



  
**interspill**  
LONDON 2012

SPILL CONFERENCE & EXHIBITION

Long term sponsor:



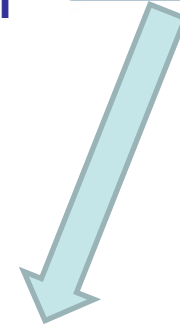
# Developments with Oil Spill Preparedness in the Black Sea Region

**INTERSPILL-2012, 13-15 March**

*Black Sea Commission/Permanent Secretariat*  
[www.blacksea-commission.org](http://www.blacksea-commission.org)

# The Convention on the Protection of the Black Sea Against pollution, 1992

This 'Bucharest Convention' and its 'Emergency Protocol' provide the legal framework for actions concerning regional co-operation in combating marine pollution incidents



## 'Black Sea Commission'

Inter-governmental body for promoting implementation of Bucharest Convention, its Protocols and the Strategic Action Plan



# Strategic Action Plan (revised 2009)



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.



# 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.

## Black Sea Contingency Plan (BSCP)

- Sets out regional cooperation mechanism and procedures
- Fully operational following three major exercises (Turkey 2007, Romania 2009 and Georgia 2011)
- BSCP is coordinated within the framework of the Commission's Advisory Group on the Environmental Safety Aspects of Shipping (AG ESAS).

# AG ESAS provides operational assistance for combating pollution from oil or chemical spills



- **Capacity building** (training, exercises)
- **Data collection** (no. of ships calling at ports, passing the Istanbul Strait, PRF, reported oil spills, dumping volumes, ballast waters)
- **Legal documents.** Regular maintenance and update of the operational information for the implementation of the BSCP
  1. Directory of competent national authorities, contact points, emergency response centres, national on-scene commanders and other relevant addresses;
  2. Maps showing possible sources of pollution, environmental sensitive areas, environmental sensitive indices, priorities for protection;
  3. Operational procedures: alarm, notification, communication system;
  4. Directory of response personnel and inventory of response equipment, products and other means which each party might offer as assistance in case of the activation of the Plan.

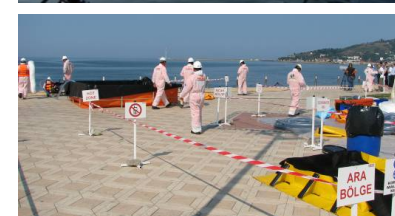


# Regional Activities: Workshops Training Exercises



# Black Sea Oil Spill Exercises

- Embeds cooperation procedures amongst all stakeholders (government and industry)
- Biennial major (DELTA) exercises ensure regional-scale oil spill preparedness.
  - SULH 2007, hosted by Turkey.
  - RO-DELTA 2009, hosted by Romania
  - GEODELTA 2011, hosted by Georgia
  - **(RODELTA and GEODELTA supported by MONINFO Project with EMSA vessel participation in both )**
- National Plans provide the policy and organizational framework, using BSCP procedures





# MONINFO Project (two Phases)



EU co-funded, Total Budget: € 2.36 M

## **Three Work Packages in MONINFO I (Jan 09 to Aug 11)**

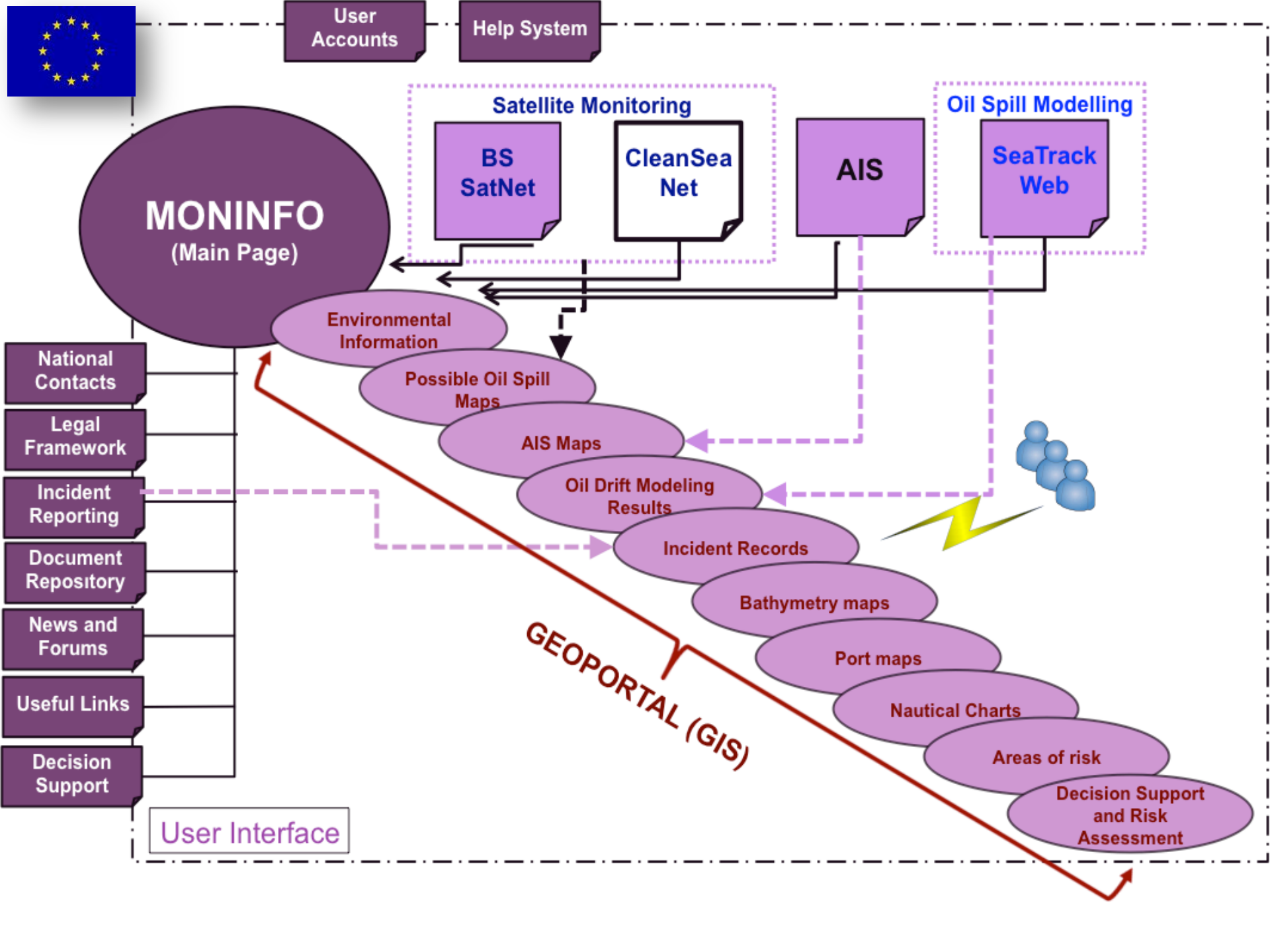
- WP1. Information System development
- WP2. Monitoring System development
- WP3. Capacity Building

