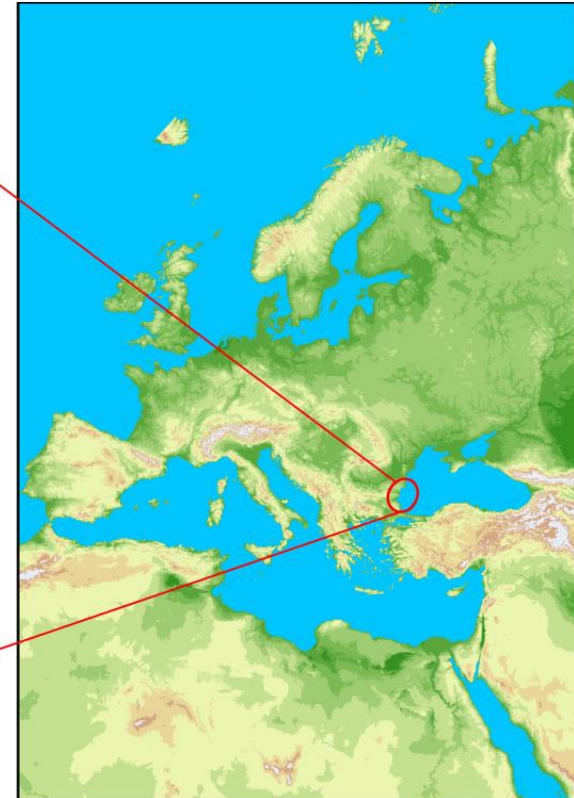
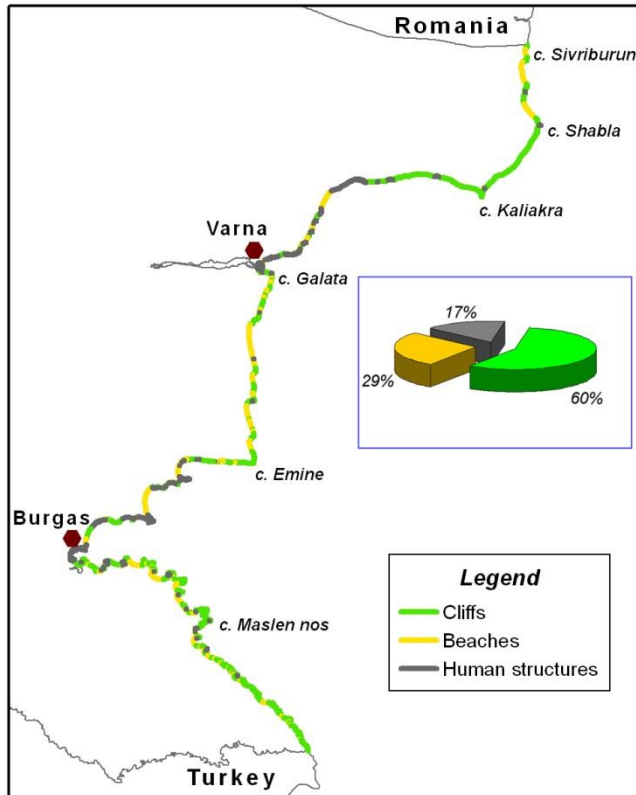


ADDRESSING ISSUES OF ICZM ALONG THE BLACK SEA COAST OF BULGARIA AND PERSPECTIVES FOR FUTURE COASTAL DEVELOPMENT

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INTRODUCTION: Bulgarian Black Sea coast



INTRODUCTION: Increasing pressure on Bulgarian coastal zone

- ▶ In 2011, of the 7 364 570 people that lived in Bulgaria, more than 726 923 people lived in Black Sea coastal municipalities. Coastal municipalities contain 9.87% of the nation's population, yet, only account for 5.2% of the Bulgaria land area.
- ▶ Coastal tourism and infrastructure developments have substantially increased over the recent years and it is expected to continue to grow.
- ▶ Thus, the Bulgarian coastal zone is currently a subject to significant anthropogenic pressure causing degradation of beaches and sand dunes and overexploitation of natural resources.



