



Black Sea Commission activities in oil spill response and preparedness

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www.blacksea-commission.org

Sofia, 29 May 2009

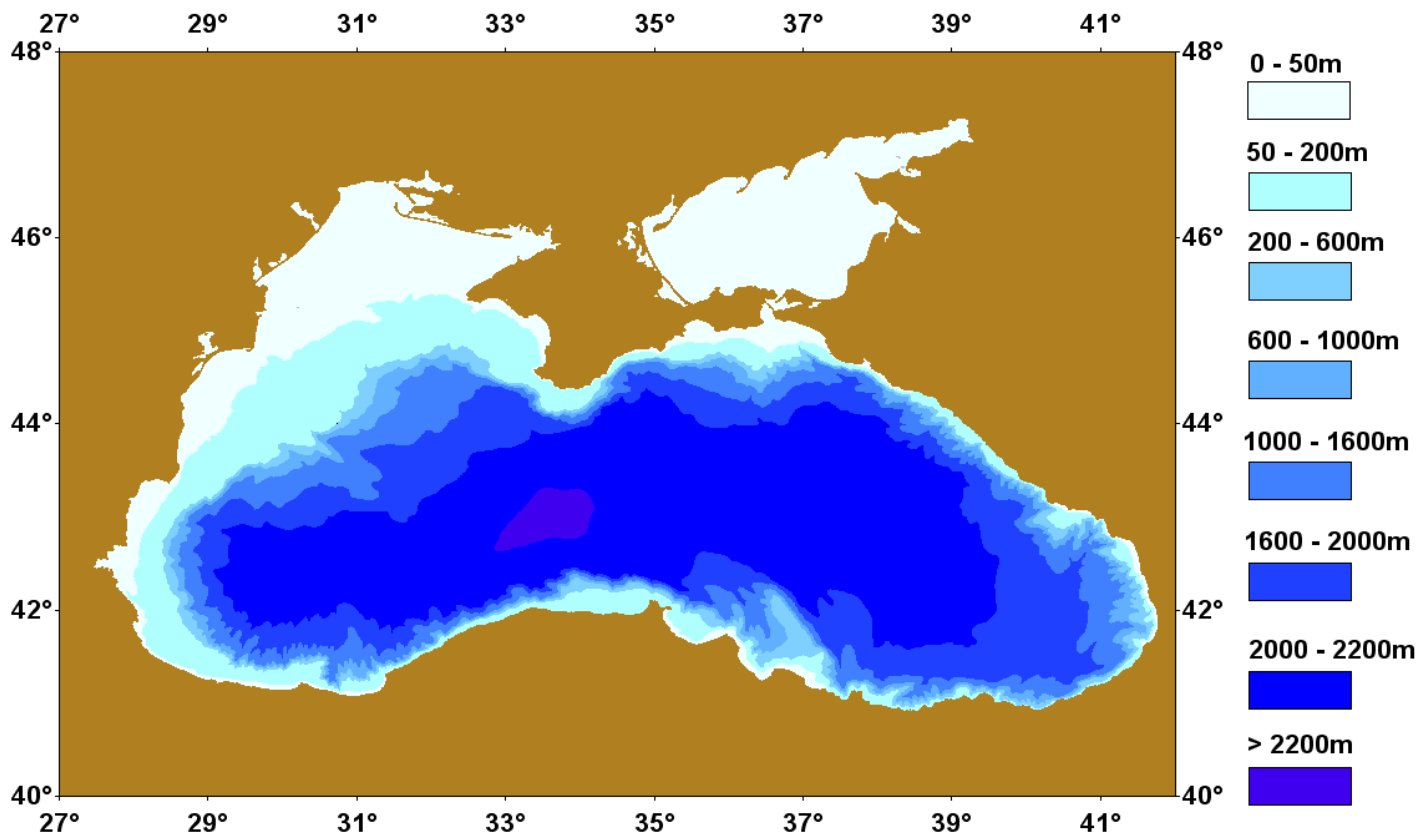
Content

- 1) The Black Sea ecosystem and Oil transport & spills
- 2) Regional legal framework for oil spills
- 3) The Project MONINFO

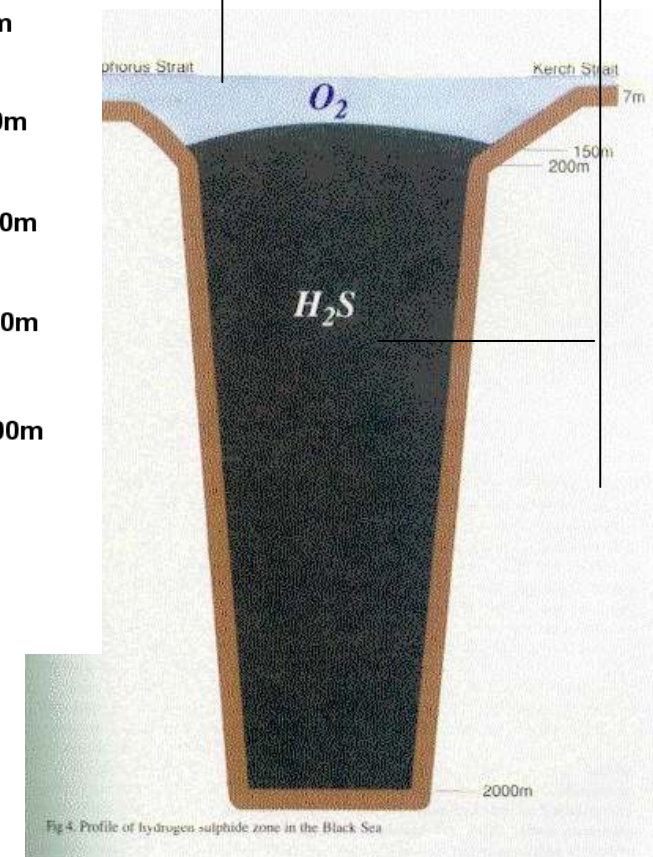


Bathymetry of the Black Sea & Anoxia

($5.5 \times 10^5 \text{ km}^3$; Zaitsev & Mamaev 1997)



Salinity, (Temperature)
18‰ 21-22‰
(5-25°C) (8-9°C)



