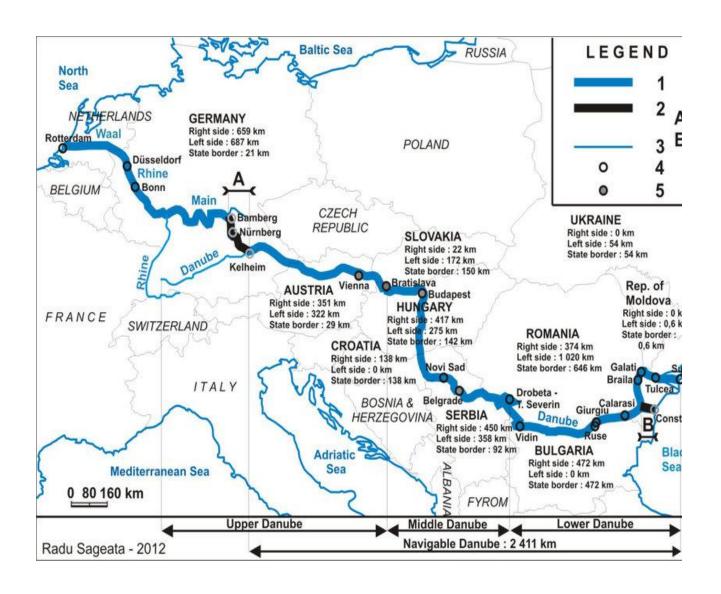




## Environmental perspective

- Danube River
- Danube Delta
  - natural habitat
  - human settlements (16,000 people are resident)
- Black Sea Coast
- Air and water pollution

#### Geographic perspective



- Inland waterway
- Maritime Danube
- Danube Delta
- Rhein-Danube inland waterway/multimodal corridor
- Green corridor
- Competition with railway and road: intermodal hubs along Danube; TEN-T

#### Climate

• The climate of the Danube Delta is *continental*, with strong influences from the vicinity of the **Black Sea** and its dominant **amphibian environment**.

• It is the driest and sunniest region of Romania.









Ethnic diversity

Ethnic structure of Tulcea County population (at the census of March 18, 2002)was as follow:

- 90% Romanians
- 6.4% Russians-Lipovans
- 0.5% Ukrainians
- **1.3% Turks**
- 0.9% Roma
- 0.7% Greeks
- 0, 3% other ethnic minorities (Hungarians, Tatars, Germans, Bulgarians, etc.).

Tulcea has a population of 73,707 inhabitants



#### Economical activities and environmental impact

The main economical activities performed in Tulcea are:

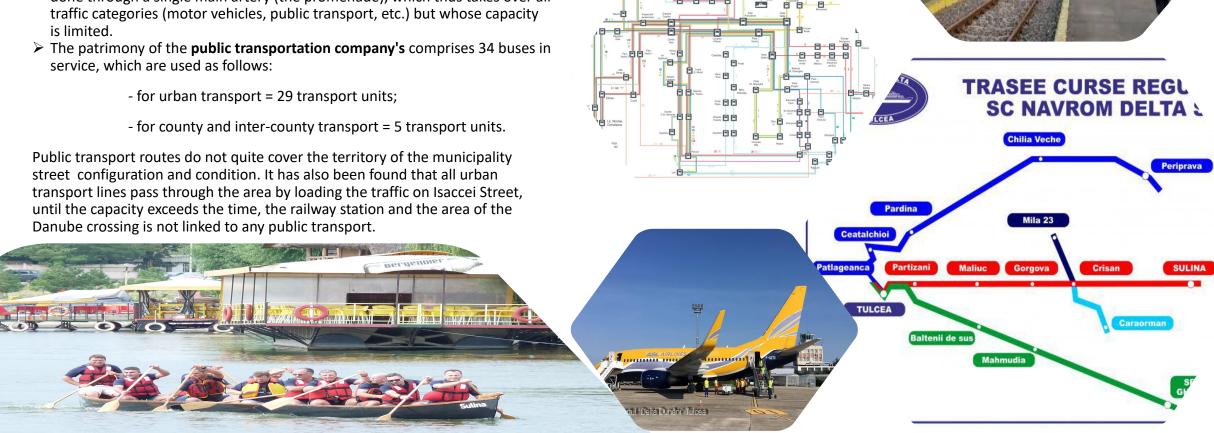
- industrial (the metallurgical industry 51% of the total value—one Aluminum factory and one Shipyard)
- > food (29%)
- > transportation (6.4%).







- > "Danube Delta" Airport situated 17km from Tulcea is currently undergoing an complex modernization project in order to comply with the European aviation regulations in force
- > Tulcea city's connection with the railway station as well as with the river is done through a single main artery (the promenade), which thus takes over all traffic categories (motor vehicles, public transport, etc.) but whose capacity is limited.



Transport- intermodality: road-rail-aviation- waterways

# Port of Tulcea- Stakeholders & Main policy makers

- Port of Tulcea Authority RNA (Romanian Naval Authority)
- APDM Maritime Danube Port Administration
- Municipality of Tulcea
- Tulcea County
- Danube Delta Biosphere Reserve Authority
- AFDJ (Lower Danube River Administration)
- RA AZL Sulina (Autonomous Administration of the Sulina Free Zone Administration)
- End-users...26 customers









## Operational perspective

- Danube-Black
  Sea Canal
  - Cargo
  - Public-shared mobility
  - Tourist journeys









#### Passenger Transport

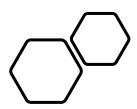
- Galati Tulcea
- Tulcea Danube Delta:
- Chilia; Sulina; Sfantul Gheorghe
- County Administration Project on mobility
- Scheduled and unscheduled transport (tourists).
- Shared mobility& Private tourists
- Micromobiliy- bikes.
- Active mobility





