

## Main Activities

### - Design and development of system architecture:

- Review of scientific, technical and legal framework for environmental monitoring,
- Design of a monitoring protocol,
- Adaptation of innovative technologies for environmental monitoring in the Black Sea,
- Design of system architecture.

### - Geodatabase development and data collection:

- Identification of the most suitable type of data for utilization in environmental monitoring,
- Collection and processing of current and historical data,
- Design and creation of the geodatabase,
- Testing of system components and geodatabase in test sites.

### - Integration and implementation of the monitoring system:

- Development of the integrated multi-level monitoring system,
- Application of the system in the demonstration site.

### - Visibility of the Action:

- Development of Action Website – Help Desk,
- Organization of Mass Media actions and press releases (newspapers/ Internet/ media),
- Creation and dissemination of brochures,
- Organization of distance learning Web based courses,
- Organization of training seminar on the use of the system.

### - Management and coordination of the Action:

- Organization of meetings,
- Partner administration and financial management,
- Submission of the Final Report,
- Action administration and financial management

The project started in October 2011 and its duration is 24 months

## Partners

Decentralized Administration of  
Macedonia - Thrace, Greece  
[www.damt.gov.gr](http://www.damt.gov.gr)

Aristotle University of Thessaloniki,  
Central Macedonia, Greece  
[www.auth.gr](http://www.auth.gr)

Balkan Environment Centre,  
Thessaloniki,  
Central Macedonia, Greece  
[www.balcenv.gr](http://www.balcenv.gr)

Danube Delta National Institute for Research  
and Development, Tulcea,  
South-East, Romania  
[www.ddni.ro](http://www.ddni.ro)

Odessa Branch Institute of Biology of Southern  
Seas, National Academy of  
Sciences of Ukraine, Odessa, Ukraine  
[www.ibss.nas.gov.ua](http://www.ibss.nas.gov.ua)

District Administration Varna, Varna,  
Severoiztochen, Bulgaria  
[www.vn.government.bg](http://www.vn.government.bg)

For more information about the ECO-Satellite project  
visit the project's web page [www.eco-satellite.eu](http://www.eco-satellite.eu)

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The Black Sea Basin Programme is co-financed by the European Union through the European Neighborhood and Partnership Instrument and the Instrument for Pre-Accession Assistance. More information about the Black Sea Basin Joint Operational Programme could be found at: <http://www.blacksea-cbc.net>

This brochure has been produced with the assistance of the European Union. The content of this Brochure is the sole responsibility of the Decentralised Administration of Macedonia and Thrace and the Regional Development Fund of Central Macedonia and can in no way reflect the views of the European Union.



Project funded by  
EUROPEAN UNION



# ECO SATELLITE

[www.eco-satellite.eu](http://www.eco-satellite.eu)



Development of a common intraregional  
monitoring system for the environmental  
protection and preservation of the Black Sea





# ECO SATELLITE

Development of a common intraregional monitoring system for the environmental protection and preservation of the Black Sea

It is widely recognized that the Black Sea faces serious environmental problems. Some of the major European rivers, e.g., Danube, Dnieper and Dniester, discharge into the Black Sea carrying not only nutrients that determine biological productivity, but significant pollution loads as well. About one tenth of the land area of continental Europe drains into this semi-enclosed sea, which is connected to the Mediterranean through the narrow Bosphorus Channel.

The increased pollution load that enters the Black Sea has led to a significant deterioration of the marine ecosystem and to a sharp decline of fisheries resources. Pollutants, including agrochemicals, toxic metals and radionuclides, make their way into the sea either through the atmosphere or river discharges. Increased “nutrients” have caused an overproduction of phytoplankton, which block the light from reaching the sea grasses and algae. Industrial activity, mining, shipping, and offshore oil and gas exploration have further contributed to the sea’s destruction. Tanker accidents and operational discharges have caused oil pollution while coastal industries discharge wastes with little or no treatment. Additionally, in some countries, solid wastes have been dumped into the sea or onto wetlands. Urban areas flush untreated sewage; and poor planning has destroyed much of the aesthetics of the coastlines

In the above context, the “ECO-SATELLITE” project focuses on the protection and preservation of the Black Sea ecosystem, with its main emphasis given to river deltas and protected coastal regions at the seaside. It deals with environmental problems posing a threat that cannot be addressed individually, but only in a unified way.

## Overall objective

The overall objective of the “ECO-SATELLITE” project is the creation of a common intraregional environmental monitoring system for the Black Sea Basin. The system will make use of the technological assets provided by satellite data and geomatics facilities. The project will contribute to the efforts of strengthening the joint knowledge and information base needed for the environmental protection and preservation of the Black Sea ecosystem, through the promotion of stronger integration and development of research between the involved partners and by exchanging scientific data and know-how in the fields of monitoring and protection of marine, coastal and wetland systems in the Black Sea Basin.

## Specific objectives

1. Develop and test a system for monitoring the state of marine, coastal and wetland ecosystems. This objective will increase the intraregional knowledge for the coastal zones of Black Sea.
2. Creation of a unified, easy to update geodatabase covering the entire Black Sea area in order to support the design of a common cross-border environmental policy for the Black Sea.
3. Develop a Web-GIS system which will contribute to the environmental protection of the Black Sea ecosystems as it will raise awareness through the presentation of the study results and facilitate decision making, with the use of a decision support module that includes an effective help desk support.
4. Diffuse the project knowledge and outputs through training, mass media actions, web-portal and e-lessons.
5. Increase the capacity of decision makers who are related to Black Sea environmental policy.

## Target Groups

The “ECO-SATELLITE” System will be designed so that it can be easily adaptable for environmental management in local, regional, national and trans-national level. Therefore, the project will directly or indirectly benefit population and environmental protection bodies in all eligible areas

it is expected that administrative authorities and scientifically related institutes and competent agencies will show much interest in the results of the ECO-Satellite action. The user-friendly, easily expandable ECO-Satellite web-GIS System could serve as the basic tool for the environmental monitoring, protection and preservation of the Black Sea system.

In the frame of the project, numerous potential groups and various end-users and beneficiaries of the system can be generally ranged in the following categories: Users in scientific – research level: Research and higher education institutions, Institutes of Geological, River and Marine Research, Land Planners, City Planners, Natural Risk Managers, Environmentalists, Foresters, Environmental Engineers, Marine scientists, Coastal Engineers, etc.

Users in public services and organizations: Ministries for the Environment, Land Planning and Public Works, Ministries of Agriculture and Forests, Master Plan and Environmental Protection Organizations, Regional Administration, Local Authorities Organizations, Emergency Planning and Protection Organizations, Public Enterprises for Urban Planning and Housing, NGOs active in environmental protection and conservation, etc. The final beneficiaries include citizens, fishermen, farmers and ecotourists.

