strategy Framework Directive, and is also the year adopted for implementing a 'Coherent network of Marine Protected Areas' at the Johannesbourg summit on sustainable development in 2002.

As an immediate follow up of the Brest Conference, the EU Regional Conventions and Member States were informed that the European Commission had commissioned the Joint Research Centre (JRC, http://ec.europa.eu/dgs/jrc/index.cfm) and ICES (International Counsel for the Exploration of the Sea, http://www.ices.dk/indexfla.asp) to prepare the scientific basis for the development of criteria and methodological standards in relation to eight of the GES descriptors in the EU Marine Strategy Framework Directive (MSFD) during the course of 2009. The member states and Regional Conventions were invited to nominate experts for task groups to work with JRC and ICES. Each task group will consist of 12 independent experts, selected on the basis of their individual expertise and experience, and ensuring coverage of the four marine regions specified in Article 4 of the MSFD. The aim of their work will be to establish criteria and standards which will ensure consistency and comparability in the determination of Good Environmental Status in all Regional Seas. Final results are expected in the first half of 2010.

The Black Sea Mnemiopsis Database Workshop

On 15 - 16 December 2008, the leading *Mnemiopsis* data holders from the Black Sea countries gathered under the auspices of the Permanent Secretariat of the Commission on the Protection of the Black Sea Against Pollution (BSC/PS) to discuss the issues of creation and maintenance of the joint Black Sea *Mnemiopsis leidyi* (ML) – *Beroe ovata* (BO) Data Base in Istanbul.

After presentations (available at http://bss.ibss.org.ua/), participants discussed an issue of the data policy and possible restrictions applied to the data dissemination. All participants confirmed that metadata have no restriction and can be disseminated freely.

Participants agreed on the data policy and rules of use of the ML-BO-DB stated in the document "*The Principles for Creation and Procedures for Future Utilization of the Black Sea Mnemiopsis Leidyi and Beroe Ovata Data Base*" that was preliminarily sent to the workshop participants. Main changes proposed to the initial document were the following:

- To increase moratorium period on data dissemination from 2 to 5 years
- To establish rules for restricted use of data from 5 to 15 years old
- To increase a period of metadata delivery from 1 month to 2 months
- To include representative of BSC/PS into the Data Base Executive Committee
- To provide formats for metadata and data submission in the annex to the document

The condition of storage of the third backup copy of the ML-BO-DB in BSC/PS was added. Participants also proposed a number of

corrections to the metadata and data submission formats aiming to provide more complete and precise information on sampling methods and conditions.

Then participants discussed the issues of identification, sampling and sample processing of gelatinous macro plankton in the Black Sea. Taking into account variety of methods, used by different scientists, participants came to the conclusion that further development of the common methodology is one of the first priority steps. The methodology also has to include such issues as compatibility of results obtained with different nets or different calculation formula, taking into account wire angle and flowmeter data, etc.

The workshop asked Z. Ozdemir with consultancy of Dr. E.Mutlu to draft the methodology by the end of February, 2009. Then this methodology will be circulated among leading zooplankton scientists through BSC/PS for remarks and comments. Upon approval of the methodology at the regular BSC Conservation of Bio-Diversity (CBD) group meeting it will be recommended for use in all Black Sea countries.

Finally participants approved the meeting decisions and action plan for the 2009.

Next ML DB workshop is planned to be organized jointly with BSC CBD Advisory Group meeting preferably back to back with forthcoming BSS UPGRADE project meeting tentatively in September 2009.

Cetacean By-catch and Stranding Related To Turbot Fishery and Marine Litter Pollution on the Western Turkish Black Sea Coast

As the top predators of the Black Sea, cetaceans have been badly affected by ecological factors such as water pollution, food shortage, microbial contamination, loss of habitats, incidental catch and changes in the population structures.

Every year several hundreds of dolphins are drowned in gillnets and stranded ashore between early April and June. Large numbers of *P. phocoena* and *T. truncatus* also die as a result of incidental catch during bottom gillnets fisheries.

More information is needed to elucidate this problem to design the conservation plan for the dolphins in the Black Sea. Therefore, in 2008, the Joint Programme on Marine Mammals Conservation and Marine Litter in the Black Sea has been established by the Commission on the Protection of the Black Sea Against Pollution (BSC) in cooperation with ACCOBAMS (The Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and contiguous Atlantic area) and the UNEP (United Nations Environment Programme) Regional Seas Office.