### Green approach

- Green port
- Green vessels
- Green Journeys
- Digitalization of port activities
- Smart & intelligent & integrated transport systems
- Multimodal and green trips
- Sustainability- UN-SDGs

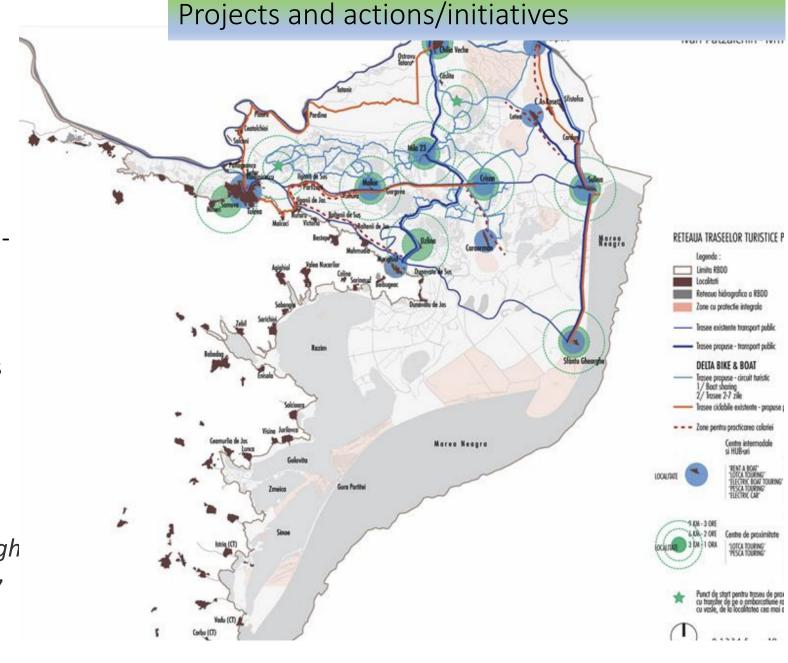


#### **Transport**

- Transdanube. Pearls Network for Sustainable Mobility along the Danube -Interreg
- TRANSDANUBE "Sustainable Transport and Tourism along the Danube"
- SUMP(Sustainable Urban Mobility Plans Tulcea)
- Projects ITI: Tulcea-Braila bridge
- Tulcea Port Development

#### **Climate adaptation**

"Climate proofing the Danube Delta through integrated land and water management", ENRTP Programme\_EC



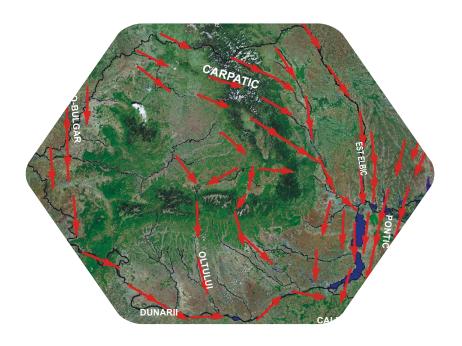
#### Smart, low carbon & integrated mobility

#### **Sustainable & Smart Mobility**

- Integrating people and freight transportation
- Green Mobility\_low carbon: boat & bike
- Biodiversity protection: conservation areas
  - There are over 320 species of birds found in the delta during summer, of which 166 are hatching species and 159 are migratory.
- Shared mobility (boats; vessels)
- <u>Limits</u> for Mobility as a Service (MaaS) due to a specific infrastructure: waterborne







Map of birds migration routes that cross Romania in autumn

(transposition in GIS format Doroșencu A. after

Ciochia V.)





#### Delta

 one of the largest and most remarkable river wetlands in Europe;

 Biosphere Reserve, Ramsar site, UNESCO World Heritage Site;

• it overlaps with 4 sites of community interest included in the Natura 2000 ecological network.









- the mosaic of habitats hosts a unique mix of flora and fauna species, with about 2000 vascular plants and more than 3000 animal species;
- high density of species that are rare or missing in other European areas;
- represents a treasure for the natural heritage of Europe and for ensuring the overall connectivity of species;
- home to several globally threatened bird species, including the red-breasted goose, the Dalmatian pelican and the pygmy cormorant, which either breed or winter in the delta.

#### protection

- In the context of climate change and mobility development, the conservation of biodiversity and environmental quality in the Danube Delta is a main challenge;
- Preferential habitats and natural passageways of the species must be determined and mobility solutions must be adapted in relation to them;
- It is necessary to investigate the **synergistic effects of climate change** and other pressures on biodiversity and ecosystems and integrate measures for nature conservation, climate protection and adaptation.













- Smart Innovation Hub around the green port- Tulcea
- Extension of the concept: Smart City Smart Port City:
- Port as an urban development entity
- WATERPOLITAN area: challenges & opportunities
- Wetland city neighborhoods
- SUMP
- Project on Port Tulcea Modernisation(2020):
  - Reducing time related to operations in Port
  - Increasing safety aspects
  - Increasing accessibility
  - Building new port infrastructure of 36,016 m2
- Opportunities of investments through the EU Recovery & Resilience Fund







### **Innovations**











#### **Quality of Life**

- New green oriented lifestyles
- New jobs: generate income through responsible tourism and reinvesting it in conservation and community development
- Develop a Social Enterprise Ecosystems
- Better integration of social attributes
- Inter-cultural ethnic group
- Access to social services- facilities
  - connect services to markets (website)
- Preservation of human heritage new values

## Romanian team around the Port of Tulcea

- DDNI
- COMOTI
- PGU
- UPB
- FLAG
- Geostud
- BEIA
- AZL & Port of Tulcea
- Port of Giurgiu















### Thank you!

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