Project funded by the EUROPEAN UNION

Black Sea Hotspots

Black Sea CROSS BORDER COOPERATION

Common borders. Common solutions

Ministry of Education and Science of Ukraine
Odessa State Environmental University

Integrated Hotspots Management and Saving the Living Black Sea Ecosystem - HOT BLACK SEA Project :

Activities and Deliverables

2015

CROSS BORDER COOPERATION

Abbreviations

BAT	- Best Available Technique
BEP	- Best Environmental Practices
BS	- Black Sea
BSC	- Black Sea Commission (Commission on the Protection of the Black Sea Against Pollution), www.blacksea-commission.org
BSERP	- Black Sea Environment Recovery Project (Phase I and II in the period 2001-2008), financed by Global Environment Facilities and managed by UNDP (United Nations Development Programme).
BSIMAP	- Black Sea Integrated Monitoring and Assessment Program
DABLAS	- Danube - Black Sea Task Force, https://www.icpdr.org/main/activities-projects/dablas
EEA	- European Environment Agency
EI	- Economic Instruments
E-PRTR Regulation	- European Pollutant Release and Transfer Register Register
EU DG Environment	- The Environment Directorate-General of the European Commission
FCE	- Foundation Caucasus Environment
HBS Project	- HOT BLACK SEA Project
HS	- Hot Spot
HS DB	- Hot Spots Data Base
ICDPR	- Convention on the Protection of the Danube River, www.icpdr.org/
ICPE-CA	- National Institute for Research and Development in Electrical Engineering
JMA	- Joint Management Authority
LBS	- Land Based Source (of pollution)
OSENU	- Odessa State Environmental University
R&D	- Research and Development
SuRDEP	- NGO for Sustainable Regional Development and Environment Protection
TUBITAK	- TUBITAK-Marmara Research Center
UNDP	- United Nations Development Program
UNEP	- United Nation Environment Programme

CONTENTS

General Information about the HOT BLACK SEA Project

For years, keeping the Black Sea environment healthy, with all its ecosystem goods and services functioning at a time when economic recovery and further development are also being pursued, has been considered to be a priority challenge for all Black Sea coastal states. Yet, most of the environmental problems in the Black Sea have not been effectively addressed. Moreover, being of transboundary character, they cannot be efficiently regulated by individual states. Recognising the need for cooperation, harmonisation of approaches to environmental protection management and transparency, the partners of the Hot Black Sea (HBS) Project dealt with one of the most sensitive issues in the Black Sea region – Hot Spots. This is why the project is mainly known in the region as the HotSpots Project. Six Partner Organizations from five Black Sea countries take part in the project implementation.

HBS Project started in March 2013 and ends in October 2015.

The project overall objective:

To foster cross-border partnership for the development of harmonised policy and utilization of scientific studies relevant to monitoring and addressing environmental threats in the Black Sea Basin in the field of land-based sources of pollution.

The project specific objectives:

- Harmonise river monitoring programmes
- Harmonise Hot Spots identification and prioritisation
- Update the Lists of Hot Spots based on common Methodology
- Provide data/information management tool to support decision-making in the field of Hot Spots management
- Share competencies to increase capacity in hot spots management embracing the adaptive approach and market-based instruments for pollution control
- Increase public awareness and stakeholders participation in decision-making related to hot spots

The project group of activities within six work packages:

- Harmonization of Hot Spots policies
- Identification, evaluation and prioritisation of hot spots
- Hot Spots Data Base in support of decision-making and investment planning
- Increasing sector expertise
- Dissemination of Knowledge and Best Practices, Public Awareness and Visibility
- Management and coordination of the Action

The project Partner Organizations:

Project Co-ordinator - National Institute for Research and Development in Electrical Engineering (ICPE-CA, Romania (RO)) has an important scientific experience in the field of environment protection and holds up a significant national and international position, being the most active and efficient research unit in Romania.

TUBITAK-Marmara Research Center (TUBITAK, Turkey (TR)) is a leading organization in the domain of marine ecosystem protection. TUBITAK works in close cooperation with the TR Ministry of Environment and Urbanization and with the Black Sea Commission.

Foundation Caucasus Environment (FCE, Georgia (GE)) is well known in Georgia and abroad for its educational and public awareness activities, work with stakeholders and experience in visibility and ownership development.

NGO for Sustainable Regional Development and Environment Protection (SuRDEP, Bulgaria (BG)) experts has extensive experience in BS scientific research and policy development. They were involved in BS regional harmonization processes and preparation of major regional reports.