The programme started with two pilot projects, one Crimean coasts in the northern Black Sea and the another on the western Turkish coasts of the southern Black Sea. This article reports results from the latter which is the first study for the cetacean stranding in autumn and winter in the Turkish western Black Sea coast. This study on cetaceans is also part of an ongoing project supported by the Research Fund of Istanbul University (2007-2009).

Marine Litter (ML) is part of the broader problem of solid waste management which is closely linked to the major problems of public health, conservation of the environment and sustainable development in the Black Sea region. The observation of a huge amount of marine litter taken by gillnets in preliminary participation in turbot fishing operations has shown the necessity of quantifying the marine litter which becomes a more and more disturbing problem in the Black Sea. As a consequence of the growing marine litter problem in the Black Sea, these waste materials accumulate on the shores. So another aim of this study was to gather information about the quantity and characteristics of ML in the Turkish western Black Sea area, which was never studied before.

The components of our project are the research of incidental catch of the Black Sea cetaceans and other species in turbot bottom gillnets, research of ML taken by bottom-set gillnets during turbot fishing operations, research of stranding cetaceans on the Turkish western Black Sea coast on a seasonal basis in April, June, Oct/Nov 2008 and January 2009 and of its possible relation with the turbot fishing operations, research of coastal ML in the Western Black Sea, increasing public awareness, education and information exchange. The study began on April 1st 2008 and will continue through February 28th 2009.

One of the field activities was the participation of a researcher in the observation process on one of the commercial fishing boats. The fishing observation continued from 2nd of April till the prohibition period of turbot fishing (1st of May) during which a total of 332 turbots were caught. Only one Harbour porpoise (*Phocoena phocoena*) was by-caught besides 150 rays. Most of the rays were alive and released back into the sea. Birds bycatch was not observed.

The waste materials caught by bottom gillnets included a total of 555 items amounting to 445 kg dry weight. Most of the litter items were plastics and nylon bags (94 %). 24 items were identified for their origin. Almost half of them were from Turkey, others were from other countries.

The coastal surveys of sandy beaches, which extends to 43 km in length spreading over 200 km seashore, were conducted seasonally in spring, summer and autumn (Fig.1.). In total, 17 stranded cetaceans were found, including nine harbour porpoises (53%), five bottlenose dolphins (29%), one common dolphin (6%) and two unidentified individuals (12%). All carcasses were in the advanced stage of decomposition. Therefore we could not identify the cause of death, except for one specimen, of which a piece of mariner rope was tied on the tail fluke. Fins of two individuals were also missing, which might have been removed during the fishing activity.

A total of 10 stations were surveyed for marine litter during the same periods. A transect of 20 m was divided in a number of lines according to the length of the beach varying among stations.

The number of items (assorted and counted in different categories) present on each line was noted (Fig. 2.). All lines were cleaned off of litter. Photos of litter items/transect were taken at each station. Then waste materials were taken to the nearest disposal site.

A total number of 13,419 waste items were collected at the sampled stations. Hard plastic materials were the dominant solid wastes followed by soft plastics, spyrofoam, synthetic fibres, polyurethane foam and glass. Countries of origin were identified for 443 items. Half of them were from other countries rather than Turkey. Seventeen countries of origin were identified.

The mortality associated with incidental catch in fishing gears is a major concern for the conservation of cetaceans in the Black Sea. Besides, unregulated and unreported fisheries are threats to all three cetacean species, particularly for harbour porpoises.

This kind of fisheries should be managed either by banning or limiting fishing activities and establishing fishing-free zones.

The marine litter issue needs to be monitored by standardized methods throughout the whole basin in order to properly quantify this problem, to find out its sources and develop appropriate measures.

M.Sc. Arda M. TONAY
M.Sc, Eda N. TOPÇU
Ph.D. Ayhan DEDE
Ph.D Ayaka A. OZTURK

Turkish Marine Research Foundation
Istanbul University, Faculty of Fisheries

Plastic Wastes Aggrevate Dolphin By-Catch in Fishing Nets

It turned out that conventional turbot fishery presents double danger to the Black Sea cetaceans where the bottom-set nets catch the fish along with sunk plastic debris.

Accidental catch in fishing gear, or, shortly, by-catch has been recognised as a major threat to the Black Sea cetaceans since 1990s. The bottom-set gillnets for turbot and the spring fishing period proved to be the most hazardous

fishing gear and season to endemic bottlenose dolphins (*Tursiops truncatus ponticus*) and, especially, to harbour porpoises (*Phocoena phocoena relicta*). However, so far there was no scientific evidence to understand the actual magnitude of this detrimental phenomenon.