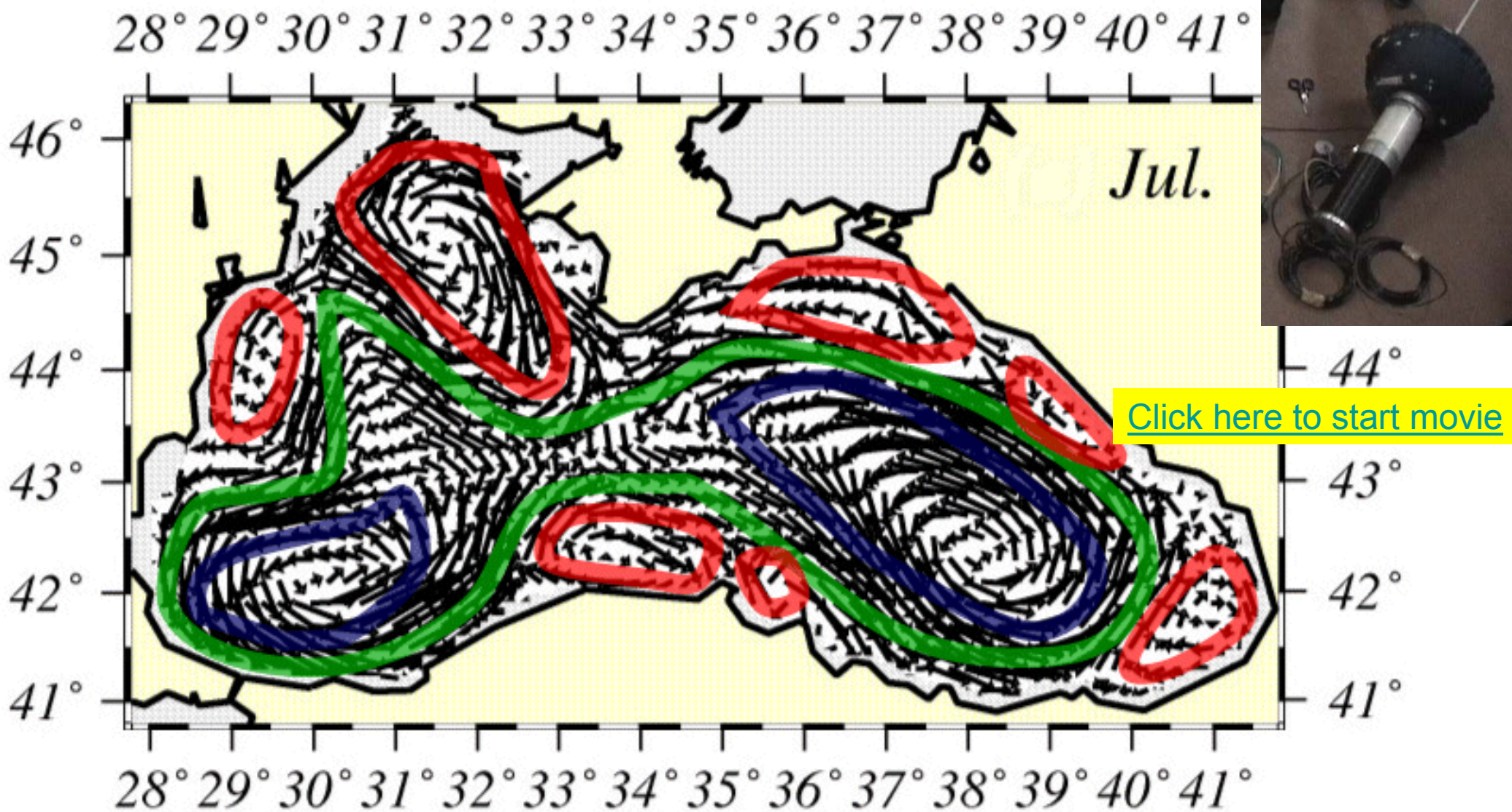
Currents of the Black Sea

(T. Oguz; pers.comm)

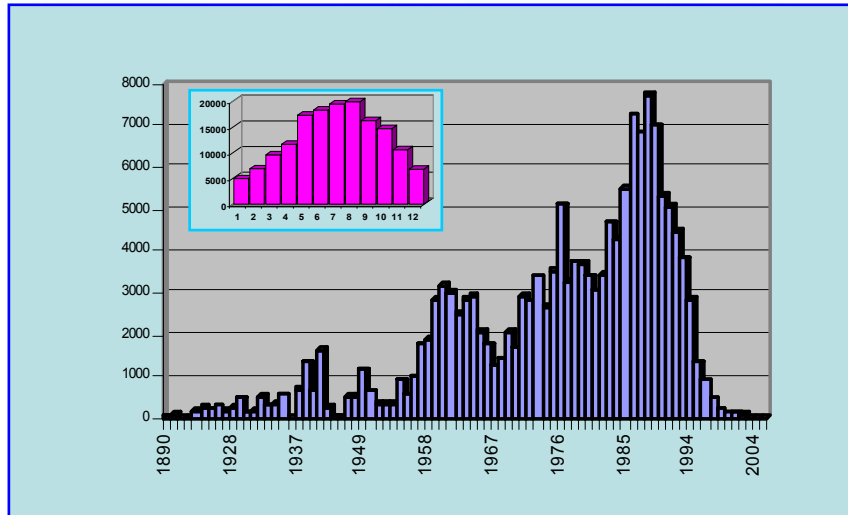
Up to 40-50 cm/s (or 0.8-1 knot)



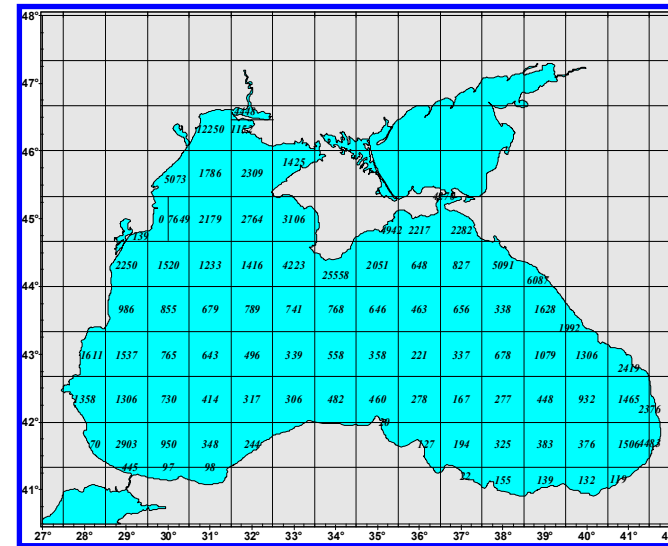
Drifter



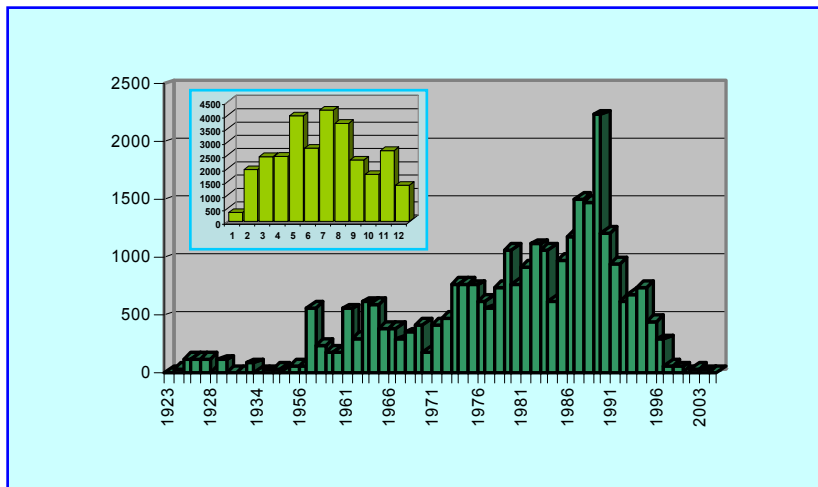
The Black Sea is a well-investigated marine basin.