Odessa State Environmental University (OSENU, Ukraine (UA)) is affiliated to the Ministry of Education and Science of Ukraine. Its main area of competence is scientific research in the fields of hydrometeorology, ecology and environmental control, and sustainable environmental management. Several research laboratories investigating a wide range of

atmospheric, oceanic, hydrologic and ecological processes are affiliated with the OSENU. The OSENU also has an integrated electronic data archive of hydrometeorological information.

Burgas Municipality (BG) is a local public authority, however, it deals with more than 30 different projects, some of them address issues related to management of hot spots.

Key Project Deliverables

Hot Spots Methodology (in English)

The Hot Spots Methodology is intended to ensure common approach to identification, assessment and ranking of Hot Spots, located within the Black Sea catchment area and having impact on the state of the Black Sea. Distinctive features of this methodology are the following:

- the methodology allows to reliably identify and rank Hot Spots located on the territory of the Black Sea catchment area;
- when ranking, common criteria for all Black Sea countries were chosen taking into consideration availability of data;
- the list of criteria contains environmental, socioeconomic, and integrated indices;
- the methodology includes an expert scoring (expert-judgement), but also mathematical methods for

estimating the effect of Hot Spots on the environment of the Black Sea.

To support the use of this methodology a special database on LBSs was developed by the project (also named the HotSpots Database, see information on it further below) and a software.

The Hot Spots Methodology includes the following stages of work:

1. Compilation of full LBSs List (as full as possible);
2. First level screening – selection of Hot Spots candidates;
3. Second level screening and first prioritization to identify top Hot Spots (prioritization is performed on environmental and socio-economic (welfare) criteria);
4. Third level screening to verify the prioritization according to more sophisticated criteria and build the final List, which would be eligible to speak about priorities in investments and their schedule (short-, mid-, and long-term) and final selection of top priority HSs.

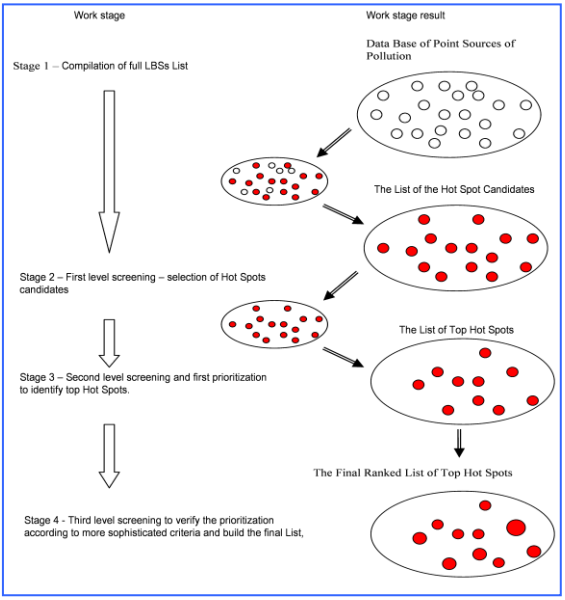
Depending on the amount of final weight of the pollution source, 3 categories of HSs are distinguished:

The Hot Spot of the first rank is an entity that requires the most attention and prompt actions from decision makers.

The Hot Spot of the second rank is an entity that requires attention from the decision makers and problem-solving in the short term (3 to 5 years).

The Hot Spot of the third rank is an entity that requires constant attention on the part of decision makers and problem-solving in the medium term (5 to 10 years).

The candidate Hot Spots, outside of the List of top HSs, obviously may later be addressed in the long-term run (over 10 years).

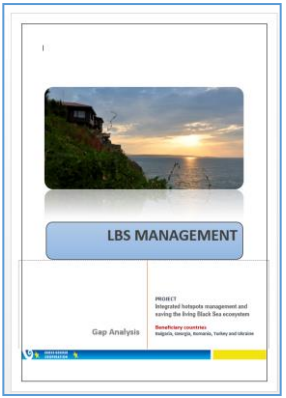


General Algorithm of the Methodology

LBS Management Report (in English)

This report (http://www.bs-hotspots.eu/Documents/Deliverables/LSB%20Management%20Final%20Draft.pdf) has been prepared with the aim to promote harmonization of policies in the field of LBS management. It contains analysis of the achievements and gaps in management of point sources of pollution located in the project beneficiary countries, gives recommendations on improvements of policies and practices for each beneficiary country in separate