In 2008, the Joint Programme on Marine Mammals Conservation and Marine Litter in the Black Sea has been established by the Commission on the Protection of the Black Sea Against Pollution (BSC) in cooperation with ACCOBAMS (The Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and contiguous Atlantic area) Permanent Secretariats and the UNEP (United Nations Environment Programme) Regional Seas Office.

The programme started with two pilot projects, and one of them was implemented in Ukraine by the international NGO of Black Sea Council for Marine Mammals and the Brema Laboratory, a research institution. An independent scheme for direct synchronous monitoring of fish catches, cetacean by-catches and plastic wastes caught in the nets was set up on board of a vessel involved in regular turbot and shark (spiny dogfish) fisheries in the northwestern Black Sea off the coast of Crimea.

A total of 1,073 bottom-set gillnets (their overall length extended to 78 *km*) were examined from March to June in 2008. The by-caught cetacean numbers were recorded as 118 harbour porpoises (98%) and two bottlenose dolphins. All of the cetaceans found were dead. The rate of harbour porpoise by-catch steadily increased during the study period. Therefore, the maximal level indicated in June was as follows: 2.3 individuals/*km* in turbot nets and 1.5 individuals/*km* in dogfish nets. In terms of fish catches, the levels of cetacean by-catch amounted to 42 harbour porpoises and one bottlenose dolphin per 1,000 turbots and to 43 harbour porpoises per 1,000 sharks.

At the same time, a total of 895 items of plastic debris (pieces of polyethylene film, plastic bags, bottles, cans, fragments of other solid packaging matter) were recorded, collected and delivered to the shore. In general, the turbot nets entrapped polymer litter twice as much (14.1 pieces/*km*) than the dogfish ones (7.0 pieces/*km*). In respect of monthly variations, the highest catch of plastics occured in March in turbot nets (25.0 pieces/*km*). The levels of marine litter amounted to 345 items per 1,000 turbots and 259 items per 1,000 sharks caught by turbot and dogfish nets, respectively.

The turbot nets contained by-caught cetaceans more often and on a larger scale if they contained also plastic wastes. One kilometer of turbot nets contaminated by plastics caught 2.3 cetaceans whereas one kilometer of the same nets free from plastics caught 1.2 cetaceans. In other words, the risk of cetacean by-catch in turbot nets almost doubled in case of plastic litter entanglement.

Many plastic items extracted from the fishing nets had the appearance of long-sunk objects coated with settled benthic invertebrates belonging to sponges, hydrozoans, sea mats, tube-building worms, bivalve molluscs, barnacles, holothurians, brittlestars and sea squirts. They were attached to marine litter, whilst forming asso-

ciations among themselves which included also brown and green algae. Besides, some mobile demersal organisms were found in the nets along with target fishes, by-caught cetaceans, marine litter and settled representatives of benthic fauna and flora. In particular, two species of decapod crustaceans (shore crab and warty crab) and two species of small fishes (Black Sea whiting and flounder) were recorded.

The obtained data suggest that plastics lifted aboard from the sea floor in some way favoured cetacean by-catch. This effect could be explained from hydrobiological point as follows:

- Sunk plastic items are distributed at the bottom of the Black Sea shelf irregularly; in some areas forming large - bottom deposits.
- These deposits probably persist for a long time during the years and serve as an artificial substrate for settled benthic organisms establishing new biocenoses.
- "Biocenoses of plastic litter" include also mobile benthic organisms such as small demersal fishes representing common food for harbour porpoises. The prey attracts marine mammals to the sunk plastic debris and bottom-set fishing nets if they are installed at the same spot.

Certainly, this is only working hypothesis and it should be verified by subsequent research. However, at present, there can be no doubt that any plastic litter incidentally extracted from the sea during fishing operations must be removed from the marine environment and eliminated properly in line with the International Convention for the Prevention of Pollution from Ships (MARPOL), the Convention on the Protection of the Black Sea Against Pollution and the FAO Code of Conduct for Responsible Fisheries.

In order to enhance awareness of the Black Sea fishermen, a leaflet and two stickers to prevent marine litter pollution were designed, published and disseminated. Besides, relevant guidelines have been drafted and submitted to consideration by the Advisory Group on Environmental Aspects of Management of Fisheries and Other Living Marine Resources of the Commission on the Protection of the Black Sea Against Pollution.

Alexei Birkun, Jr.