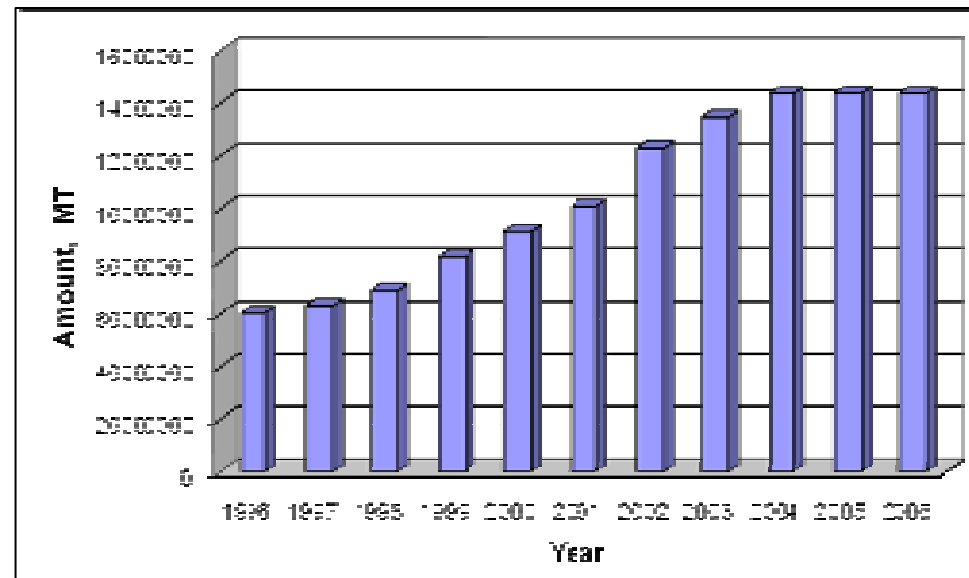
Distribution of hydrographic stations on years and months



Count of oceanographic stations on squares for the Black Sea.

