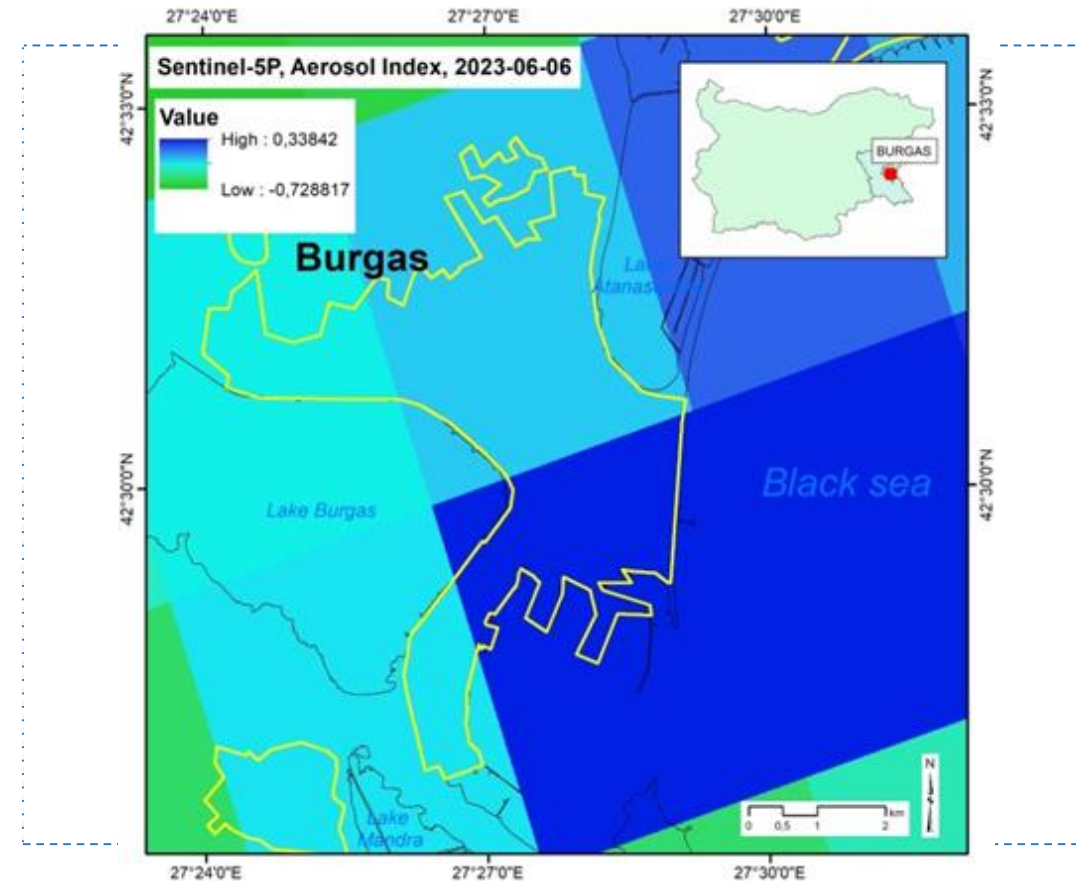


Country: Bulgaria

## Remote Sensing 'hot topics'

Team: Rumiana Vatseva, Lachezar Filchev

- **Modular Energy Islands (MODENERLANDS - COST CA20109)**  
- to assess the potential of offshore renewable energy sources of the Black Sea (incl. wind, solar energy, etc.) and to work on the concept of Modular Energy Island (Copernicus Climate Change Service Climate Data Store (CDS)).
- **Urban dynamics of the Black Sea coastal zone in Bulgaria for the period 2011-2022 using remote sensing data (1977-2022)**
- **„Smart Integrated Devices For Telemedicine to Combat COVID-19 Toward New Resilience City“ - Smart4COV19/ Telemedicine (SRTI-BAS, MES)** - The main objective is to develop and implement advanced telemedicine technologies to enhance healthcare delivery during pandemics like COVID-19. This involves creating smart devices and systems that can monitor patients remotely, integrate with existing healthcare infrastructure, and provide real-time data to healthcare providers.
- **“Monitoring Water Productivity in Crop Production Areas from Food Security Perspectives” (Dragon 5, ESA)** - the main objective of the Dragon5 project involving the Space Research and Technology Institute at the Bulgarian Academy of Sciences (SRTI-BAS) is to enhance agricultural water management and food security.



# Projects/ Success stories / Good practices

## Achieved

*Topic: Smart4COV19/ Telemedicine*

*Main objectives:* Air Quality Monitoring: Investigating the influence of air pollution on COVID-19 cases using data from satellite and ground-based sensors. This includes analyzing pollutants like NO<sub>2</sub>, CO<sub>2</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub> over Bulgarian cities such as Sofia, Burgas, and Varna.

*Geographical dimension: Bulgaria, Indonesia*

*Synergies: Copernicus CAMS, EIC-Climate*

*NETWORKING OPPORTUNITIES:*

Data Integration: Combining satellite data from the European Sentinel-5P satellite with ground station data to study the spatial and seasonal distribution of air pollutants.

Software Development: Designing prototype software and geodatabases for image processing and statistical analysis to link weather conditions and air pollution with COVID-19 case trends.

## Future plans

- *Topic:* Modular energy islands (MODENERLANDS - COST CA20109)
- *Main objectives:* Development of an energy island conceptual model based on real objects, techno-economical analyzes and socio-environmental constraints and policies.
- *Geographical dimension:* St. Anastasia Island, Burgas, Black Sea
- *Synergies:* Climate Change EU strategy, renewable energy
- *NETWORKING OPPORTUNITIES between MedRIN and SCERIN:* Assessment of renewable energy resources; Energy Islands strategies for climate change adaptation through case studies.

