

# BURGAS CASE STUDY: LAND-SEA INTERACTIONS

Dr. Margarita Stancheva



**Maritime Spatial Planning Conference  
Addressing Land-Sea Interactions  
St Julian's, Malta – 15 & 16 June 2017**



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# NEED FOR COHERENCE BETWEEN LAND AND SEA ACTIVITIES



- Burgas is the fourth largest city in Bulgaria and it is located in the most eastern point of Burgas valley.
- It is one of the largest ports at the Black Sea with significant infrastructure for supporting the economic activities.
- Burgas has a modern international airport, which handles most of the tourist flow during the peak summer season.
- Burgas is leading center of oil industry and it is distinguished with rapid developments over the recent years.
- In the surroundings of Burgas there are valuable natural protected areas (Natura 2000) and wetlands, important Ramsar sites, such as: lakes of Atanasovsko, Burgas and Mandra - Poda.
- Current challenge for sustainable economic development and protection of biodiversity of all wetlands and effective use of natural resources.



Photo source: IO-BAS and PSDS – WCU



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## GENERAL APPROACH TO THE CASE STUDY

**Directive 2014/89/ of the European Parliament and of the Council of 23 July 2014 sets the land-sea interactions (LSI) as one of the minimum requirements for MSP.**

In Burgas Case Study it was aimed to:

- ✓ follow the land-sea interactions with a special focus on biodiversity;
- ✓ identify the impact of land infrastructure on wetlands and maritime space;
- ✓ it was challenging to find out what are the interactions, conflicts and impacts between uses, sectors and interests both terrestrial and marine;
- ✓ identify key stakeholders and involve them in the process of identifying current and future trends, sector priorities and interests;
- ✓ develop different agenda options, recommendations and solutions for identified case area issues.



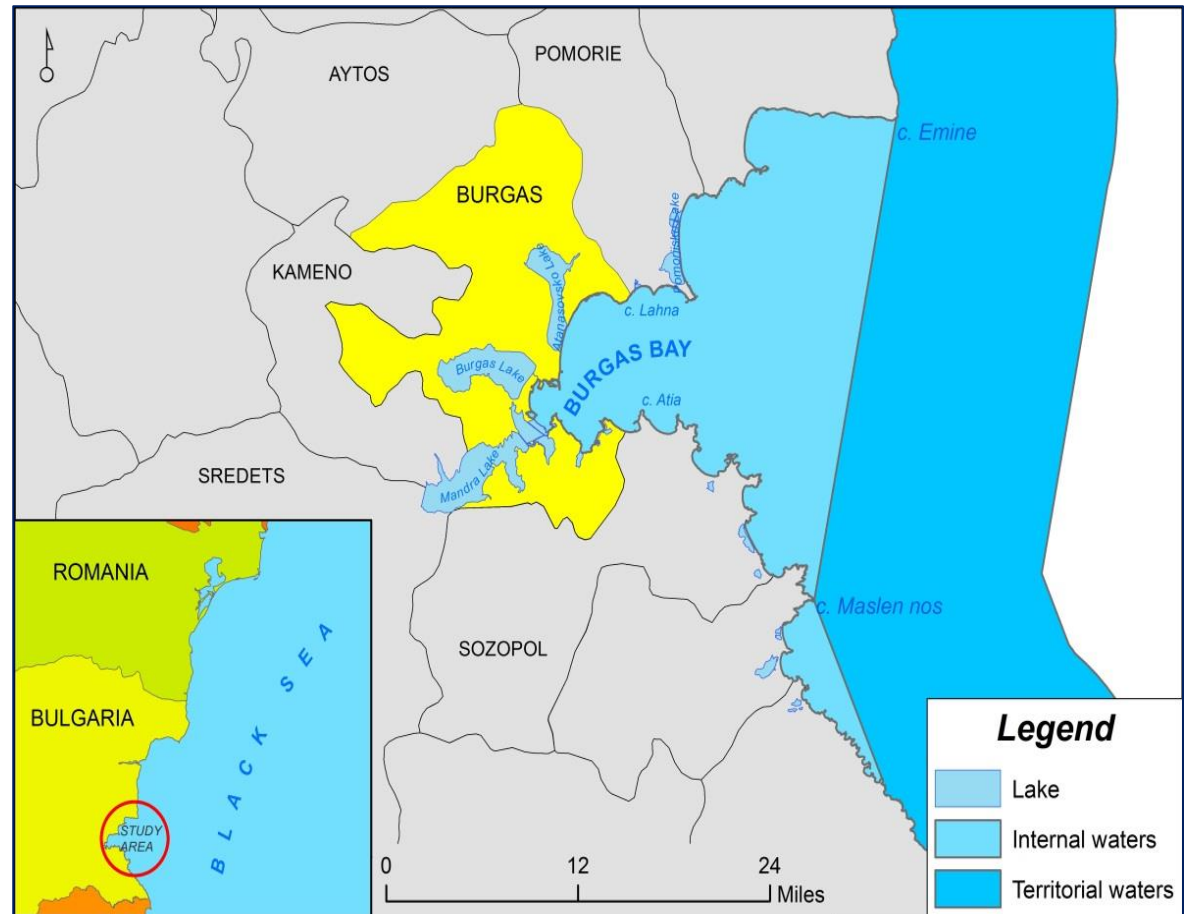
## BURGAS CASE STUDY AREA

The case study area is geographically located along the south Bulgarian Black Sea coast, in the westernmost part of the largest Bulgarian bay – Burgas Bay and administratively in the municipality of Burgas



