The **goal** of the challenge is to enable the integration of the 4 H2020 Citizen Observatories datasets with the NextGEOSS catalogue as an approach to connect citizen science into GEOSS.

In the context of the European Union's Horizon 2020 research and innovation programme, four sister projects on Citizen Observatories (COs) for Environmental Monitoring (GROW, GroundTruth 2.0, LandSense and SCENT) have been launched and realised. During these projects, a variety of smart and innovative applications have been implemented, enabling citizens to be engaged with environmental monitoring during their everyday activities. The use of mobile devices and low-cost portable sensors coupled with data analytics, quality assurance and modelling approaches pave the way for citizens to have an active role and voice in environmental decision-making. The capabilities of the abovementioned tools and approaches have been demonstrated in a variety of citizen-science campaigns, being conducted across different European regions and beyond, leading to the collection of valuable environmental information. The datasets involve the following themes:

- Land cover/land use (point observations, maps, change detection validation, land use classification, in-situ validation, cropland field size and interpretations)
- Soil parameters (soil moisture, air temperature, levels of light); Planting and harvesting dates
- Water parameters (water level, water velocity)
- Air quality parameters (black carbon concentration)
- Phenological observations (species and pheno-phase identification)
- Disaster resilience (maps and time series data related to flood monitoring)

- Urban green space quality (users' perception through the provision of responses to questionnaires and images)

The datasets are being managed by different infrastructures involving various access endpoints as well as the utilisation of OGC standards (i.e. WMS, WGS, SOS, etc), while at the same being accompanied by dedicated metadata.

Thus in order to facilitate the metadata ingestion in the NextGEOSS catalogue, continuously running harvesters (for the Data Sources which have new Data available daily) and on-demand harvesters (for static collections of Data) shall be implemented.

Register here

Mentors: Koushik Panda and Joao Andrade from DEIMOS, Valantis Tsiakos from ICCS, Georiana Beres and Lea Manoussakis from Datopian.

Koushik Panda *is an International professional with 10+ years of experience in the field of Technology, holding a degree in Business (MBA from TheLisbonMBA - Nova School of Business and Economics , Catolica Lisbon and MIT Sloan) and Information Technology (IT). Koushik is currently working in a Space Company in Portugal to bring together science , technology and software to build innovative solutions in the field of Earth Observations while playing crucial roles in Project Management, Business Development , Product Development and DevOps evangelism. He has experience in handling large international projects, namely in requirement analysis, conceptualization of functional and technical specifications for large and complex systems with end-to-end delivery of solutions. He has also worked on building services related to Data Governance areas. Koushik is currently working in the project coordination of NextGEOSS in addition to working on several of the NextGEOSS pilots*.