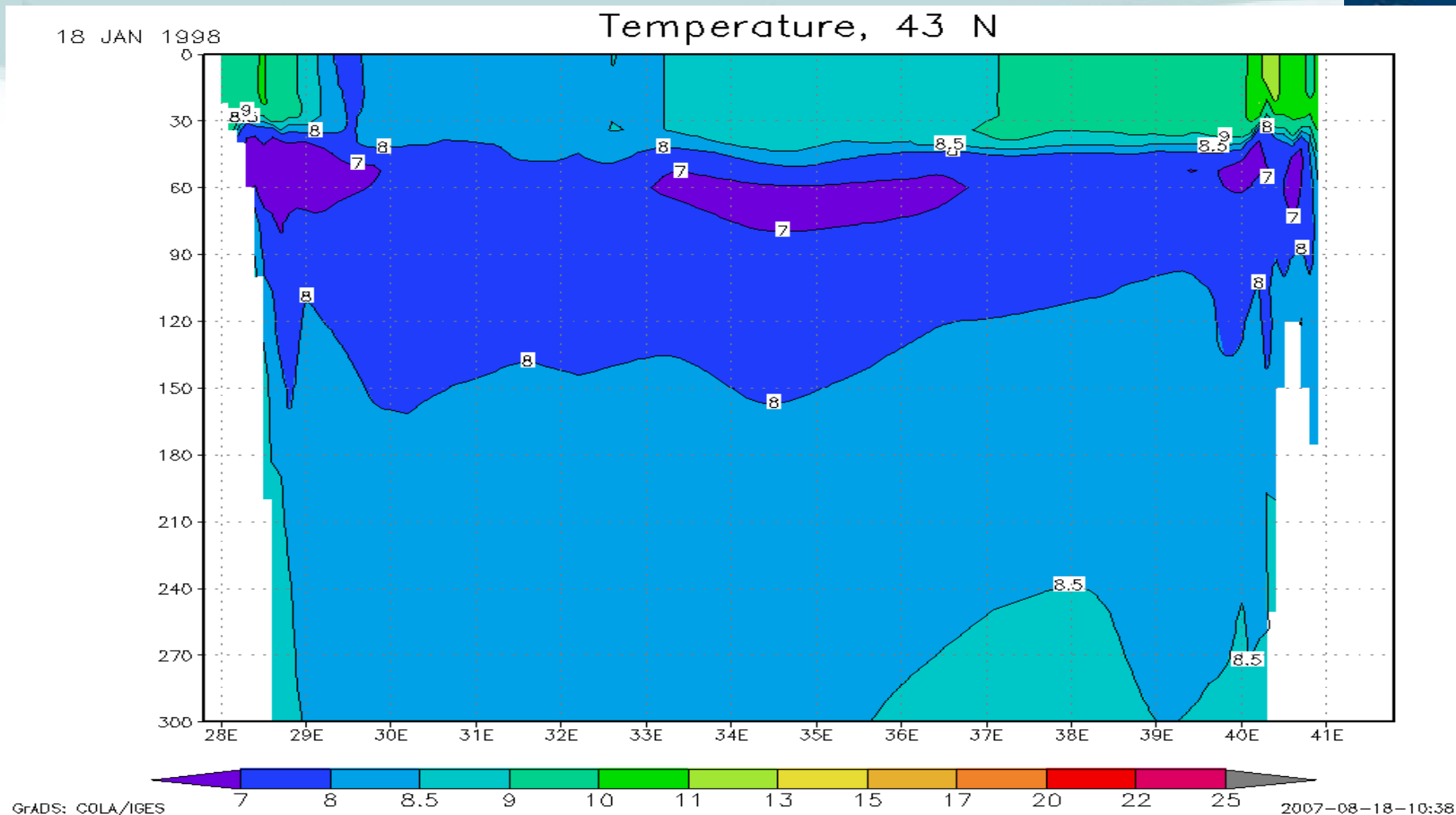


Distribution of hydrochemical stations on years and months



Ref: Eremeev et al. Sofia Climate Conference 2008

Formation and evolution of the Cold Intermediate Layer

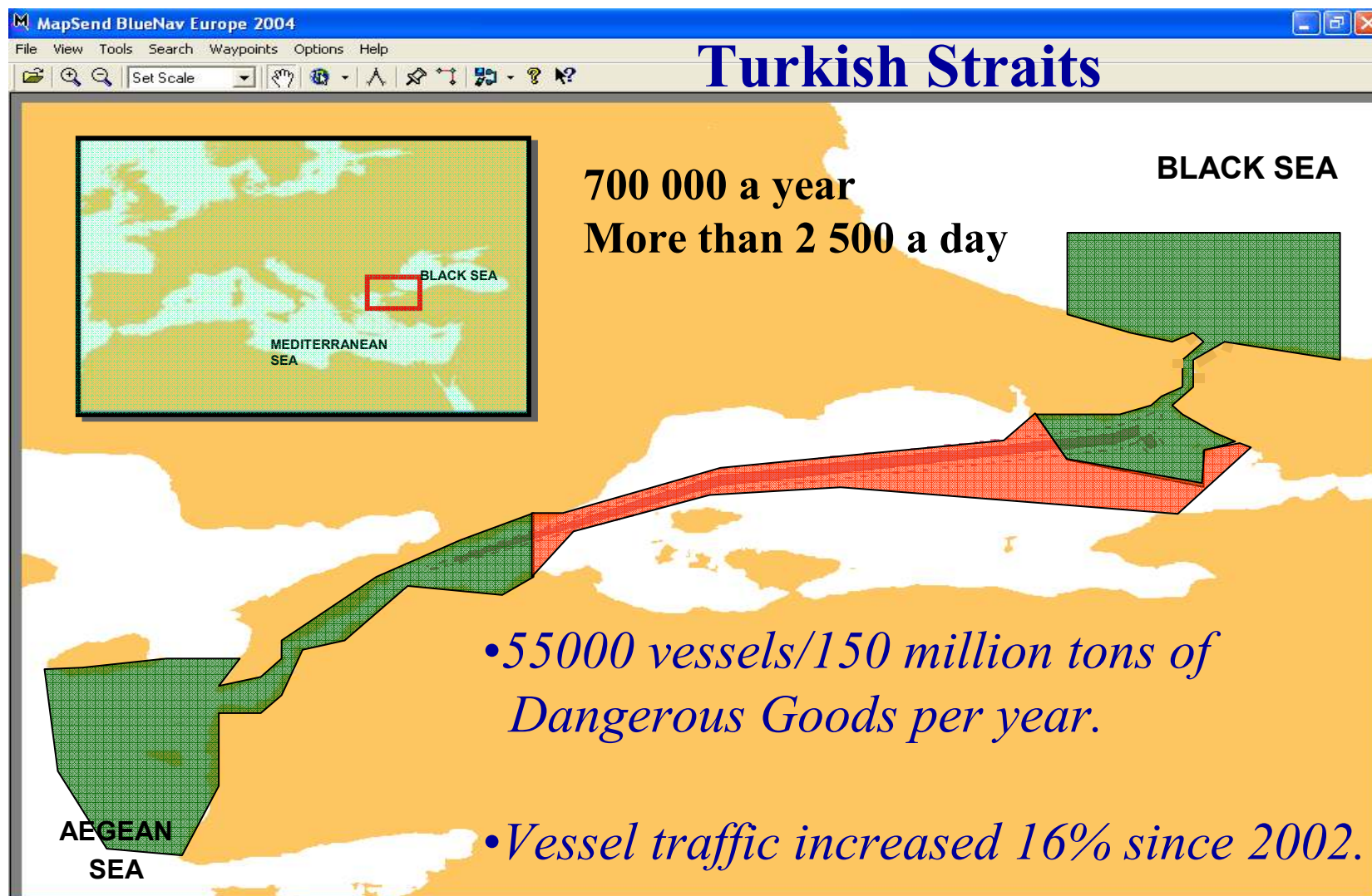


on the Protection
Against Pollution

The Cold Intermediate Layer (CIL) is characterized traditionally by temperatures colder than 8°C. This cold water mass, convectively generated every winter within the upper 50–75 m of the water column, preserves its identity between the seasonal and permanent thermocline during rest of the year.

Oil transport & spills in the Black Sea

It is clear that oil transfer activities (shipping, pipelines, construction of new terminals, etc) create risks for the marine environment and this is expected to increase over the next years.



⁵⁴Remote sensing data from 2000, 2001, 2002 and 2004 (Tarchi *et al.*, 2006).

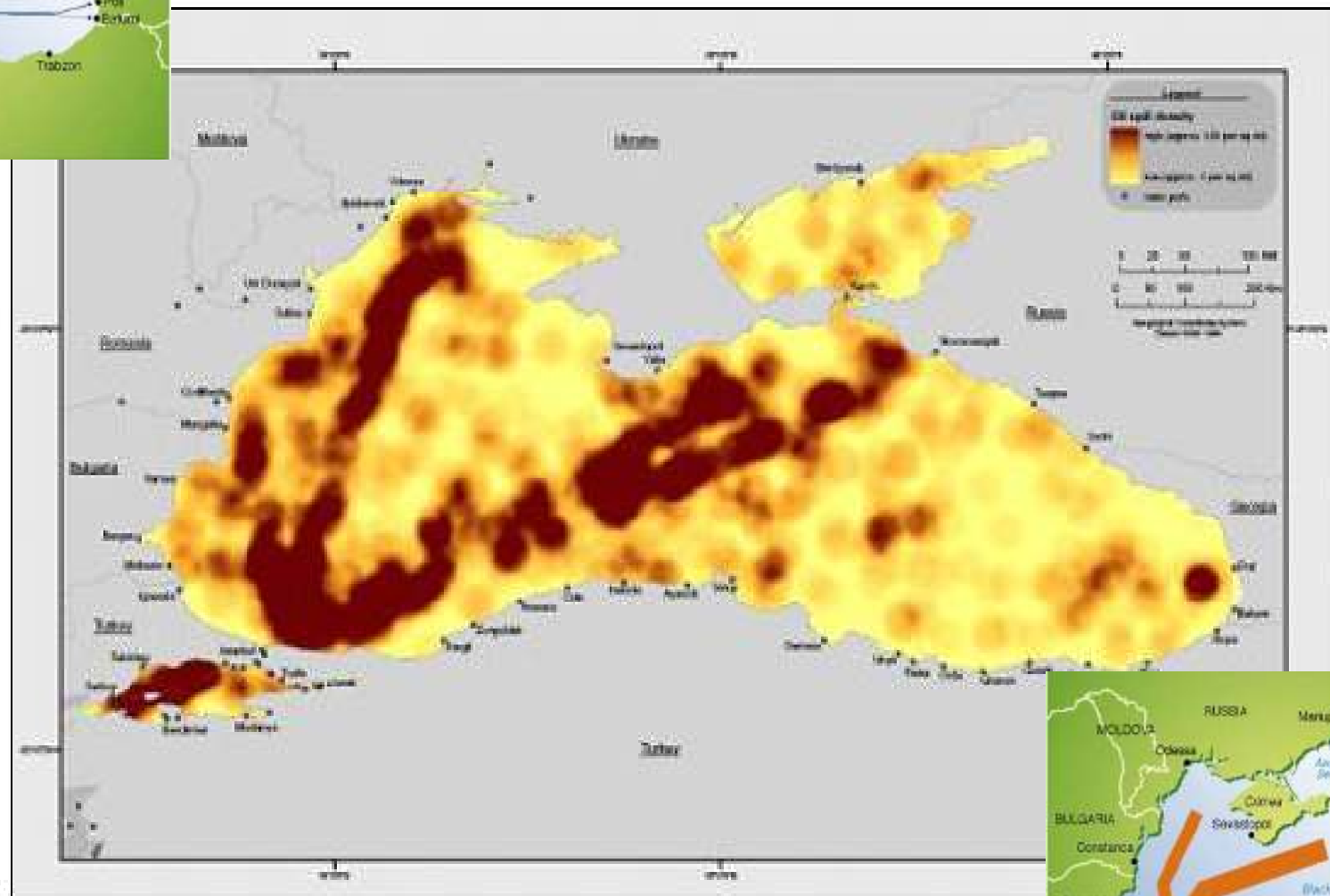


Figure 4.16 Number of likely oil spills per area of sea⁵⁴



Increasing role of BS as transport route for Caspian oil and by direct exploration from the sea.