This results in different natural, economical and cultural conflicts and destruction of the functionality of the coastal system!

Main conflicts identified in Bulgarian coastal zone:

- **Coastal armouring:** Attempts to solve erosion of the cliff and protect beaches with hard or soft stabilisation structures (overbuilding/armouring), which causes downdrift erosion, deteriorate the coastal environment and impact negatively on natural attractiveness of the seaside for tourists.
- **Expanding coastal tourism development:** Urbanisation and boom of mass coastal tourism versus sustainable development and economical increase.
- **Resource overexploitation:** The coast is highly urbanised and the trend to occupy natural areas for new housing and tourist infrastructure is a main threat to natural resources, such as sand dunes and beaches.

COASTAL ARMOURING VS. NATURAL EROSION: 10% of Bulgarian coast is armoured

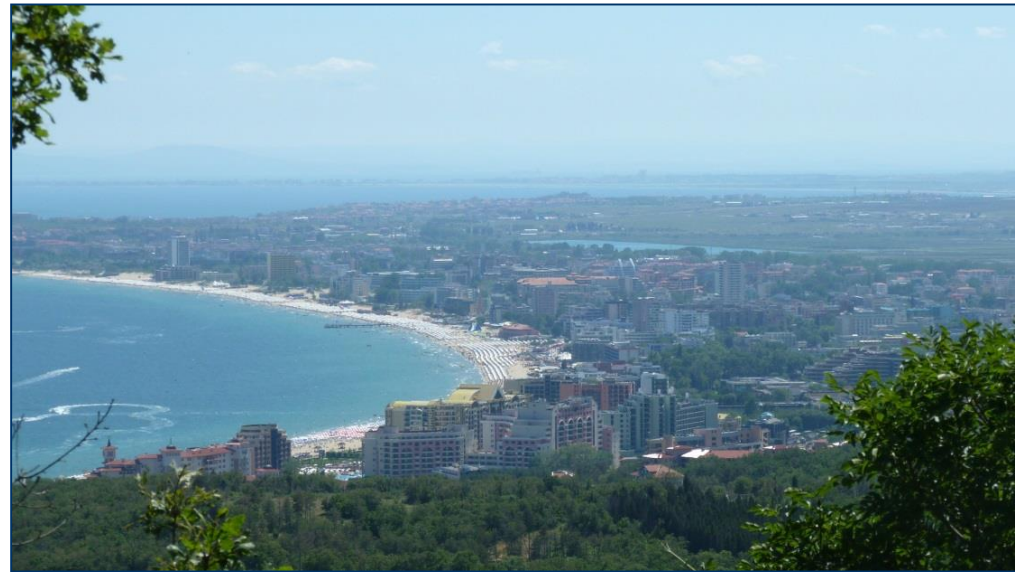


EXPANDING COASTAL TOURISM DEVELOPMENT

- ✓ In 2011, the capacity of tourist accommodation in 14 Bulgarian coastal municipalities accounted 184 165 beds or circa 65% of all tourist beds in Bulgaria.
- ✓ Over the period 1999 – 2011 the number of tourist beds in coastal municipalities increased from 74 277 to 184 165 or by 147%.