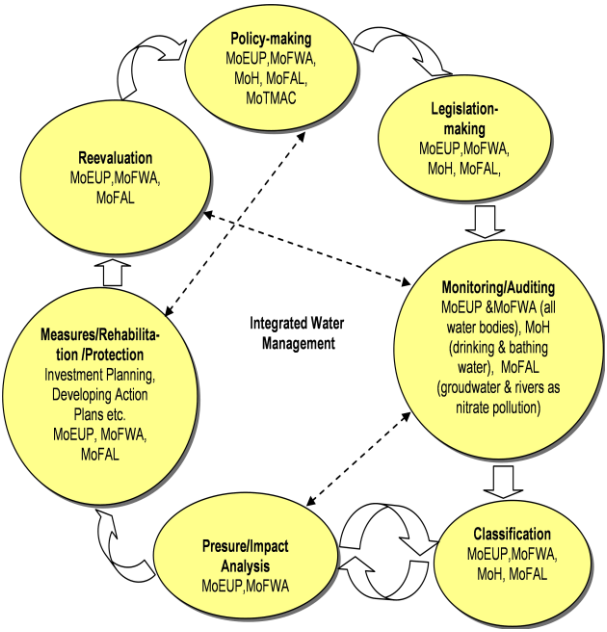
and also for the Black Sea region, in general. The report includes comprehensive inventories of laws and 'soft-laws' governing LBS management at various levels – from global to national. Institutional frameworks are presented for the regional (Black Sea) and national levels (beneficiary countries). Special attention was paid at LBS management cycles (example is given for Turkey in the Figure below) and programmes of measures as well as at relevant national and international projects in each beneficiary country. The Annexes of the report contain useful information on:



- Regional Black Sea Hot Spots List (as currently submitted by the beneficiary countries to the Commission on the Protection of the Black Sea Against Pollution);
- Basic parameters, priority substances, specific pollutants and hydromorphological elements in Bulgarian, Romanian and Ukrainian surface waters monitoring according to national legislation and in line with requirements of European Directives;
- Comparison between Annex I of the E-PRTR Regulation and the Turkish legislation in the field of permits.

The LBS Management Report took into account information, recommendations and comments provided by important stakeholders and it could be useful for decision-makers,

scientists, NGOs, international organizations and general public of the Black Sea countries.



MoEUP: Ministry of Environment and Urban Planning
MoFWA: Ministry of Forestry and Water Affairs
MoTMAC: Ministry of Transport, Maritime Affairs and Communications
MoFAL: Ministry of Food, Agriculture and Livestock
MoH: Ministry of Health

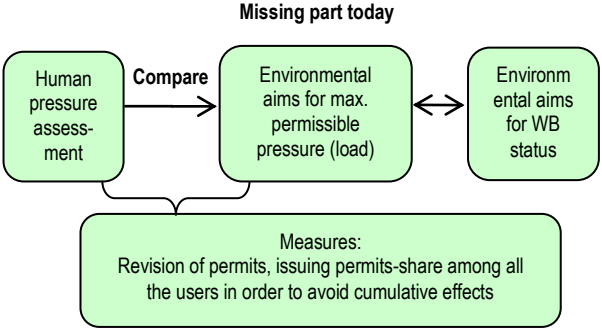
The LBS management cycle in Turkey

Main message of the report is: ***There is no need to adopt the same laws or policies provided the objectives are the same, the approaches are harmonized***. Recommendations were given where needs in harmonization were determined. For instance, "Hot Spot" is differently understood in the beneficiary countries. Furthermore, non-compliance is based on standards, which say only about permissible concentrations of pollutants in waste waters. However, Hot Spot is not the source of pollution itself or not solely. According to the LBSA Protocol 2009 (the one which is still not in force) to the Bucharest Convention, the Hot Spot is:

> ."· a limited and definable local land area, stretch of surface water or specific aquifer that is subject to excessive pollution and necessitates priority attention in order to prevent or reduce the actual or potential adverse impacts on human health, ecosystems or natural resources and amenities of economic importance".

Therefore, the adverse impacts on the receiving environment should be well known, as well as the causative cumulative pressure. The pressure/impact analysis should be the basis for decision-making (programmes of measures). Neither fixed standards should be applied to individual sources, nor the permits should miss the effect of 'accumulation and cumulating' in the cases when several LBSs discharge into the same water body (WB). In situation of environment deterioration, the standards should be immediately revised/adjusted to ensure decrease in the load of pollution until a WB reaches good environmental status and keeps it.