Black Sea Council for Marine Mammals, Simferopol, Ukraine

Climatic Anomalies; Black Sea Hurricanes and Environmental Contamination

Weather and climate do not respect international borders. Recent floods in Europe, catastrophic storms and hurricanes impact different nations, life, property, security level and demonstrate cross-border vulnerability. Dramatic consequences of the Black Sea hurricane with wind speed of ~25-40 m/sec on 11 November 2007 clearly demonstrate that. Four Russian ships in the Kerch channel were sunken on the 11th of November: tanker "Volgoneft" broke into two, resulting in 1200 tons of oil pouring into the sea; dry cargo ships "Volnogorsk", "Nahichevan" and "Kovel" loaded with sulfur, as a result, the whole cargo spilled into the sea.

Two Russian barges ("Kilia" and "Tica" near island Tuzla) and dry cargo ship "Vera Voloshina" (near Sudak town) have got into trouble. Dry cargo ship "Han-Ismail" (from Georgia) capsized and sunk near Sevastopol. Unfortunately there were also human casualties. Destructive consequences of this hurricane for the Crimea and Azov ports, environmental contamination, damage of power lines and roads, etc. were extremely serious.

The pictures below can only slightly illustrate the power and dangerous manifestations of this hurricane. Rough estimates of its destructive consequences exceeded $25 million only for Crimea.

The external features of this hurricane were similar to that of famous Autumn Hurricane of 1854 (so-called, Balaklava Storm) which was fatal for the Royal navy participated in the Crimea war. Many land troops of British-French-Turkish alliance were hit badly by this hurricane, too. There was only one well-known positive consequence of that storm: the regular hydrometeorological network was established in the British and French Empires just after that.

Such catastrophic events occur rarely, and their typical frequency is one-three cases per twenty to thirty years. It is very important to study the features and causes of catastrophic extremes and their statistics depending on complex global and regional climatic processes of different temporal scales.

The average wave heights as well as their maximums vary in different regions of the Black Sea and throughout the year. The maximal wave heights in the Black Sea are mostly generated by synoptic processes of two types.

First type is due to the following synoptic pattern. When high pressure ridge is spread over European part of Russia and southern cyclones pass through Turkey and Southern Black Sea, the favorable conditions for strengthening of easterly winds are created. In this case, the most vulnerable (for wind and waves) northern Black Sea regions are Odessa, Illichevsk, Yalta, Alushta, enter the Kerch channel. Catastrophic extremes of such type have been observed there in 1969-1981, namely: on 6-7 January 1969, 10 March 1970, 16 November 1981, when the maximal wave heights of in the Odessa port reached 5 m, in Yalta and Alushta – 6 m, Zavetnoye – 4 m.

The second type of synoptic situations over the Black Sea region is due to both southern cyclones and Atlantic cyclones over Europe, when their trajectories pass over the West and North-West Black Sea. In this case, favorable conditions for strengthening of westerly winds are created. The most vulnerable North Black Sea regions are Evpatoria, Chernomorskoye, Sevastopol, Khersones Cape. Catastrophic extremes of such type have been observed there in 1981-2007, namely: on 10 November, 1981, 3 March 1988, 15 November, 1992, 11 November, 2007 when the maximum wave heights of the exceeded 7 m at the Khersones Cape, 4 m in Evpatoria and 3.5 m in Chernomorskoye. It is reasonable to note that "Balaklava Storm" of 1854 was due to the second type of synoptic processes.

Extreme storms of both types are observed usually in November and March. Anomalies point to the significant periodicity of 2-5 years, a decade and about 55 years. The long-term variability of these processes is a result of global processes in the coupled ocean-atmosphere system on the interannual, decadal and interdecadal scales. Wind-wave extremes occur when certain phases of these processes are superimposed.

In conclusion it is important to improve the weather forecast and especially the forecast of extremes; as well as to enhance the access of decision makers to these forecasts.

Alexander Polonsky[(1)], Elena Voskresenskaya[(1)] and Valentina Naumova[(2)]
(1)Marine Hydrophysical Institute
(2)Sevastopol Hydrometeorological Observatory

Photo by: Arda M. Tonay

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Additional copies may be obtained on request by contacting the Permanent Secretariat of the Commission on the Protection of the Black Sea Against Pollution.

Additional Information:
Tel + 90 212 327 35 80

Fax +90 212 227 99 33
E-mail secretariat@blacksea-commission.org
Web www.blacksea-commission.org

The Commission on the Protection of the Black Sea Against Pollution,
Permanent Secretariat
Dolmabahce Sarayi
II. Hareket Kosku
34353 Besiktas
Istanbul
Turkey