Photo source: IO-BAS and PSDS – WCU



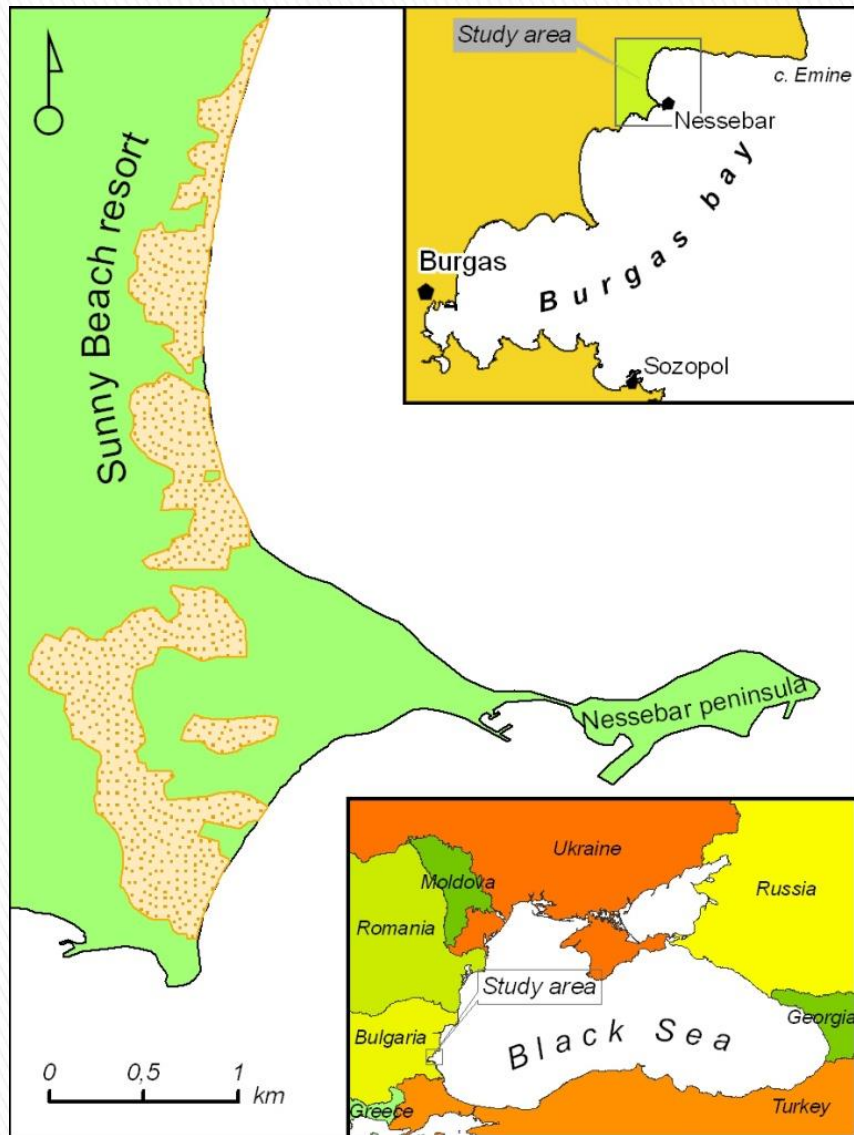
USE AND OVERUSE OF NATURAL RESOURCES

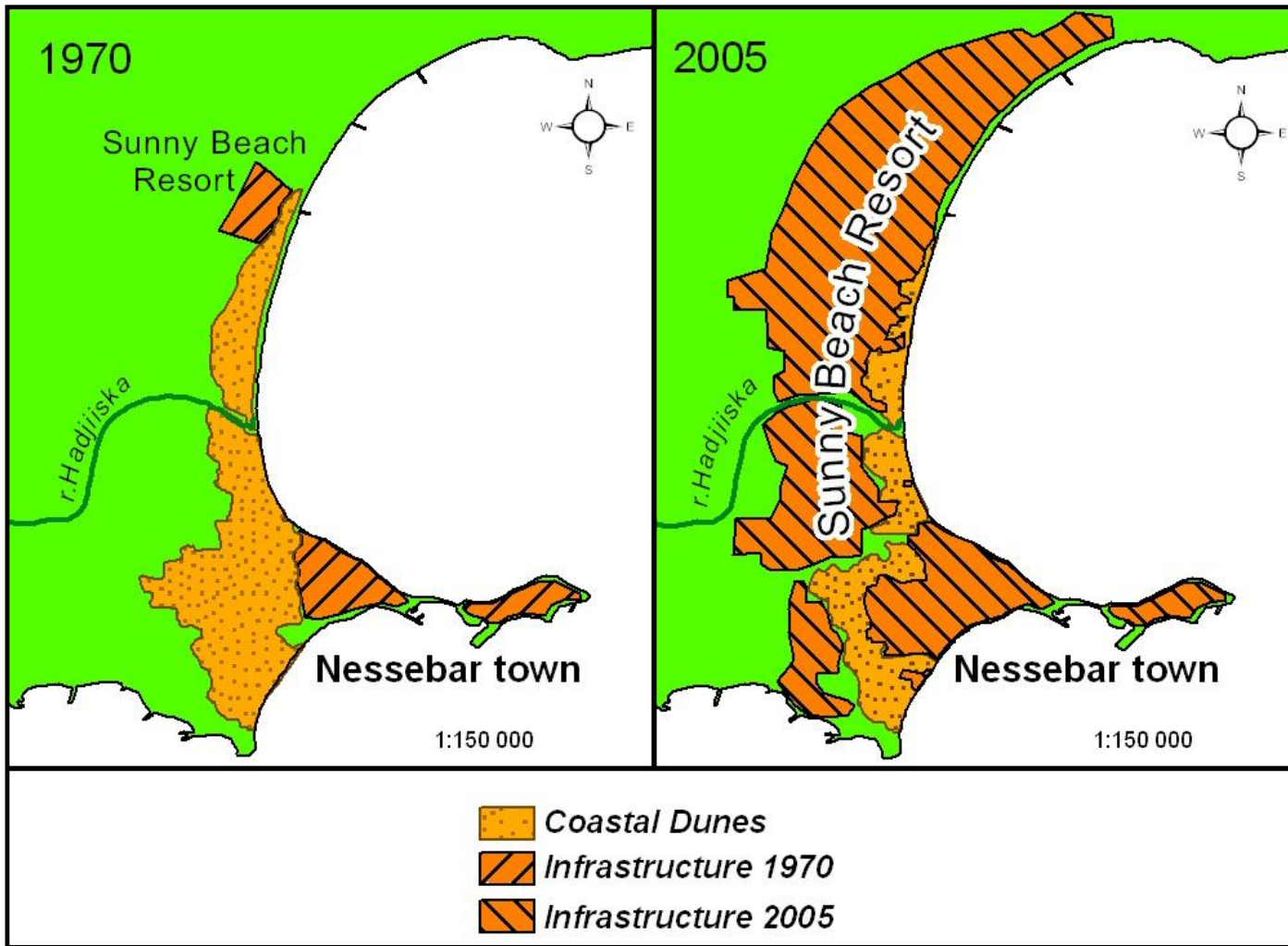
- ✓ Huge hotels or second residential homes located on the active beach and dunes
- ✓ Sand mining from dunes and beaches
- ✓ Unregulated camping and “temporary” constructions on the dunes and beaches
- ✓ Mismanagement of sand dunes and beaches
- ✓ Lack of setbacks along most the beaches and dunes in Bulgaria
- ✓ Overuse and deterioration of terrestrial and marine ecosystems



Photo source: IO-BAS and PSDS – WCU

Sunny Beach Resort – Nessebar Peninsula





- In 1960-70s the sand dune area was **2.26 km²**
- In 2005 this area decreased to **1.25 km²**
- By contrast, the area that has been subject to development has significantly grown: from **0.77 km²** in 1970 to **6.5 km²** in 2005

WHY INTEGRATED COASTAL ZONE MANAGEMENT?

- ✓ As the coastal zone is an extremely complex social-ecological system that varies in relation to its environmental, socio-economic, cultural and governance factors, the Integrated Coastal Zone Management (ICZM) seeks to develop an integrated model for sustainable development that is based on finding points of convergence among these factors (Cicin-Sain and Knecht, 1998; Diedrich et al., 2010).
- ✓ ICZM is nowadays considered as most appropriate tool to achieve sustainable coastal development by many EU coastal related policies, such as an EU ICZM Recommendation (2002/413/EC), which invited coastal Member States to develop national ICZM strategies, despite with unequal progress and results (Garriga and Losada, 2010).