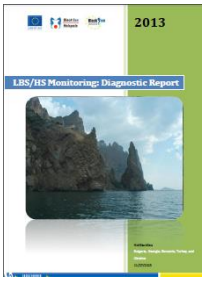
Shortly, LBS management should be based on the following scheme:



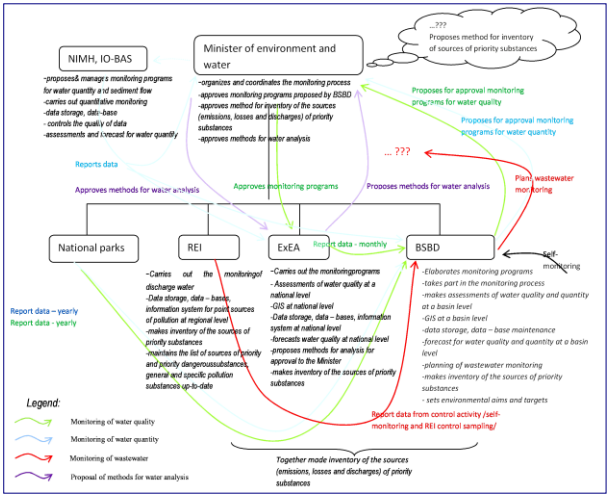
Having in mind that the Black Sea suffers mostly under environmental problems which are transboundary in nature, clearly a single country in the region cannot achieve improvements of its coastal waters tackling only its own sources of sea degradation. To streamline the efforts, the BS countries need to have a common understanding on the following major issues:

- What is a water body;
- How to assess the status of water bodies;
- How pressures/impact analysis to be carried out?
- What is a water body at risk?
- How to establish environmental quality objectives/targets?
- How to build a programme of measures?
- What should be the monitoring to trace progress (compliance monitoring)?
- What standards for pollutants loads in waste water discharges to be used?

LBS Monitoring Report (in English)



The LBS Monitoring Report (http://www.bs-hotspots.eu/Documents/Deliverables / LBS%20Monitoring%20Final%20Draft.pdf) presents information on the regular observations conducted on industrial and municipal point sources of pollution in the BS beneficiary countries as well as on Black Sea rivers. The analysis of gaps starts from legal/policy documents and institutional frameworks and covers all types and domains of monitoring, including data management and reports produced.



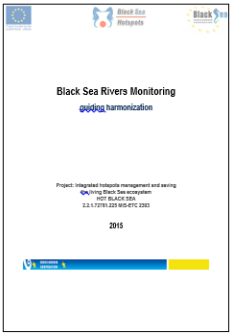
The LBS Monitoring Institutional Framework in Bulgaria

The report says that state monitoring is of a 'control function' in the case of facilities (e.g. once or twice a year), whereas 'self-monitoring' (industries self-control) is expected to be frequent and produce the major bulk of data. However, this is the case in BG and RO only. The rest of the BS countries has not developed the proper system of 'self-monitoring' with the consequent 'polluter-pays' principle. The comparability of data between the BS countries is doubtful as little harmonization is achieved in the parameters observed, frequencies of sampling and methodologies applied. Few parameters are the same in the countries monitoring, thus, budgets of national contributions to the Black Sea pollution are incomplete and comparisons in between countries for basic, priority and specific pollutants are largely not possible. There is no regional 'mass loads' calculation methodology, which would unify the approach and ensure data collections provide comparable values of LBS loads.

The report draws recommendations on these and other findings, which are meant to advance regional harmonization.

Black Sea Rivers Monitoring: guiding harmonization

(in English)



This report builds upon the findings of the LBS monitoring report, further revealing gaps and discussing the comparability of data on riverine nutrients and pollutants in the Black Sea region. The Report provides comparison between the rivers monitoring

strategies and programmes of the project beneficiary countries, outlining discrepancies and reasons for the poor knowledge on riverine loads stemming to the Black Sea.

Stations used for calculation of riverine loads stemming to the Black Sea (**Note**: the stations coordinates are stored in the HS Database, see further below information on this project deliverable).

The Report demonstrates that comparison of national contributions to the Black Sea pollution is possible for inorganic nutrients and BOD-5 only.

Parameters monitored in rivers by the roject beneficiary countries as required by BSIMAP

Parameters	BG	GE	RO	TR	UA
Nitrate (N-NO3)	Yes	Yes	Yes	Yes	Yes
Nitrite (N-NO2)	Yes	Yes	Yes	Yes	Yes
Orthophosphate (P-PO4)	Yes	Yes	Yes	Yes	Yes
Total Nitrogen	Yes		Yes	Rare	No
Total Phosphorus	Yes		Yes	Rare	Yes
Ammonia (N-NH4)	Yes	Yes	Yes	Yes	Yes
Zinc (Zn) - Dissolved	Yes		Yes		
Copper (Cu) - Dissolved	Yes		Yes		
Chromium (Cr) - Dissolved			Yes		
Lead (Pb) - Dissolved	Yes		Yes		
Cadmium (Cd) - Dissolved	Yes		Yes		
Mercury (Hg) - Dissolved			Yes		