## **Five Work Packages in MONINFO II (Jan 10 to Dec 11)**

Complementary to MONINFO 1

Oriented to the establishment of real operational tools to support institutions responsible for monitoring, counteraction and mitigation activities in case of oil spills

- WP 1. RDIP Database and Info platform and Expert System/MONINFO System on oil pollution mitigation and counteraction activities
- WP 2. Application of a Web based model for oil pollution forecasting
- WP 3. Regional Black Sea AIS data server
- WP 4. Remote sensing monitoring of oil pollution
- WP 5. Capacity building and sustainability

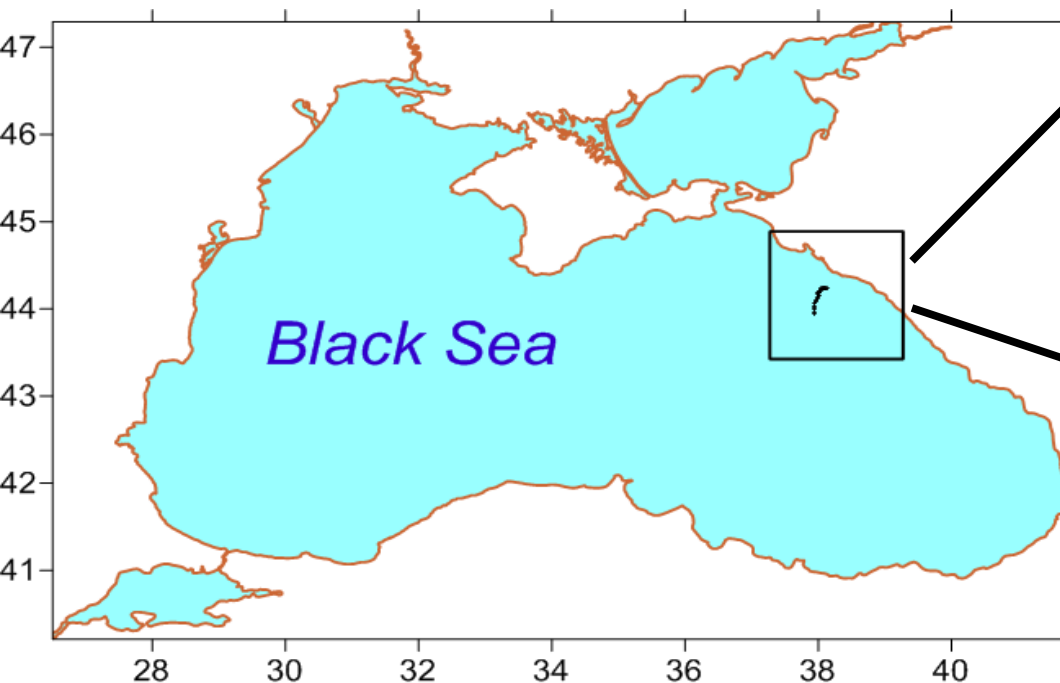


# Monitoring System

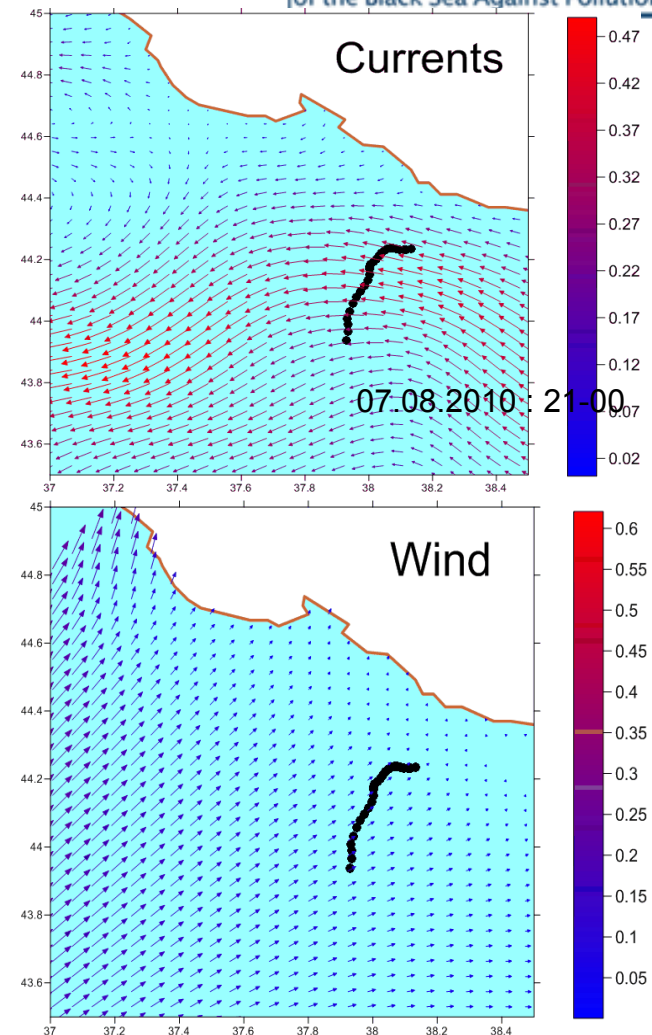
## Spills modeling

### -Black SeaTrackWeb

Oil drift model of the STW from Baltic has been adapted to the Black Sea (BSTW) and users have been trained