EIGHT PRINCIPLES OF ICZM (EU RECOMMENDATION, 2002/413/EC)

- **Principle 1:** A broad overall perspective (thematic and geographic) which will take into account the interdependence and disparity of natural systems and human activities with an impact on coastal areas.
- **Principle 2:** A long-term perspective which will take into account the precautionary principle and the needs of present and future generations.
- **Principle 3:** Adaptive management during a gradual process which will facilitate adjustment as problems and knowledge develop. This implies the need for a sound scientific basis concerning the evolution of the coastal zone.
- **Principle 4:** Local specificity and the great diversity of European coastal zones, which will make it possible to respond to their practical needs with specific solutions and flexible measures.
- **Principle 5:** Working with natural processes and respecting the carrying capacity of ecosystems, which will make human activities more environmentally friendly, socially responsible and economically sound in the long run.
- **Principle 6:** Involving all the parties concerned (economic and social partners, the organisations representing coastal zone residents, non-governmental organisations and the business sector) in the management process, for example by means of agreements and based on shared responsibility.
- **Principle 7:** Support and involvement of relevant administrative bodies at national, regional and local level between which appropriate links should be established or maintained with the aim of improved coordination of the various existing policies. Partnership with and between regional and local authorities should apply when appropriate.
- **Principle 8:** Use of a combination of instruments designed to facilitate coherence between sectoral policy objectives and coherence between planning and management.

HISTORY OF ICZM IN BULGARIA

- ✓ No ICZM equivalent policies were in advanced stages of preparation, only fragmented tools were in place to address coastal issues by 2007 (Thetis, 2011).
- ✓ In 2007 Bulgaria joined the European Union.

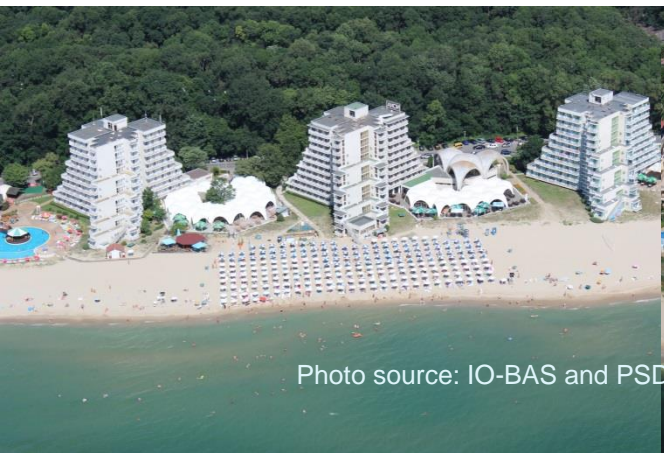
Results:

- ✓ Efforts to elaborate a systematic ICZM Programme have been resumed
- ✓ The Black Sea Coast Development Act – enforced January 2008
- ✓ Harmonising Bulgarian with EU legislation

BLACK SEA COASTAL DEVELOPMENT ACT (on a theory)