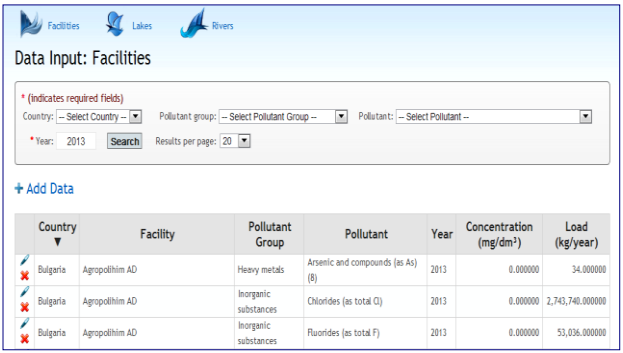
Nickel (Ni) - Dissolved	Yes		Yes		
Total Zinc			Yes	Yes	Yes
Total Copper		Rare	Yes	Yes	Yes
Total Chromium		Rare	Yes	Yes	Yes
Total Lead			Yes	Yes	
Total Cadmium			Yes	Yes	
Total Mercury			Yes	Yes	
Total Nickel			Yes	Yes	
Iron	Yes	Yes	Yes		Yes
Lindane			Yes		Yes
TSS	Yes	Yes	Yes		No
Total Hydrocarbons		Rare	Yes		Yes
Anionic active surfactants			Yes		Yes
Phenols			Yes		Yes
PCB-28					
PCB-52					
PCB-101					
PCB-118					
PCB-153					
PCB-138					
PCB-180					
Total PCBs					
BOD-5	Yes	Yes	Yes	Yes	Yes
COD-Cr	Yes		Rare	Yes	Yes
TOC	Yes		Rare		
AOX					
Tritium					
Other Radionuclides					Yes
Average Riverine Flow for the Year	Yes	Rare	Yes	Yes	Yes
Long Term Annual Average for the Riverine Flow	Yes	Yes	Yes	Yes	Yes

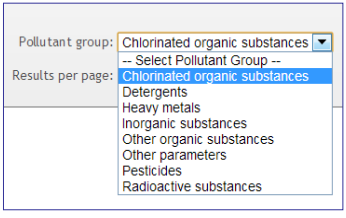
***Note**: The List above does not include all parameters, for detail on the subject see the full inventories provided in the Rivers monitoring report. BSIMAP does not require hydromorphological and hydrobiological monitoring in rivers and these parameters are insufficiently monitored or absent in national rivers monitoring. Recommendations are given in this report on how to improve rivers monitoring at national level and achieve its harmonization at regional level. The need for strengthening the regional component of BSIMAP on rivers is emphasized.*

Hot Spots Data Base (HS DB) (in English)

This activity of the project aimed at provision of a tool in support of decision-making and investment planning. Thus, the HS Database ensures common LBS data management and generation of data products useful in environment protection management. Before the software was developed, the HBS Project investigated what LBS Data Bases exist in the Black Sea region and at European level, then the 'Concept' (http://www.bs-hotspots.eu/Documents/Deliverables/Database %20Concept % 20Final%20Draft.pdf) was prepared and extensively discussed with stakeholders. Consultations with potential end-users continued throughout the whole period of the HS DB development.

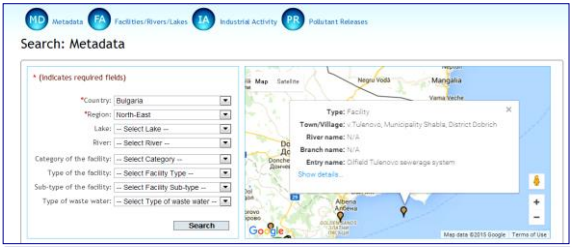
The Data Base contains point land-based sources which discharge directly or indirectly into the Black Sea. "Indirectly" means to other water bodies, which are connected to the Black Sea. The point sources addressed include municipal and industrial facilities, rivers and lakes. LBS detail meta data and data are collected and stored.