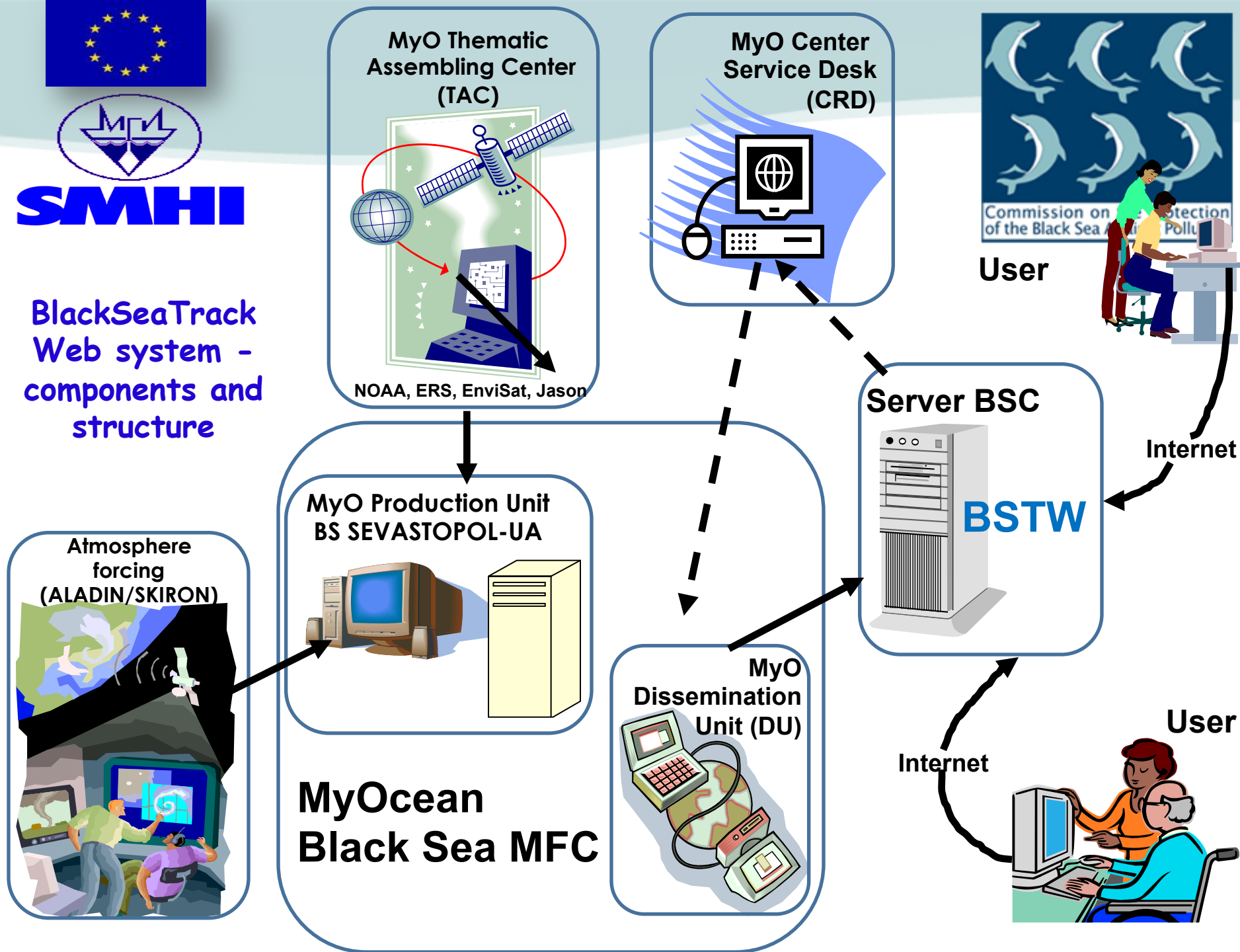


**Trajectory of the spot center**





## BlackSeaTrack Web system - components and structure



## BLACK SEA CONTINGENCY PLAN ACTIVATED LEAD COUNTRY - GEORGIA

### OFFSHORE PARTICIPANTS:

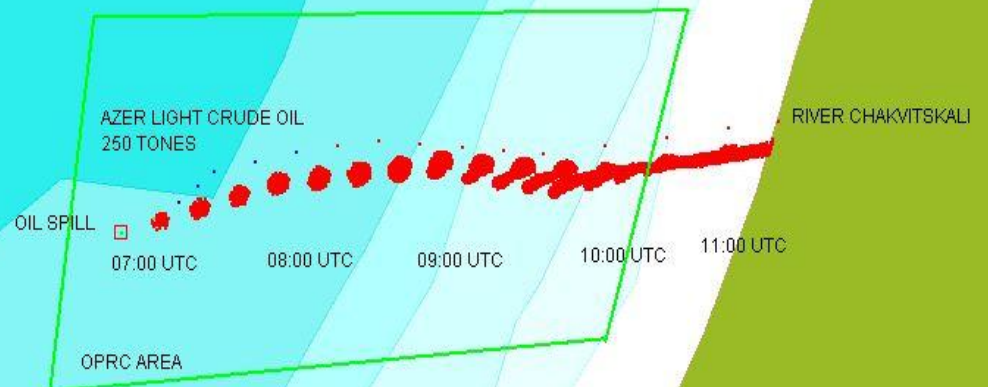
TUG - KAPITAN PAGAVA  
GEORGIAN MINISTRY OF DEFENCE - HELICOPTER  
OIL RECOVERY VESSEL - AISI  
TUG PATRIOTI  
CRANE - CHERNOMORETS9  
BOOM DEPLOYMENT BOAT - GAGRA  
VESSEL - HIDROGRAF 1  
MOTORBIAT OF BLACK SEE SERVICE - BUNEBAS  
EMSA SPECIAL VESSEL - GSP ORION  
TURKISH COASTAL DIRECTORATE TUG - GEMI KURTARANI  
TURKISH COAS GUARD BOAT - TGS-95

### SHORELINE PARTICIPANTS:

MTA - HARBOUR MASTER  
EMERGENCY SERVICE MIA  
BATUMI OIL TERMINAL  
PATROL  
LIFEGUARDS  
BATUMI TOWNHALL  
FIRE PROTECTION SERVICE  
AMBULANCE  
MARE - SEA CLEANING SERVICE LTD  
MEKE - MARINE ENVIRONMENTAL PROTECTION SERVICE LTD  
SEAGULL - ENVIRONMENTAL PROTECTION SERVICE LTD

The Operational Black Sea Regional Exercise

## GEODELTA 2011 BATUMI



WIND - NW 5 M/SEC  
DRIFT - SE 3 KN.  
TEMPERATURE - 20 DEG.  
WAVE - 2 DM.