Oil Movements - 2005

- Main bulk oil ports
- Other large ports

Legend Overview Zoom In Zoom Out Zoom Full Back Pan Identify Measure Select Select Clear Country Profiles Print Help

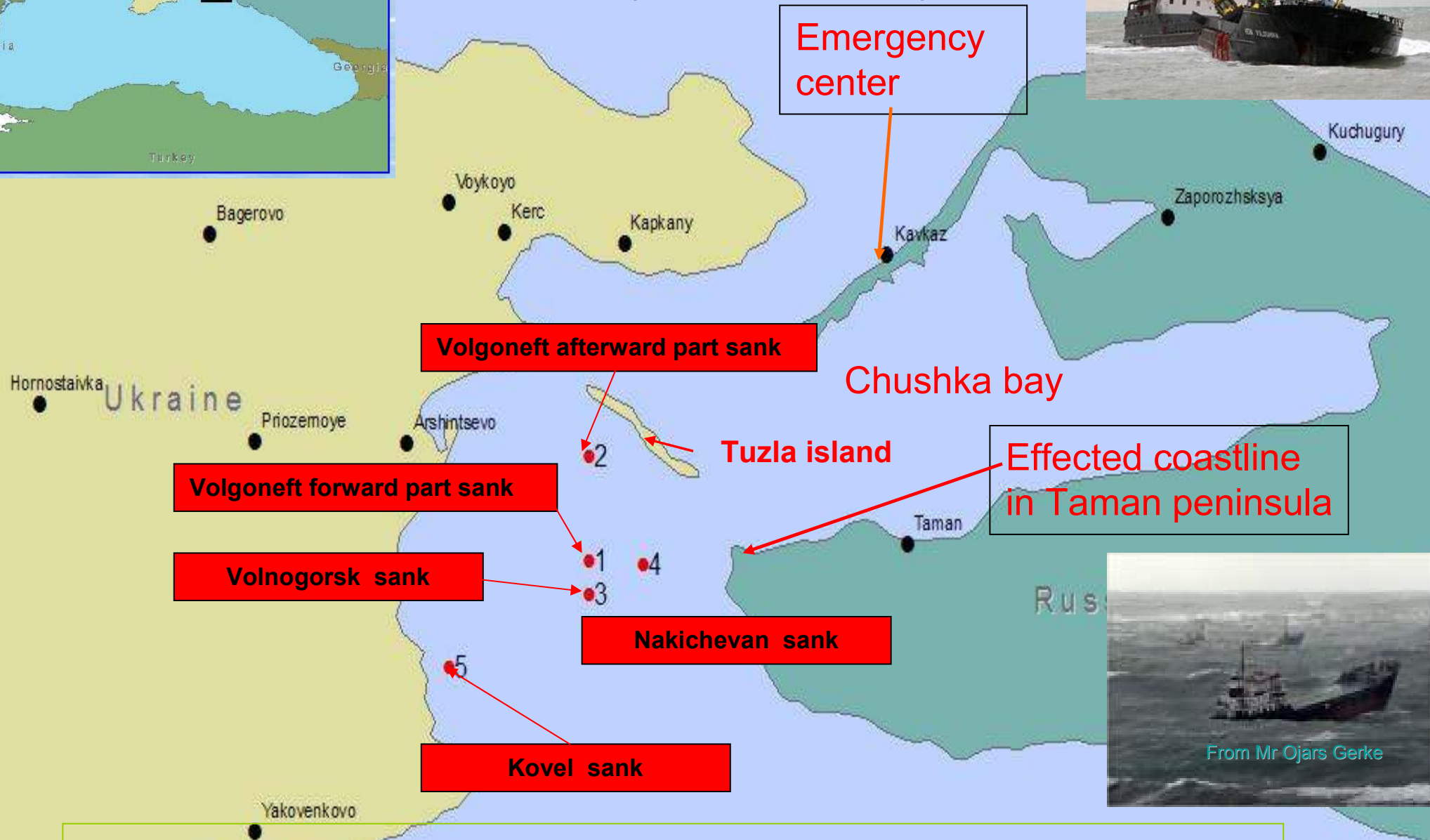


- Legend**
Oil Movements 2005
- 0 to 10 Million Tonnes
 - 10 to 20 Million Tonnes
 - 20 to 30 Million Tonnes
 - 30 to 40 Million Tonnes
 - 40 to 50 Million Tonnes
 - 50 to 60 Million Tonnes
 - Greater than 60 Million Tonnes
 - Rivers
 - Lakes
 - Capital Cities
 - Country Profiles
 - Ocean

The total amount of production is expected to increase approximately to 211 mta by 2010 with 154 mta actually going through the Black Sea and Turkish Straits (Oral 2008).



Kerch Oil Spill, (11th Nov 2008)



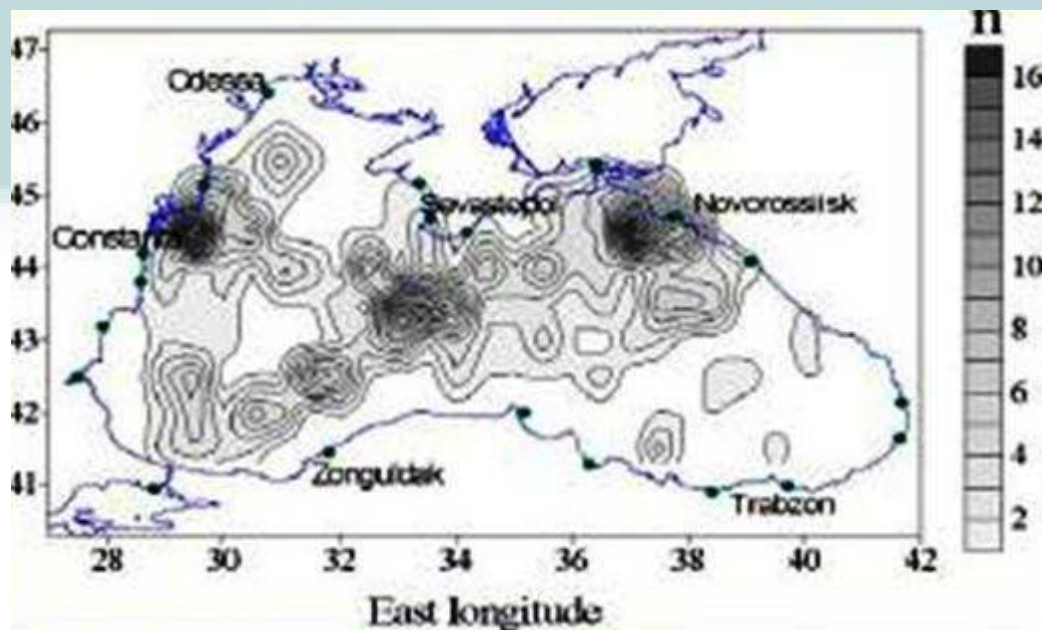
From Mr Ojars Gerke

The tanker, Volgoneft-139, was on its way from the port of Azov to Kerch when high waves broke its hull at around 0445h on Sunday spilling min **1300 tons** of its 4077 tons (or 3463 acc to a different source) .