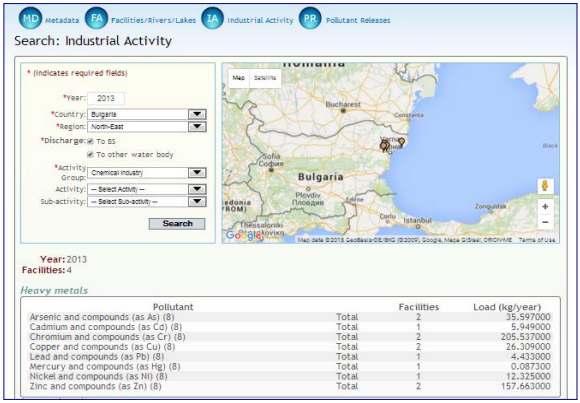
Total 137 pollutants (8 major groups) are included in the HS DB, as some of them are those discharged by industrial facilities into air. Air pollutants were included as a 'forward-looking' component of the HS DB, in future such LBSs might also be addressed in it. For the purposes of the DB, 'Hot Spot' is not only the area impacted by an LBS, but also the LBS itself. Which LBSs in the DB are Hot Spots? As mentioned above, HSs are defined through the HS Methodology developed by the Project. The HS Methodology is embedded in the DB, works online and delivers part of the DB products. Thus, the update of the HSs Lists of the project beneficiary countries was done using the data collected in the DB and the HSs Methodology software. The DB gives the opportunity to Search in it through various keys and produces four major reports. The Meta data visualization is the first one and it appears in a Table and on a map. The data visualization includes the following three reports:

- Tables, which display the reported releases of a specific facility, or a River or a Lake for a specific year;
- Tables, which display aggregated releases of a specific industrial activity or a sector (includes facilities data only)
- Graphs, which display releases level for a specified pollutants – for a certain year and time series for a specified period.



Entry name	Type	Town/Village	River name	River branch
Agropolihim AD	Facility	Devnya	N/A	N/A
Landfill for non-hazardous wastes - "Beglik Chair" (sgurootvali)	Facility	v. Ezerovo	N/A	N/A
Oilfield Tulenovo sewerage system	Facility	v.Tulenovo, Municipality Shabla, District Dobrich	N/A	N/A
Solvey Sodi AD	Facility	Devnya	N/A	N/A
WWTP Balchik	Facility	Balchik	N/A	N/A
WWTP Golden sands	Facility	Varna	N/A	N/A
WWTP Varna	Facility	Varna	N/A	N/A

Example is given below for the aggregated releases of a specific industrial activity, the selected year is 2013. The map on the right side shows those sources, which discharge the pollutants enlisted in the Table beneath the map.



Pollutant		Facilities	Load (kg/year)
Arsenic and compounds (as As) (8)	Total	2	35.597000
Cadmium and compounds (as Cd) (8)	Total	1	5.949000
Chromium and compounds (as Cr) (8)	Total	2	205.537000
Copper and compounds (as Cu) (8)	Total	2	26.309000
Lead and compounds (as Pb) (8)	Total	1	4.433000
Mercury and compounds (as Hg) (8)	Total	1	0.087300
Nickel and compounds (as Ni) (8)	Total	1	12.325000
Zinc and compounds (as Zn) (8)	Total	2	157.663000

The HS DB is harmonised with the *European Pollutant Release and Transfer Register (E-PRTR,* http://prtr.ec.europa.eu/Home.aspx*)*. E-PRTR is the Europe-wide register that provides easily accessible key environmental data from industrial facilities in European Union Member States and in Iceland, Liechtenstein, Norway, Serbia and Switzerland.

The HS DB contains LBS meta data and data collected by the Project in Bulgaria, Georgia, Romania, Turkey and Ukraine. It is the only Data Base in the Black Sea region, which addresses LBSs of all Black Sea coastal states except Russian Federation (**Note**: this country was not a beneficiary of the HBS Project).

The HS DB is on the webpage of the HBS Project: http://www.bs-hotspots.eu/ and is accessible via password. When the Project closes, the HS DB will be opened for access with various levels of confidentiality depending on the policies of the beneficiary countries. For all countries the access to meta data will be without restrictions.

Guidelines on public participation in Ecological Monitoring and Management of the Environment

(in Georgian and English)

The purpose of this guide is to promote a common understanding and reliable practice in the issues concerned. It communicates major definitions and information teaching public how to participate in monitoring and other fields of environmental management. It says that environmental protection is not a responsibility of a government only, but a personal endeavour. And each of us can help to keep the environment in a status which would raise the quality of our

life. The Guideline says why and how ecological monitoring should take place, as well as gives basics of environmental protection practices where public participation is crucial. Decision-making needs the opinion of public, and this Guideline reiterates it with relevant examples. The text is meant for non-professionals, thus, experts may use it just as a reminder of a well-known but often neglected information. Certainly, this guide is not intended to be read from cover to cover, the reader can refer to specific topics for more detail when needed.

Guideline on BEPs and BATs in use of market-based instruments for water pollution control (in English)

This activity of the project is under PA1 'Harmonization of policies' and in the course of the project, after consultations with many stakeholders, it evolved in 3 different documents. These documents are logically interrelated and should be read in the following sequence:

1. Analysis of the current use of economic instruments (EIs) in the project beneficiary countries – this Report discusses the present situation and the progress made during the last decade. Conclusions are made and recommendations are given on the way forward.