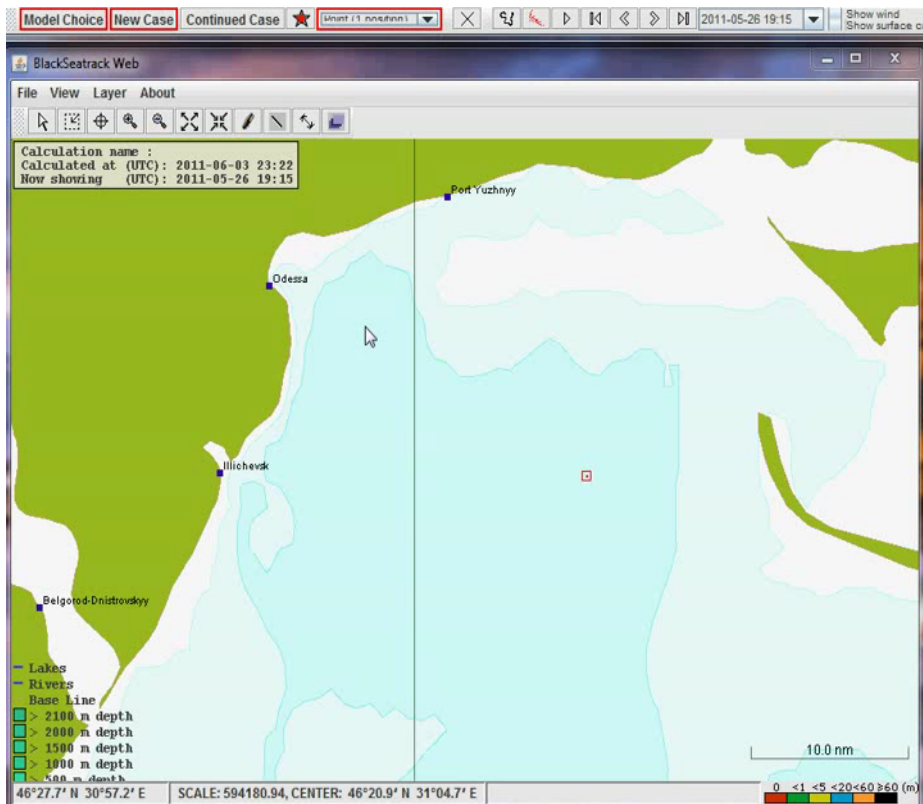
1.0 nm



# MyOcean database helped BSTW



One of the biggest in recent years, oil spills occurred in the Ukrainian Black Sea. Oil spilled on the beaches of Odessa and Ilyichevsk (<http://klumba.ua/club/post-8376/>).



MyOcean Black Sea MFC has provided currents to the Black Sea Track Web system, the downstream service of oil spill drift forecast at the Black Sea Commission. Backtracking tool has confirmed that the pollution was done by Russian tanker “Orion A” and Cyprus “Baltic Chief 1”. Leak occurred at a time when oil was pumped from one vessel to another. Direct oil tracking shows the scale of the beach pollution.



# Oil Spill Monitoring (Satellite based)



- **CleanSeaNet (CSN) from EMSA**



- Successfully launched in the Black Sea area since August 2010, providing service to Bulgaria-Georgia-Romania-Turkey;
- The limited access to CleanSeaNet services to countries of the Black Sea region (Russia and Ukraine as well) demonstrating the added value of satellite based oil spill monitoring systems;

- **BlackSeaSatNet (ITU+ScanEX)**



- Tested-> February-March 2011  
(all BS countries received the reports)

Содержимое окна карты

30 сентября 2008 г. утро  
☐ Радарст 51\_2

26 сентября 2008 г.  
☐ Радарст 51\_2

26 сентября 2008 г. вечер  
☐ Радарст 51\_2

23 сентября 2008 г. вечер  
☐ Радарст 51\_2

23 сентября 2008 г. утро  
☐ Радарст 51\_2