ACCIDENTS
11 November, 2007

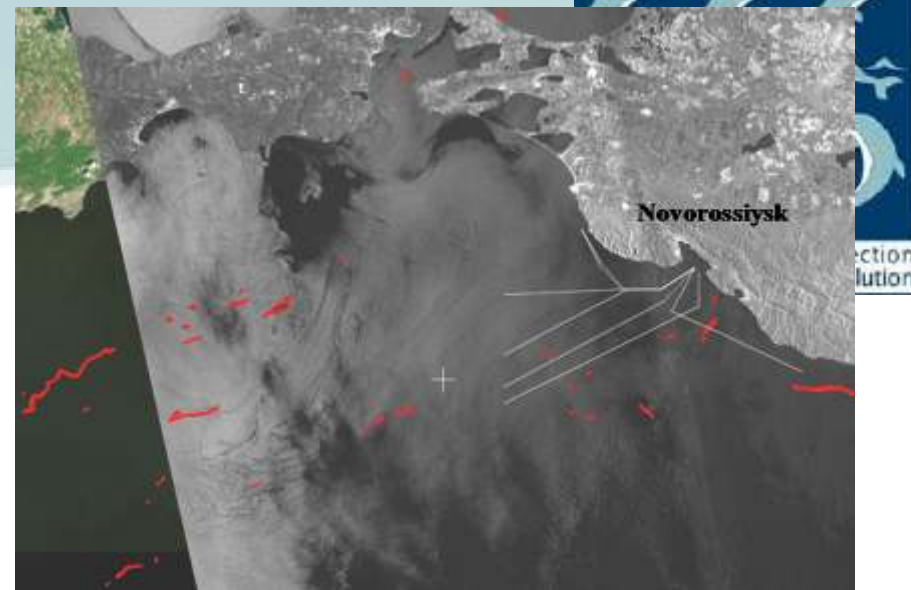
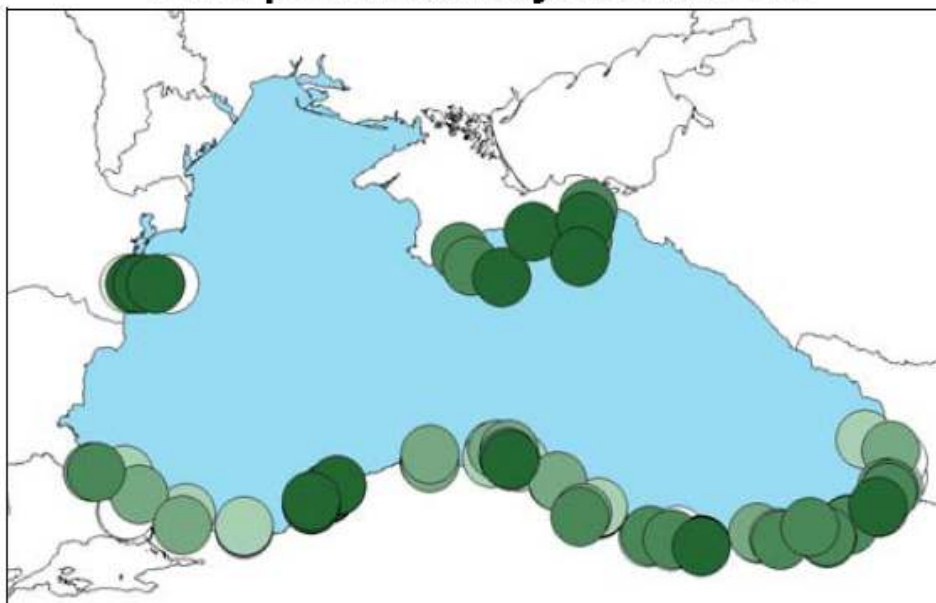
Kerch



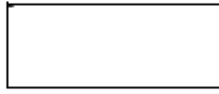


SEDIMENTS Pollution: 2000-2005

Total petroleum hydrocarbons



Background TPH value 10 µg/g

Colour	Total petroleum hydrocarbons (µg/g)
	<5.51
	5.51-26.00
	>26-60.72
	>60.72-190.00
	>190.00

Action should be taken at several stages of the process of oil transfer



- ✓ Provision of safe oil transport /port operations in the area
- ✓ Monitoring maritime traffic and in particular polluting ships

For operational or accidental pollution:

- ✓ Response in emergency situations
- ✓ Environmental impact of pollution by oil,
- ✓ Exercises/Training/Capacity building on a regular basis.

Regional Legal Framework: The Black Sea Commission – responsible for the implementation of the Bucharest Convention

Major Objective of activities:

Protecting the Environment and enhancing Cooperation in the Black Sea region

through

Regional legal and policy development, capacity building, data collection and sharing, strengthening scientific foundations of decision making.



The basis for regional cooperation

Bucharest Convention



Emergency Protocol*



SAP, Contingency Plan**



Guidelines



**Protocol on Co-operation in Combating Pollution of the Black Sea Marine Environment by Oil and Other Harmful Substances in Emergency Situations, 1992;*

*** fully consistent with the OPRC Convention.*



Regional Legal Framework for Oil Spills



Acc to MARPOL 73/78 (International Convention for the Prevention of Pollution from Ships) :

Black Sea is a Special Area and oil discharges within special areas have been completely prohibited

	Adopted	Date of Entry into Force	In Effect From
Annex I: Oil			
Mediterranean Sea	2 Nov 1973	2 Oct 1983	2 Oct 1983
Baltic Sea	2 Nov 1973	2 Oct 1983	2 Oct 1983
Black Sea	2 Nov 1973	2 Oct 1983	2 Oct 1983
Red Sea	2 Nov 1973	2 Oct 1983	<u>*</u>
"Gulfs" area	2 Nov 1973	2 Oct 1983	1 Aug 2008

Institutional Setup of the BSC

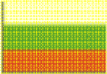


- Black Sea Commission is the governing body of the Bucharest Convention

The Commission for the Protection of the Black Sea Against Pollution

Permanent Secretariat

Advisory Groups

AG ESAS	AG PMA	AG LBS	AG ICZM	AG CBD	AG FOMLR	AG IDE
Environmental Safety Aspects of Shipping (AG ESAS)	Pollution Monitoring and Assessment	Control of Pollution from Land Based Sources	Development of the Common Methodologies for Integrated Coastal Zone Management	Conservation of Biological Diversity	Environmental Aspects of Fisheries and Other Marine Living Resources Management	Information and Data Exchange
Regional Activity Centers						
Environmental Safety Aspects of Shipping (AC ESAS), <u>Varna</u> , Bulgaria	Pollution Monitoring and Assessment (AC PMA), <u>Odessa</u> , Ukraine	Control of Pollution from Land Based Sources (AC LBS), <u>Istanbul</u> , Turkey	Development of Common Methodologies for Integrated Coastal Zone Management (AG ICZM), <u>Krasnodar</u> , Russian Federation	Conservation of Biological Diversity (AC CBD), <u>Batumi</u> , Georgia	Environmental Aspects of Fisheries and Other Marine Living Resources Management (AG FOMLR), <u>Constanta</u> , Romania	Information and Data Exchange (AC IDE), Permanent Secretariat, <u>Istanbul</u> , Turkey
						