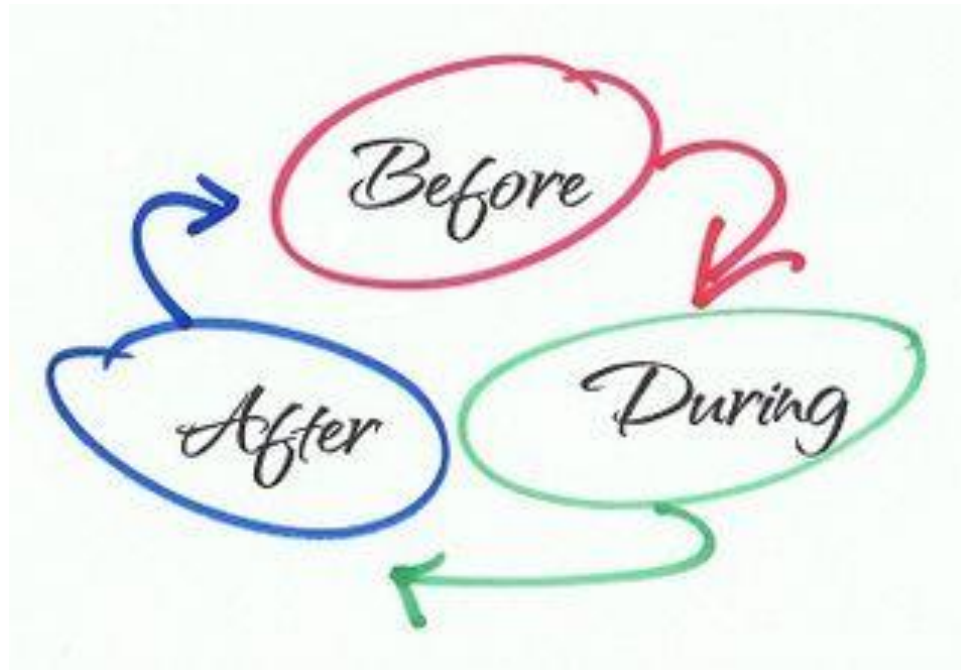
- ▶ **The Black Sea Coast Development Act aims for:** creation of conditions for protection, sustained integrated progress and development of the Black Sea coast; ensuring free public access to the sea shore; protection, preservation and rational use of natural resources; prevention and reduction of pollution; protection of the sea shore from erosion and landslides; and protection of the natural landscape as well as of cultural and historical heritage.
- ▶ **Two protected zones are legally regulated in coastal areas:**
- ▶ The first zone "A" covers part of the Black Sea aquatory, the coastal line and part of the territory falling in a line of width of 100 m, measured horizontally from the borders of the seashore or the sea beaches. In this zone construction is limited to 10% and at least 80% of land remaining green area.
- ▶ The second zone "B" zone covers the territories, falling in the line with width 2 km from the borders of "A" zone, with the exception of the urban territories of the populated places, determined on the date of the enforcement of the act. In this second zone density of construction is limited to 30% with minimal green area of at least 50%.

In practice... Lack of required setbacks !



PROGRESS OF ICZM IN BULGARIA

- ▶ Bulgaria submitted an official Report on the Implementation of the Recommendation of the European Parliament and of the Council Concerning the Implementation of Integrated Coastal Zone Management in Europe (to the European Commission for the time frame 2006-2010 , Thetis, 2011).
- ▶ The report was prepared by the Ministry of Environment and Water of Republic of Bulgaria.
- ▶ **The framework of national ICZM strategy is still under development.**



ACTIVITIES SUPPORTING ICZM IN BULGARIA

▶ **Supporting legislation**

- ▶ The themes concern the protection of the environment (protected areas, marine environment, biodiversity, etc.) and the spatial planning and development (The Regional Development Act, Spatial Development Act, Black Sea Coast Development Act).
- ▶ Several plans and programmes have been adopted both at national and local level: River Basin Management Plans (Varna region), Environmental plans (National Environmental Protection Strategy, Biodiversity Conservation Action Plan, Protected areas Management Plan, and so on), Sustainable development plan (National Strategy for Sustainable Development of Tourism).

▶ **Institutional coordination**

- ▶ Two ministries are responsible for decision-making on ICZM and spatial development: Ministry of Regional Development and Ministry of Environment and Water.
- ▶ In recent years the coordination mechanism has improved even if it is still underestimated the importance to coordinate ICZM activities with other sector policies.

▶ **Research and cooperation projects**

- ▶ Many research and cooperation projects have been realised or are going at both EU and Black Sea cross-border scale. The themes developed concern the sustainable development, sustainable transport and tourism, climate changes impact, environmental protection, marine spatial planning, and most recently ICZM in Black Sea region.

ACTIVITIES SUPPORTING ICZM IN BULGARIA: IO-BAS GeoInformation System

Data sets are organised in 6 main thematic groups:

Management (administrative borders, coastline, protected zones, topographical and navigational maps, cultural and historical heritage etc..)

Physical geography (elevation, depth, oceanography, hydrology, geomorphology, geology, land cover etc.)