26 сентября 2008 г. вечер  
☐ Радарст 51\_2

26 сентября 2008 г. утро  
☐ Радарст 51\_2

10 сентября  
☐ Радарст 51\_2

17 сентября  
☐ Радарст 51\_2

16 сентября  
☐ Радарст 51\_2

9 сентября  
☐ Радарст 51\_2

6 сентября 2008 г.  
☐ Радарст 51\_2

2 сентября 2008 г.  
☐ Радарст 51\_2

27 августа 2008 г.

The Russian capacity under SCANEX- and the Turkish capacity by Istanbul Technical University, Center for Satellite Communications and Remote Sensing (ITU CSCRS) are available.

Both institutions are involved in the Project by their capacity and expertise in satellite surveillance, in build a composite map of areas of heavy oil pollution (based on archive data) and to provide a similar service as CSN (complementing it in the BS region).

- Geoportal

“Cosmophotos – Black Sea


Demonstration site  
<http://new.test.kosmosnimki.ru/Default.aspx>  
 Log in – scanex, password – scanex

13.82983 36.17367



# OIL SPILL REPORT SATELLITE BASED

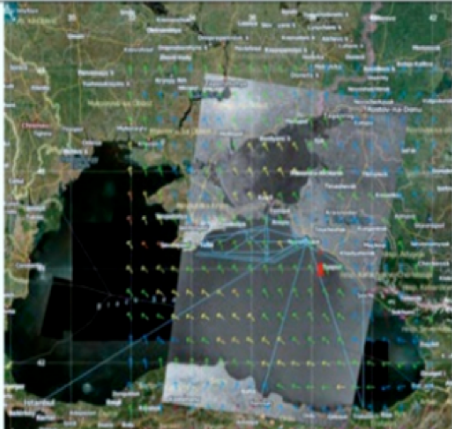




**MONINFO SYSTEM SATELLITE  
BASED OIL SPILL REPORT**

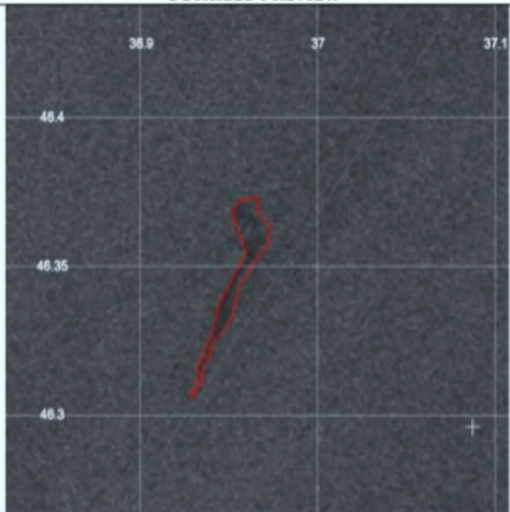
**REPORT NO:**

**PREVIEW IMAGES OF POSSIBLE OIL SLICK(S)  
GENERAL VIEW**



INFORMATION ABOUT SATELLITE IMAGE	
SATELLITE	RADARSAT-1
DATA ACQUISITION TIME (UTC)	2011-03-14 03:30
IMAGE COORDINATES	
LATITUDE	LONGITUDE
LOWER LEFT:	LOWER LEFT:
LOWER RIGHT:	LOWER RIGHT:
UPPER LEFT:	UPPER LEFT:
UPPER RIGHT:	UPPER RIGHT:

SUMMARY OF POSSIBLE OIL SLICKS					
NUMBER	CONFIDENCE	LOCATION	LINK	KMZ	SEATRACK
1	HIGH	TURKEY			
2	MEDIUM	RUSSIA			
3	LOW	UKRAINE			
4	LOW	TURKEY			

NUMBER OF THE POSSIBLE OIL SLICK	1		
CONFIDENCE LEVEL	HIGH		
<b>DETAILED PREVIEW</b>			
			
<b>OIL SLICK INFORMATION</b>			
<b>POSITION</b>			
OIL SPILL ID:			
LATITUDE OF THE CENTER :		43° 38' 56,8" N	
LONGITUDE OF THE CENTER :		36° 35' 20,7" E	
AFFECTED COUNTRY(S) :		TURKEY	
ASSOCIATED COUNTRY(S):		TURKEY	
THE NEAREST LAND (km):			
<b>GEOMETRY OF THE SLICK</b>			
SIZE (km <sup>2</sup> )	LENGTH (km)	WIDTH (km)	DIRECTION
2,71 km <sup>2</sup>	9,28 km		N-S
<b>METEOROLOGICAL DATA</b>			
SEA SURFACE TEMPERATURE			
SEA CURRENT			
SAR WIND DIRECTION (Degrees)			
SAR WIND MAGNITUDE (m/s)			
MODEL WIND DIRECTION (Degrees)			
MODEL WIND MAGNITUDE (m/s)			
<b>COMMENTS ON CONFIDENCE LEVEL AND OTHER ISSUES</b>			
Medium contrast, sharp and diffuse edges, irregular angular shaped slick, fragmented, source: N/A, homogenous surrounding.			

# OIL SPILL REPORT SATELLITE BASED used in GEODELTA 2011

## MONINFO SYSTEM SATELLITE

### OIL SPILL REPORT

REPORT No: 6

GENERAL VIEW



#### INFORMATION ABOUT SATELLITE IMAGE

SATELLITE: Radarsat-1  
ACQUISITION TIME (UTC): 2011-09-15 11:09:00.0

#### IMAGE COORDINATES

	LATITUDE	LONGITUDE
LOWER LEFT	41.0	41.0
LOWER RIGHT	41.0	42.0
UPPER LEFT	42.0	41.0
UPPER RIGHT	42.0	42.0

#### SUMMARY OF POSSIBLE OIL SLICKS

NUMBER	CONFIDENCE	LOCATION	LINK	KMZ	SHAPEFILE
1	HIGH	Georgia	<a href="#">Details</a>	<a href="#">Download</a>	<a href="#">Download</a>

#### COMMENTS

Geodelta 2011 Simulated Report

OIL SLICK ID: 1

DETAILED PREVIEW



#### OIL SLICK INFORMATION

##### POSITION

CONFIDENCE LEVEL	HIGH
CENTER	LATITUDE: 41.795 LONGITUDE: 41.695
AFFECTED COUNTRY	Georgia
DISTANCE TO NEAREST LAND (km)	5

##### GEOMETRY

SIZE	LENGTH	WIDTH	ORIENTATION
0.0072 km <sup>2</sup>	120.0 km	60.0 km	SE-NW

##### METEOROLOGICAL DATA

SEA SURFACE TEMPERATURE (°C)	20.0
SEA CURRENT (m/s)	3.0
SAR WIND DIRECTION (degrees)	
SAR WIND MAGNITUDE (m/s)	
MODEL WIND DIRECTION (degrees)	315.0
MODEL WIND MAGNITUDE (m/s)	5.0

##### COMMENTS

Simulated spill according to exercise simulated data



# Regional Black Sea AIS



- Ad-hoc AG on AIS data exchange (or Expert Working Group on AIS) established by BSC. Three AIS EWG meetings were held
- Technical specifications has been finalized
- Draft MoU on Regional Black Sea AIS has been prepared and finalized waiting for countries decision



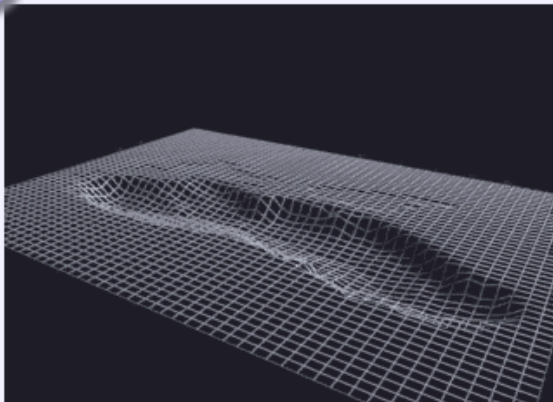
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# MONINFO