The document showcases that incentives and initiatives to support business growth are too few or virtually absent in the project beneficiary countries. Funding for innovation is limited, while potential financial instruments "off the shelf" to

encourage innovation and to provide conditions for businesses emerging from the R&D stage are not visible enough for stakeholders.

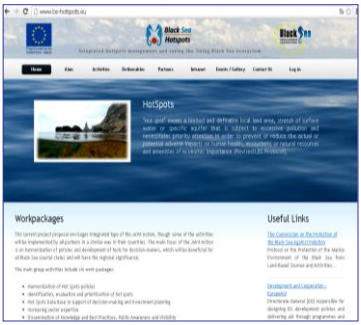
2. EIs Compendium – best practices from around the world are collected in this document. Such a Compendium was initially prepared by BSERP in 2004. The HBS Project revisited it and updated where necessary.

3. Guideline on BAPs in development of environmentally friendly industry and setting of relevant standards – in this document fifteen industrial activities are discussed and solutions for making them less harmful are proposed. In parallel, standards for emissions and discharges for each industry are advised.

Dissemination materials

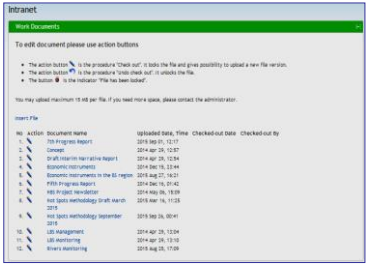
Project web-site (in English)

For dissemination of the information about the project and key project outputs project web-site http://www.bs-hotspots.eu/ was developed. It contains all information about the project background, aims, activities, deliverables, partners and events/ gallery.



To ease the work of partners a project intranet was organized, it functions as a share-point. The progress reports and other internal working documents are stored there. The share-point was

extensively used by the project partners while drafting all project deliverables. The website will be sustained for two years after the project completion.



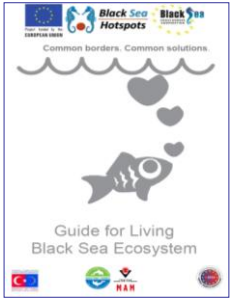
Press-releases
(national languages and English)

Press-releases were developed and distributed among project stakeholders on a regular basis. They contained information on the project progress, activities and deliverables. For more information see http://www.bs-hotspots.eu/EventsGallery.

Leaflets (national languages and English) During the first project year leaflets developed and published. For downloading of the leaflet in various languages (ENG, BG, GE, RO, TR and UA) see http://www.bs-hotspots.eu /Deliverables.

Project newsletters (in English)
Two project newsletters were developed and distributed by e-mail and through the project web-site. For more information see http://www.bs-hotspots.eu/Deliverables.

Brochure for children (national languages and English)



In the framework of the HOT BLACK SEA project a brochure for children "Guide for Living Black Sea Ecosystem" was prepared. The brochure was developed in a simple way so that children can use it in class. It contains general information on the Black Sea as well as points to remember and respect to protect the Black Sea. The brochure was published in English, Bulgarian, Romanian, Georgian, Turkish and Ukrainian languages. See: http://www.bs-hotspots. eu/Documents/ Deliverables/Brochure%20for%20child%20Edited.pdf and other links provided to the Brochure in national languages of the project beneficiary countries.

Movies *(*Turkish and English*)*

Two educational movies were prepared by the HBS Project: https://youtu.be/t6RyP80jkx0 (for 5-8th classes) and https://youtu.be/Z0KDXoGFMQE (for 9-12th classes).

Meetings and Events

Project Inception Meetings took place in each participating country:

- Bulgaria – in Burgas, June 28, 2013
- Georgia – several inception meetings were organized: in Tbilisi (June 19, 2013), in Poti (July 9-10, 2013) and in Batumi (July 24-26, 2013)
- Romania – in Constanta (July 11, 2013)
- Turkey – in Ankara (July 26, 26, 2013)
- Ukraine – in Odessa (January 27, 2014)

The overall conception of the Inception project meetings was to involve in the project the key actors in monitoring, decision-making and management process in the field of Black Sea Hot Spots, to inform them on the project, to collect initial information where they could help the project to achieve its objectives and to ensure their commitment.

In advance the project partners identified all important stakeholders in each project partner country and the enlisted organizations (see Annex I of the LBS Monitoring Report) were invited to take part in the Inception meetings.

All inception meetings were organized as a platform, where presentations were given, but also discussions took place to exchange experience and expertise between the participants and the project team's members.

In all project beneficiary countries, the visibility for broader audience – NGOs, local communities and general public – was reached through press-releases, TV videos (in GE), project leaflet (in national languages) and various postings on the webpage of the project (http://www.bs-hotspots.eu/).