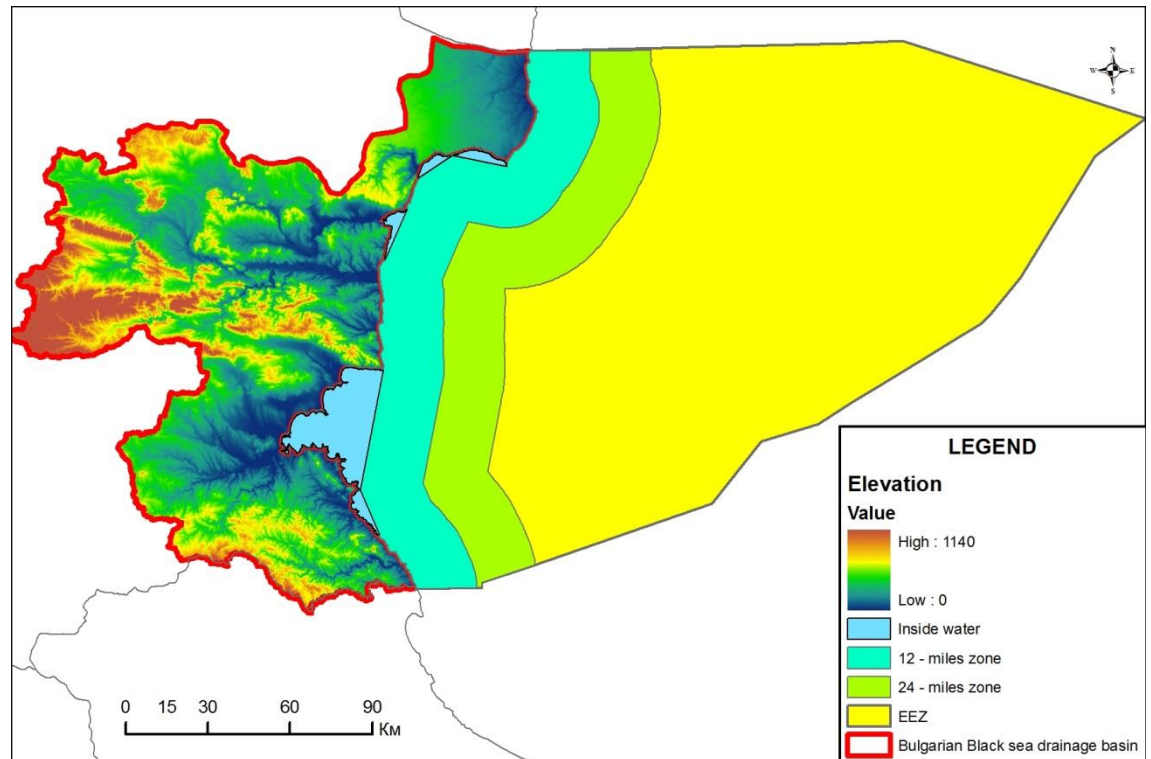
Socio-economic (population, settlements, tourism, coastal and marine infrastructure etc.)

Data from research expeditions (ship/boats track lines, stations and polygons, profile lines etc.).

Biology

Other modern data (satellite and orthophoto images, aerial photographs, LIDAR, Argo floats data etc.)