# System



## Welcome to the MONINFO System



A EU funded project led by the [Black Sea Commission Permanent Secretariat](#)

The oil spills pollution is recognized as one of the major threats to the marine environment of the Black Sea in the Strategic Action Plan (SAP) adopted in 1996 as well as in the revised draft SAP. These two documents state that the risk associated with heavy shipping traffic /platforms/offshore installations/refineries/oil terminals/ports/pipelines 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), (Black Sea Information System - ESAS - Environmental Safety Aspects of Shipping- component) including support data sets within the oil industries, private companies dealing with EIA in this particular field (d) archiving the assessments, and contributions in data, evaluations and measures of the marine environmental institutes, e) advancement of surveillance at sea and inspections in ports,
- g) enlargement of port reception facilities capacity, and the last but not least h) further development of legal and policy documents, strengthening enforcement and development of common systems of penalties and claims management for pollution damages compensation (the common framework for oil tanker spills compensation, through general shipping related oil spill claims).

[Geop](#)[Cont](#)[BSTW](#)[Docu](#)[BS A](#)[Clean](#)[BS Sa](#)[User](#)[Roles](#)[User](#)[Conf](#)[Map](#)[Map](#)[Geos](#)

# Oil Spill Records

- Historical records of oil spills in the Black Sea has been prepared and are stored in the MONINFO system
- A comprehensive report on the Kerch accident (11.11.2007) is prepared by a team of experts from Russia and Ukraine.



Commission for the Protection  
of the Black Sea Against Pollution

## Oil spill accident in the Kerch Strait in November 2007



Istanbul, Turkey  
2010

UKRAINE - Oil Spill in the Kerch Strait - November 16, 2007

1:75,000





# Oil Spill Document Repository



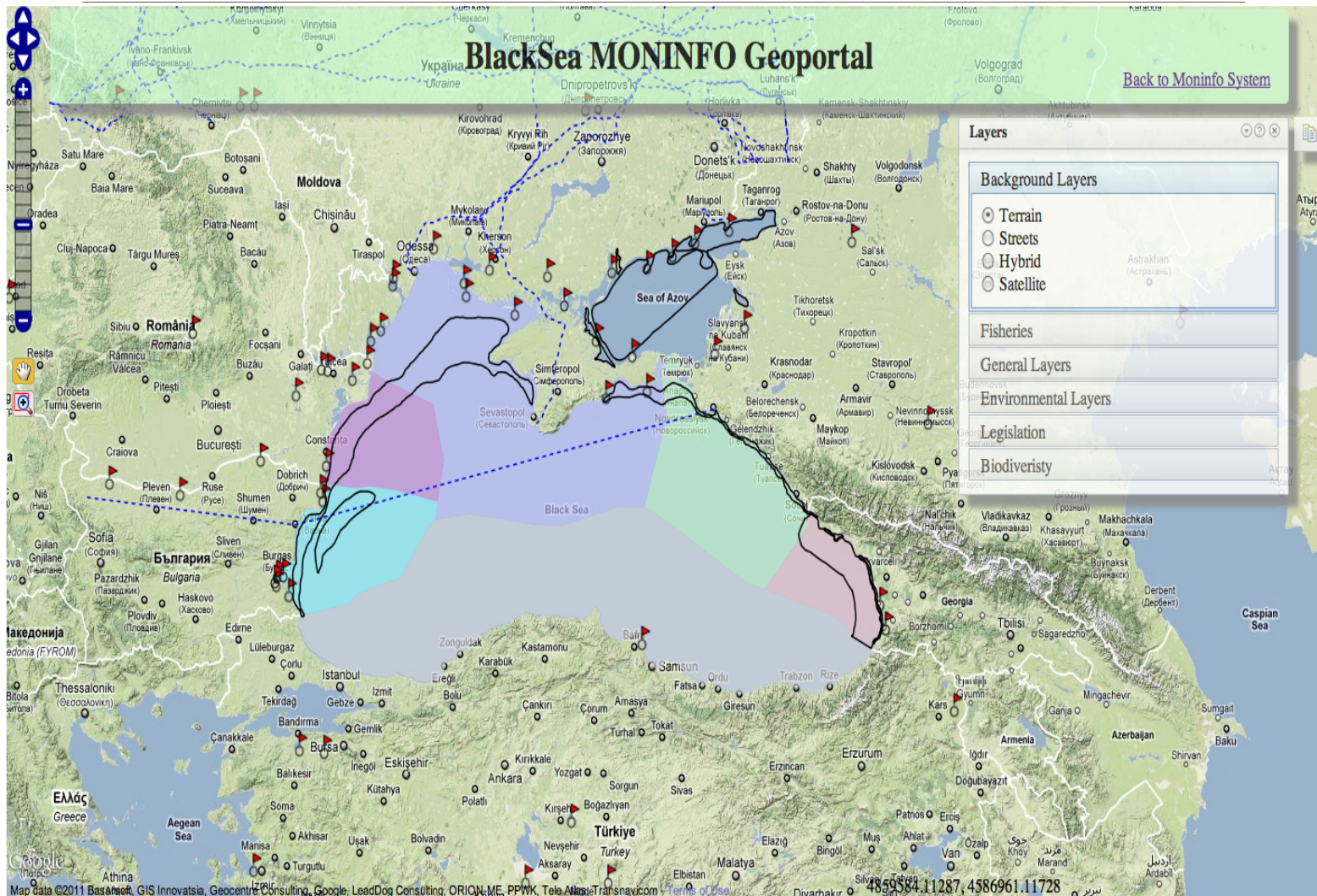
## MONINFO System

Read-only access. For write access capabilities go directly to the [Document Repository](#)