Investment Planning Workshop and Training was organized by TUBITAK and took place in Istanbul (November 28 – 29, 2013). The overall objective of the training was to support sustainability of the Black Sea by providing knowledge on the development of an optimal investment planning approach through knowledge-based understanding of the roots of environmental problems. More specifically, the course aimed at assisting the participants in learning how to proceed from the identification of a problem towards developing a proposal that addresses and tries to solve this problem. The content of the training was formed taking into consideration needs of policy makers, investment implementers, operators and their academic assistants, and other related stakeholders.

First Stakeholder Meeting took place on January 28-29, 2014 in Odessa. It was organized by OSENU. The aims of the meeting were as follows:

- to present to stakeholders the project Consortium;
- to present preliminary results of the response to the Project Questionnaire (it was developed for receiving

information from stakeholders, necessary for the major reports of the project);

- to present the project Dissemination plan and web-site;
- to present and discuss drafts of the major project reports (LBS Management Report, LBS Monitoring Report, Data Base Concept);
- to initiate dialogue with stakeholders in order to receive their recommendations on the Hot Spots Methodology, Data Base and other project activities so that to advance the project implementation in a way taking into consideration the needs of stakeholders.

The key result of the meeting was a list of recommendations, which were very useful in the work of project partners.

First Workshop on the regional Hot Spots Methodology took place on March 23 – 26, 2015 in Odessa. OSENU was the organizer. The aims of the meeting were as follows:

- to present the first draft of the HS Methodology;
- to present the second year results to stakeholders: HS Database and environmental maps, developed by OSENU;
- to continue the dialogue with stakeholders and carry out consultations in order to further improve the project major deliverables.

Recommendations were collected and duly taken later into consideration.

Second Workshop on the HSs Methodology took place on 22 – 25 June, 2015 in Odessa. OSENU was the organizer. The aims of the meeting were as follows:

- to present the final version of the HSs Methodology;
- to analyze how much the composition of Hot Spots has changed after insertion of amendments and modifications, which have been made taking into account the comments and suggestions to the HSs Methodology given during the first workshop;
- to discuss the composition of data included in the HSs Database with the project partners and stakeholders. Terms of access to data were also discussed;
- to discuss and reveal possibilities and avenues for cooperation with other projects on the Black Sea funded by EC.

For both Stakeholder Meeting and HSs Workshops Feed-back Forms were developed and distributed during the meetings to evaluate their usefulness. The Feed-back from stakeholders showed high level of appreciation of the work undertaken in the HBS Project.

Training on the Hot Spots Methodology and Database took place in Batumi, Georgia on August 4 – 7, 2015. Foundation Caucasus Environment was the organizer. The aims of the training were as follows:

- to present the HS Methodology, demonstrate how it works and share Ukrainian partners experience and skills in identification and prioritization of HSs with Georgian stakeholders;

- to present the HS Database and explain how to use it online;
- to initiate dialogue with Georgian stakeholders and collect comments/recommendations on the Hot Spots Methodology, Hot Spots Data Base and other project activities, so that to advance the project implementation taking into consideration the opinion and needs of stakeholders.

Thus, Georgian stakeholders received detailed information about the HSs Methodology and HSs Database as well as instructions on their application.

Second Stakeholder Meeting took place on September 29 – October 2, 2015 in Burgas, Bulgaria. Burgas Municipality and SurDEP were the organizers. This meeting was attended by representatives of JMA, BG Ministry of Environment and Water, Black Sea Basin Directorate, maritime administrations, scientific institutions,

local authorities, NGOs and others. Major project deliverables were presented and stakeholders questions on them were answered.

Raising Awareness of Black Sea Pollution: Activities for Children

In Samsun City of Turkey, several trainning activities of the HBS Project were organized by one of the NGOs dealing with marine pollution in Turkey, namely TURMEPA. In these activities nearly 470 instructors and 12000 children were involved. Read more in http://bs-hotspots.eu/Documents/HBSProjectVisibility/EDUCATION%20OF%20ECOSYSTEM%20AWARENESS%20PROGRAM.pdf

All meetings materials, including presentations given, are stored at:
http://www.bs-hotspots.eu/EventsGallery.
Contact us for further information:
http://www.bs-hotspots.eu/ContactUs
Visit our webpage at:
http://www.bs-hotspots.eu/Deliverables
and other domains of the HBS Project activities.

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Black Sea Hotspots

Black Sea CROSS BORDER COOPERATION

Integrated Hotspots Management and Saving the Living Black Sea Ecosystem - HOT BLACK SEA Project :

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