At the end of 2014 there are 120 data layers in the IO BAS Geoinformation system



PROGRESS IN IMPLEMENTATION OF ICZM PRINCIPLES

- ▶ The National Environmental Strategy (2009-2018) includes the priority goal of an integrated management of water resources in the coastal areas of the Black Sea, based on an ecosystem approach (**Principle 1**). The competences are still scattered among different institutions involved in the integrated coastal zone management, sustainable development and marine environmental protection. The coordination, necessary for the achievement of the **Principle 1** occurs within the framework of the activities of Black Sea Environmental Programme.
- ▶ No significant progress were made in the long term perspective (**Principle 2**) and in the adaptive management (**Principle 3**), even though the National Conservation Action Plan, taking into account adaptation of the biodiversity to climate change is some attempt in the recommended direction.
- ▶ The municipal bodies (**Principle 4**) play an important role in the implementation of the policy in the environmental sector and in this respect their main functions are related to the development of environmental protection programmes, the policies on transportation and safe disposal of municipal waste and urban waste water treatment plants.
- ▶ No significant progresses were reported in curbing unsustainable development trends. Hotspots in the Bulgarian coast refer to industrial activities, pollution due to oil products and wastewaters along the beaches. Shipping as well is considered to be one of the greatest pressures on the environmental coastal quality (**Principle 5**).
- ▶ The participatory process, involving all the interested parties, is widespread in the coordination activities of local and regional policies. Some examples concern the EIA public discussions, the River Basin Management Plan discussions, the protected areas and Natura 2000 sites assessment of compatibility, etc. (**Principle 6**). Several examples of public database are available to widespread information on coastal zone, concerning coastal uses, protected land and sea areas, landslide and erosion processes.
- ▶ Little progress in the vertical coordination can be reported both at national and local level thanks to the inter institutional boards and new development plans (**Principle 7**).
- ▶ In recent years the coordination mechanism has improved in Bulgaria, even if the importance to coordinate ICZM activities with other sectoral policies is still underestimated (**Principle 8**). The need for a better inter-institutional coordination in order to develop common actions to reinforce coastal area is furthermore highlighted.

NEEDS FOR FURTHER IMPROVEMENT OF ICZM IMPLEMENTATION

Several items for further development of ICZM activities have been identified:

- ▶ Development and use of a set of indicators, specific for Bulgarian coastal zone and useful for evaluating the progress on ICZM policies;
- ▶ Set up an Institution of a Coordination Centre for ICZM policies;
- ▶ Establishment of a common GIS-based Information System for coastal and marine areas in Bulgaria;
- ▶ Improved monitoring activities on natural processes in the context of climate change and sea level rise with the aim of preventing the loss of coastal areas;
- ▶ Enhancing stakeholder participation including the civil society;
- ▶ Preparation of specific development plans for coastal and marine areas;
- ▶ Development of cross-border cooperation in the Black Sea context;
- ▶ Improving cross-sector coordination mechanisms to better manage the ICZM issues.

NEEDS FOR FURTHER IMPROVEMENT OF ICZM IMPLEMENTATION

The main needs identified concern:

▶ The legislation framework:

In depth analysis of the existing legislative framework in order to better manage and rule the public-private collaboration and to better harmonise the competencies of central government and local authorities;

▶ The institutional coordination:

Need for support to small municipalities in their coastal development activities; Statistical data need to be disintegrated and to be define from point of view to support ICZM indicators according to Regional convention;

▶ The policy integration:

Lack of a in depth analysis of the existing international agreements in order to develop a specific strategic documents for ICZM implementation; lack of a common strategy among municipalities plans, programs and projects with strategic and planning instruments at national and regional level;

▶ The information sharing:

Need for a unified information system in order to manage planning and use in the coastal areas.

PERSPECTIVES FOR FUTURE COASTAL DEVELOPMENT

- There are many areas along the Bulgarian Black Sea coast that remain natural and unaltered yet. **It is critical that any beaches and dunes that still have fully functioning physical and biological systems be identified, mapped, and protected.**
- In addition, a science-based coastal setback should be established along all coastal cliffs and beaches.
- As most of the world's beaches become overdeveloped with degraded ecosystems, there remains the possibility in Bulgaria to highlight the touristic potential of those beaches and shorelines that remain natural: **ecotourism.**



Photo source: IO-BAS and PSDS – WCU



Photo source: IO-BAS and PSDS – WCU

A top-down view of a business meeting around a round white table. Ten people are seated around the table, engaged in discussion and looking at various documents and charts. The text "THANK YOU FOR YOUR ATTENTION" is overlaid in the center of the image. The scene is set in a modern office environment with a grey floor and wooden chairs.

THANK YOU FOR YOUR ATTENTION