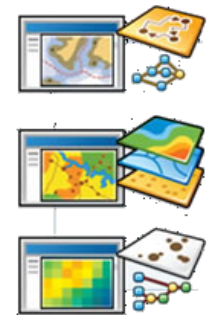
- Country profiles
  - Country profiles based on Updated Questionnaires July 2011
    - BULGARIA - Country Profile
    - GEORGIA - Country Profile
    - ROMANIA - Country Profile
      - Annexes RO country profile
      - RO Country Profile updated questionnaire 7 June 2011.doc [\[Download\]](#)
      - RO NCP legislation HG 893-2006 rom..doc [\[Download\]](#)
    - RUSSIAN FEDERATION - Country Profile
    - TURKEY - Country profile
    - UKRAINE - Country Profile
  - General
  - Guidelines
  - Incidents
  - Initial Questionnaires
  - Kerch Report
  - Meetings
  - MONINFOPhase1
  - MONINFOPhase2



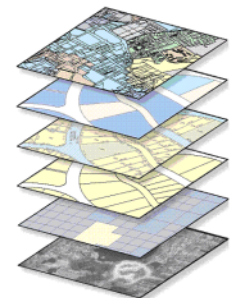
# MONINFO GIS



## External GIS Service providers



## Own GIS Database





# Links to relevant information



International Organisations

Projects

NGOs

Private Sector

## ESA Miravi [edit]



Image Rapid Visualisation. You can quickly browse the Image Archive, select, and visualise any kind of Satellite Images

## SASEPOL Project [edit]



"Development of Common Security Management System and Cooperation in the Area of Maritime Safety and Ship Pollution Prevention for the Black Sea and the Caspian Sea"

## EROCIPS [edit]



EROCIPS Project draw up a framework for a future project to further strengthen the shoreline response to pollution from shipping in the Atlantic Area.

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# Lessons learned



- **Highly challenging socio-economic environment**
- **Financing required for the development of oil spill risk management in the Black Sea**
- **Better linkage and interaction with MSFD**
- **Identify new pollution threats and risks --→**
- **Raise public awareness of maritime issues and risks, demonstrated under MONINFO Project and DELTA exercises**



# CONCLUSIONS



- The EU-funded MONINFO project has contributed significantly to the setting up of a region wide oil pollution monitoring system.
- Developed a prototype information system & substantial assistance in setting up regional AIS.
- Provided pilot projects demonstrating tools, that can improve cooperation and sharing of data ( e.g. satellite monitoring).
- The EU-funded MONINFO Project will be of great benefit in the Black Sea for future oil spill preparedness.

# CONCLUSIONS

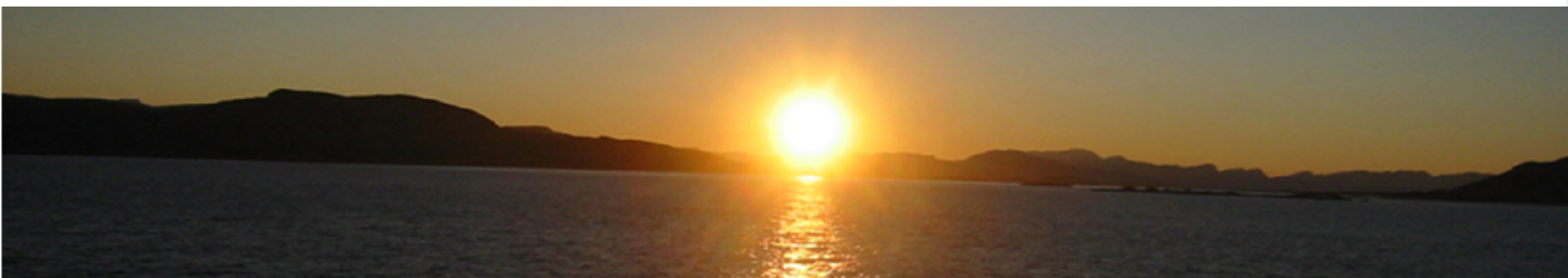


- The littoral States of the Black Sea are expected to further invest in the development of regional cooperation in case of oil pollution under the framework of the Bucharest Convention and its Emergency Protocol
- Whilst prevention of oil pollution is the priority under BS SAP, the development of oil spill preparedness has involved a broad stakeholder group, including the oil and shipping industries – fully consistent with the OPRC Convention.
- However further work and additional financial resources are needed for the full and effective set up and operation of the Black Sea Oil Spill Monitoring System (the MONINFO System).

# Thank you



[www.blacksea-commission.org](http://www.blacksea-commission.org)



Bulgaria



Georgia



Romania



Russian  
Federation



Turkey



Ukraine