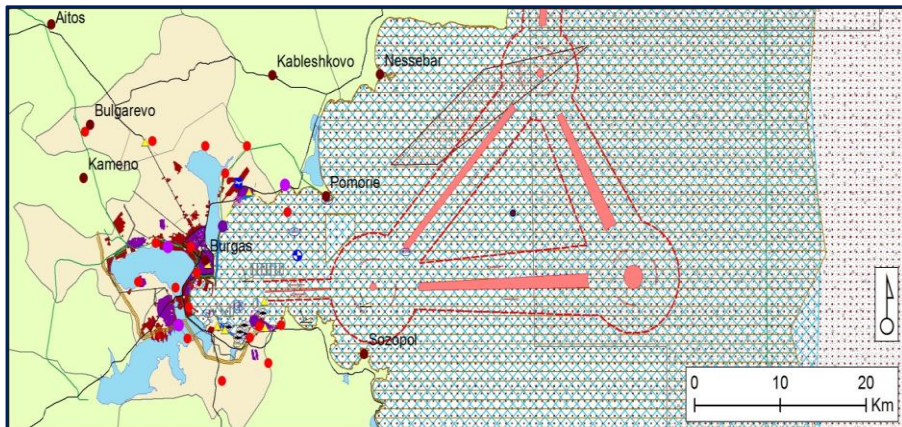
The case study area encompasses the "small Burgas Bay":

- ✓ The marine area between Cape Lahna on the north and Cape Atia on the south with the seaward boundary of 12 mile zone.
- ✓ The land boundary extending from 7 km to 23 km landward at LAU (Local Administrative Units) level.
- ✓ The entire municipality of Burgas falls within the 23 km zone along the sea, as the 10 km coastal zone area includes more than 50 % of the territory.





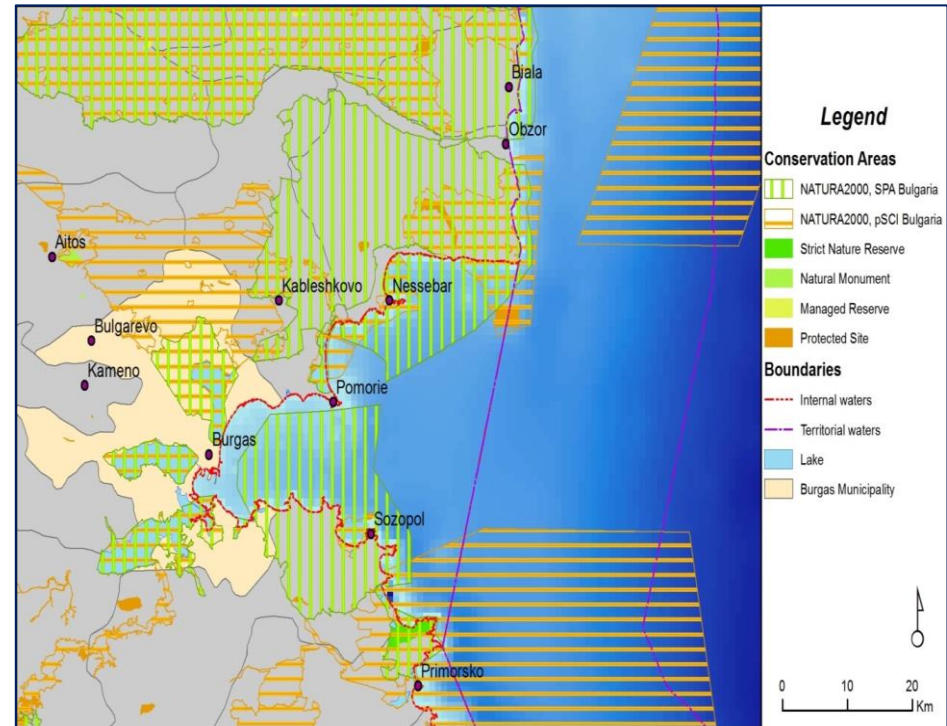
## Map of current land and sea uses



### Legend

- |                          |                           |                          |                           |
|--------------------------|---------------------------|--------------------------|---------------------------|
| ■ Airports               | ⊙ Pound nets              | ■ Bathing waters         | ■ Dumping sites           |
| ▲ Tourism activities     | ⊙ Fish boat landing sites | ■ Lakes                  | ■ Diving areas            |
| ● WWTP                   | --- Traffic System        | ■ Residential areas      | ■ Burgas Municipality     |
| ● Waste water discharges | — Roads                   | ■ Industrial areas       | ■ Anchorage               |
| ● Intakes water          | — Railways                | ■ Port terrestrial areas | ■ Concession areas        |
| ⚓ Shipwrecks             | — Electrical grid         | ■ Dunes                  | ■ Military practice areas |
| ⊙ Marine stations        | — Oil pipeline            | ■ Beaches                | ■ Fishing areas           |
| ⊙ Science equipment      | — Marine cables           | ■ Tailings dam           | ■ Bottom trawling areas   |