National Focal Points						
Bg, Ge, Ro, Ru, Tr, Ua	Ua, Bg, Ge, Ro, Ru, Tr	Tr, Bg, Ge, Ro, Ru, Ua	Ru, Bg, Ge, Ro, Tr, Ua	Ge, Bg, Ro, Ru, Tr, Ua	Ro, Bg, Ge, Ru, Tr, Ua	Bg, Ge, Ro, Ru, Tr, Ua

Regional Legal Framework: Oil Spill Related Documents



- **The Bucharest Convention** (1992)
- Article IX: **Cooperation in combating pollution in emergency situations**
- The Contracting Parties **shall cooperate in order to prevent, reduce and combat pollution of the marine environment of the Black Sea resulting from emergency situations** in accordance with the *Protocol on Cooperation in Combatting Pollution of the Black Sea by Oil and Other Harmful Substances in Emergency Situations...*

Regional Legal Framework: Oil Spill Related Documents



EMERGENCY PROTOCOL

- Article 2: The Contracting Parties shall endeavour to maintain and promote, either individually or through bilateral or multilateral cooperation, **contingency plans for combating pollution** of the sea by oil and other harmful substances. These shall include, in particular, equipment, vessels, aircraft and manpower prepared for operations in emergency situations.

Regional Legal Framework: Oil Spill Related Documents



- Contingency Plan to the Protocol on Cooperation in Combating Pollution of the Black Sea by Oil and Other Harmful Substances
- **With 8 Annexes**
- **Adopted earlier by Bulgaria, Romania, Turkey (And in 17 April 2009), by Georgia**

Earlier BS Strategic Action Plan



...heavy shipping ... calls for:

- (a) development of national emergency preparedness and response systems and their coordination at the regional level,
- (b) improvement of the communication between the private sector and the policy makers and scientists,
- (c) improvement/development of the Black Sea Information System (BSIS), (ESAS - Environmental Safety Aspects of Shipping- component)

.....

- e) advancement of surveillance at sea and inspections in ports,

.....

- h) further development of legal and policy documents,

Revised BS Strategic Action Plan



- 1. Establish an inter-state ministerial mechanism to enable a quick response to major pollution events.**
- 2. Adopt and enforce relevant international legal instruments for safety navigation, pollution prevention, limitation of liability and compensation.**
- 3. Provide adequate port reception facilities for ship-generated wastes according to MARPOL 73/78, Annex I, IV, V.**
- 4. Establish a harmonised fee/cost recovery system on ship-generated waste.**
- 5. Develop systems for the identification of illegal pollution sources from vessels and off-shore installations.**
- 6. Develop/establish a harmonised enforcement system in cases of illegal discharges from vessels and off-shore installations, including technical means and fines.**

Regional Cooperation

1. Strengthening the implementation of legal and policy documents.
2. Review techniques and provide best practice in the field of pollution preparedness & response
3. Assistance for combating pollution from oil spills through:
 - Training, capacity building
 - Data and information collection
 - Legal and policy documents update
 - Exercises (regular Alpha, Bravo, Delta)



Regular reporting.

DELTA Exercise (SULH), September 2007, hosted by TURKEY, supported by OSPRI, BSC, with assistance from international organizations - IOPC Funds, ITOPE, *Oil Spill Response* and UK P&I Club.



<http://www4.ibackup.com/qmanager/servlet/share?key=jdowx61003>
<http://www.cam-story.com/download/SULH.zip>)

Exercise SULH 07 – learn lessons, build capacity

Preparations extended over nine months.

The preparatory events included:

- Sensitivity mapping workshop
- Aerial surveillance workshop
- Integration of international resources seminar
- Shoreline equipment deployment training and local Administration liaison workshop
- National claims workshop
- Management of the media seminar



RODELTA – August 2009

1. First planning meeting – Constanta 12-13 February 2008. Together with IMO OPRC course Level 3.
2. Second planning meeting – end of May, together with TU-Greece-MED POL Delta exercise in Izmir.



Project MONINFO



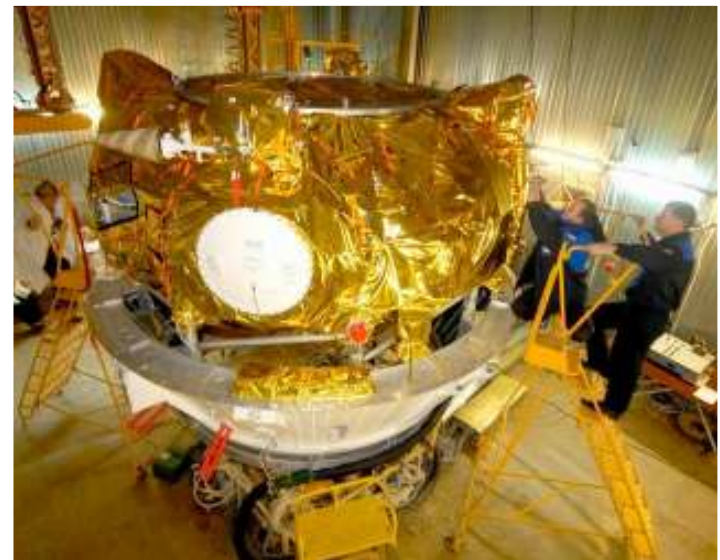
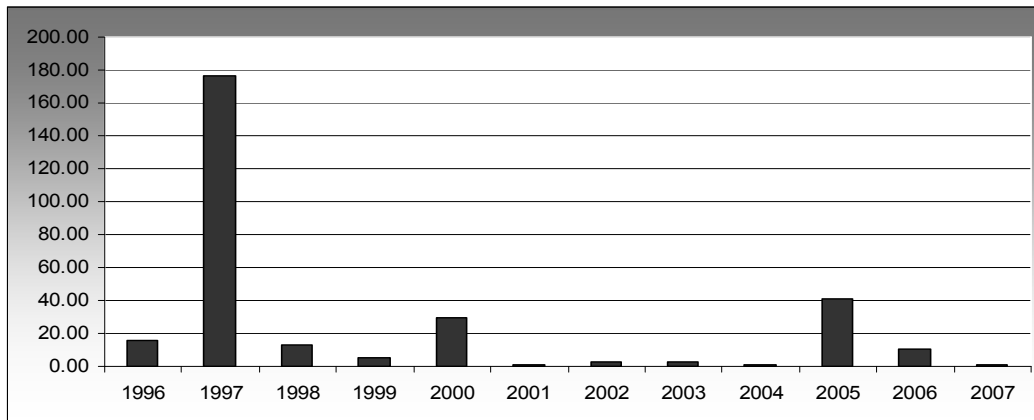
Environmental Monitoring of the Black Sea basin - Monitoring and Information Systems for Reducing Oil Pollution



Project objectives



- **Development/Improvement of information and monitoring system for operational and accidental pollution**
- **Enhancement of response capabilities, including risk management and emergency preparedness planning**



Project Work Packages



- **WP1. Information System development**
- **WP2. Monitoring System development**
- **WP3. Capacity Building**



WP1. Information System



- **Activity 1.1 Data & Information Requirements**

Deliverable: Overview of requirements for creation of the concept. Availability of data, gaps.