## Map of natural values (terrestrial and marine)



### Legend

- Conservation Areas**
- NATURA2000, SPA Bulgaria
  - NATURA2000, pSCI Bulgaria
  - Strict Nature Reserve
  - Natural Monument
  - Managed Reserve
  - Protected Site
- Boundaries**
- Internal waters
  - Territorial waters
  - Lake
  - Burgas Municipality

Coastal land uses	Sea spatial uses																							
	Bathing waters	Coastal fishing	Open sea fishing	Pound nets	Underwater cables	Shipping routes and navigation	Dumping sites	Dredging	Anchorage sites	Yachting tourism	Water sports (windsurfing etc.)	Engine water sports	Diving	Underwater cultural heritage	Military practice areas	Intake waters	Waste water discharges	Bottom trawling	Protected areas	Concession areas	Research monitoring stations	Research hydrographic equipment		
Beaches and dunes	Green	Yellow						Yellow		Green	Yellow	Yellow			Yellow		Red		Yellow					
Tourism activities	Yellow			Yellow		Yellow		Yellow		Green	Green	Green	Green											
Residential areas	Green	Yellow		Yellow							Yellow	Yellow				Green	Yellow							
Industrial areas	Yellow	Yellow		Yellow							Yellow	Yellow				Green	Yellow		Yellow					
Port terrestrial areas	Red		Green	Yellow		Green	Green	Green	Green	Green	Yellow	Yellow		Yellow		Green	Yellow	Green	Red	Green	Green	Green	Green	Green
Waste water discharges	Red	Red	Yellow	Yellow							Yellow	Yellow		Yellow		Red				Yellow		Yellow	Yellow	Yellow
Roads and railways	Yellow	Yellow				Green				Green	Green	Green							Yellow					
Electrical grid																								
Airport										Green	Green	Green	Green		Green									
Natural gas pipelines																								
Oil pipelines	Red	Red		Yellow		Yellow			Yellow	Yellow	Yellow	Yellow	Yellow	Yellow		Red			Red	Yellow	Yellow	Yellow	Yellow	Yellow
Tailings dams	Red	Red	Yellow													Red			Red					
Fish boat landing sites	Yellow	Green		Green							Yellow	Yellow	Yellow	Yellow	Yellow		Yellow	Green						
Coastal protection/nourishment	Yellow	Yellow		Yellow			Green	Green			Yellow	Yellow	Yellow	Yellow		Yellow			Red		Green	Green	Green	Green
Nationally protected areas and Natura 2000 areas	Green	Yellow		Yellow		Yellow		Yellow		Green	Yellow	Yellow	Yellow		Yellow	Green	Yellow		Green					
Cultural historical sites and landscape	Green	Yellow		Yellow		Green		Yellow		Green	Yellow	Yellow	Yellow	Green			Yellow							

Land-sea interactions matrix for Burgas study area

- ✓ 16 different coastal land uses and 22 sea uses were identified.
- ✓ Land-sea interactions without conflict are 44, weak conflicts are 100, 16 conflicts were identified and 192 no interactions between land and sea uses were indicated.
- ✓ The highest number of land-sea conflict interactions was indicated for the oil pipelines, waste water discharge and tailing dams (with quality of bathing waters, coastal fishing, intake waters and protected areas).

**Coding of boxes:**

- Green - interactions with synergy
- Yellow – interactions with weak conflict
- Red – interactions with conflict
- Empty – no interactions

## LESSONS LEARNED & LSI CHALLENGES FOR DISCUSSION



- ✓ Establishment of proper legal basis for MSP in accordance with the Directive 2014/89/EU, including land-sea planning and harmonisation in accordance with the principles of MSP.
- ✓ Bulgarian coastal zone and marine space currently are organised and planned by the respective legal acts, but for the complex LSI a dedicated MSP is needed to reflect all conflicts on the land and in the sea space.
- ✓ A draft for Amending the Law on Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria was prepared at expert level and it covers 100% legislative transposition of EU MSP Directive. Not yet a political decision for designation of the Competent National Authority responsible for MSP.
- ✓ Human resources and information basis for MSP are still insufficient at municipality and national level.
- ✓ Lack of appropriate and precise data is also a challenge for identifying LSI.
- ✓ GIS and mapping provide the best way of improving decision support elements of the MSP approach.
- ✓ The land-sea conflict/synergy matrix could be used as a model for further studies on LSI along other study areas.
- ✓ As coastal and marine research is time and costs consuming it should be the responsibility of the Competent Authority on MSP in Bulgaria to initiate funded research and monitoring programmes.



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# Thank you for your attention!



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