- **Activity 1.2 Establish contacts and create/ensure ownership**

Deliverable: Workshops to meet main stakeholders in relation to oil pollution reduction and negotiate commitments.

- **Activity 1.3 Information Networking**

Deliverable: List of oil-related organizations and expert pool. Agreements with Institutions responsible for accidental oil pollution monitoring and reporting to the BSC. Guidelines for monitoring of oil spill effects

- **Activity 1.4 Development of the concept for oil related BSIS and initial steps in creating the system**

WP1. Deliverable : Concept paper, initial design of the Information System

WP2. Monitoring System development



- **Activity 2.1 Finding the Gaps**
Deliverable: Overview of gaps.
- **Activity 2.2 Sharing best practices on monitoring**
Deliverable: Contribution to the Concept on monitoring system
- **Activity 2.3 Monitoring of accidental pollution effects**
Deliverable: Report on the monitoring of the impacts of case study

WP2. Monitoring System development



- **Activity 2.4 Strengthening of illegal discharges detection via monitoring and surveillance**

Deliverable: Mechanisms and provisions of satellite and aerial surveillance in the region

- **Activity 2.5 AIS network data exchange**

Deliverable: Development of bilateral and Multi-lateral agreements for exchange of AIS data. Texts of such agreements to be drafted. Technical design of the AIS system.

- **Activity 2.6 Development of regional VTOPIS (or VTOPIS-like system)**

Deliverable: 1. Review of existing models 2. Lay the grounds to expanding VTOPIS (or VTOPIS-like system) to the region. 3. Model/Concept of Black Sea monitoring system for operational, accidental pollution and illegal discharges from ships

VTOPIS

(VTOPIS) is the Vessel Traffic Oil Pollution Information System project implemented in Bulgaria, with the BSERP/UNDP support.



The main activities of VTOPIS include:

- development of software for visualisation, tracking and backtracking of the ships' traffic, for tracking pollution**
- development of an integrated database with the ship's pollution information**
- determination of standard formats to report ships' pollution issues for related authorities**

HELCOM experience on modeling, AIS



Seatrackweb - Windows Internet Explorer

http://www.smhi.se/hfa_coord/BOOS/Seatrackweb.html

File Edit View Favorites Tools Help

Google C seatrackweb Go 15 blocked Check AutoLink AutoFill Send to seatrackweb Settings

Seatrackweb

Observations
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TS-profiles
Currents
Soundprofiles
Marinemet
Iceservice
Öresund
Freshwater
Algal situation
Coastal observations

Forecasts
Sepdemo
Ocean Web
Seatrack Web
Seaweather

Seatrack Web
Official HELCOM oil drift forecasting system
developed and administrated by SMHI and DAMSA
with SINTEF oil weathering technology included

HEL COM

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2008-07-24 New STW version 2.4.0.
Type of outlet (Point, Line or Area) is chosen in a drop-down list. When making a line outlet, it is possible to start along up to three connected line segments, not just one straight line.

AIS
There are several improvements in the user interface which simplify the analysis of AIS information, for instance;
It is possible to undo a deletion of a ship track.
It is shown during what period the ship is inside search square.
It is possible to add data from log book, if the track is interpolated because of missing data.
The area where STW shows suspected ships is now 12 n.m. and a square.

2007-11-01 Save case.
If you use Java 1.6 you must add .xml, after the name of the file you want to save.
If you use earlier Java versions you can add it if you want.

Internet 100%

start Windows Live ... 20081203 Lis... Skype™ - ah... Microsoft Pow... Seatrackweb - ... EN 09:31

WP3. Capacity Building



Activity 3.1 Capacity building for preparedness plans, risk management

A) Emergency preparedness/contingency plan

Deliverable: Overview of emergency preparedness, promotion of national plans, regional strategy for use of dispersants

B) Exercises and training in oil spill response

Deliverable: Organized training and exercises to achieve common practices. Support to Regional Delta Exercise

C) Operational risk management

Deliverable: overview of operational risk management expertise, systems and strategies and recommendation developments.

WP3. Capacity Building



Activity 3.2 Institutional strengthening in the field of environmental and safety aspects of shipping activities & dissemination of project results

Deliverable: Workshops and dissemination activities

Advisory Board



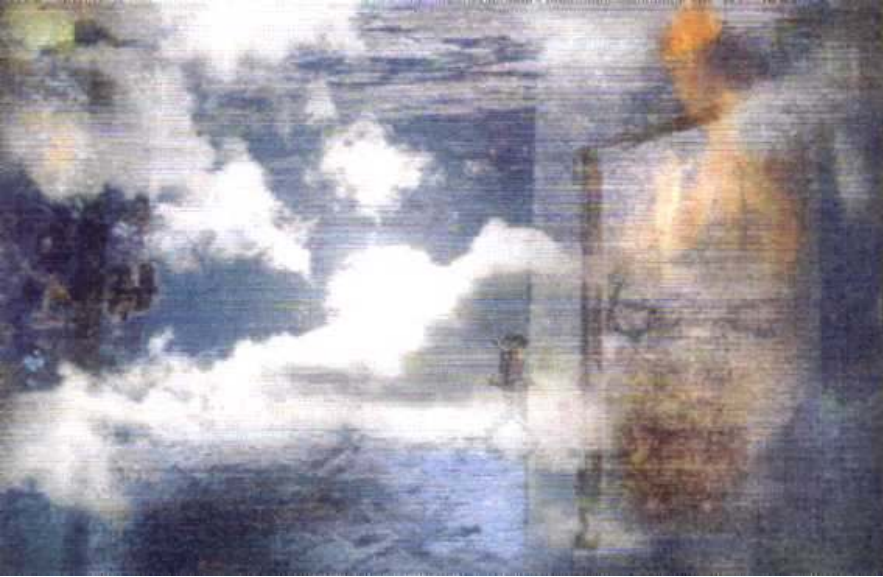
In close cooperation with EC DGs, JRC, EMSA, EEA, IMO, HELCOM, REMPEC, OSPRI etc. All these organization will be invited to be represented in the Advisory Board of the project

Project period/Duration: 2 years, 2009-2010

Progress



- Regional Delta exercise is being supported (Preparatory meeting in Constanta, Romania in Mar 2009, in Izmir, Turkey in 28 May 2009, actual exercise in 25-26 August 2009 off Romania)
- Hiring of two personnel (manager and expert) will be completed in a few days.
- Initial negotiations were made with consultants on Modeling, Surveillance, Risk Assessment, Impact of oil spills ...



**THANK YOU FOR YOUR KIND
ATTENTION!**

WWW.BLACKSEA-COMMISSION.ORG

