STARTED AT: December 2023

NAME OF THE PROJECT: TOWARDS DEMOCRATIC LANDSCAPE OBSERVATION THROUGH GEOINFORMATICS AND PUBLIC PARTICIPATION

SHORT NAME: TOPIO

PROGRAM: HORIZON-MSCA-2022-SE-01-01

DURATION: 46 MONTHS

MORE INFORMATION: https://www.topioproject.eu/

SUMMARY:

Landscape is a key element of individual and social well-being. Although its protection, management and planning are acknowledged by the European Landscape Convention of the Council of Europe since 2000, not much has been done for this treaty's comprehensive implementation. TOPIO aims to give people an active role in decision-making on landscape by means of Citizen Science, in combination with Geoinformatics (Earth Observation and GIS) and Artificial Intelligence to promote the area's sustainable development. TOPIO aims to create a Thematic Platform, an interactive and continuously updated tool, as well as digital methodologies for landscape monitoring and management.

The project aims to provide innovative training for researchers with an international, interdisciplinary, and cross-sectoral approach. By creating a research network focused on the effective integration of landscape monitoring techniques, it enhances the socio-cultural and environmental dimensions with a view to sustainable development at local and regional level. Through the implementation of landscape character assessment methodologies in seven European countries, partners will exchange information on landscape policies and peoples' experience of landscape protection, management, planning and public participation at different scales and levels. TOPIO will integrate and synthesize project findings suitable for awareness raising, readily communicable to a wide audience, and relevant for policy negotiations. Furthermore, the project will maintain a dialogue with relevant stakeholders and will provide recommendations for policy makers.

In particular, Geosystems Hellas (GSH), aims to promote the landscape character assessment through the integration of Digital Twin and Artificial Intelligence. Digital Twins, serve as virtual models that reflect physical objects using Earth Observation (EO) data, in situ measurements, photographs, UAV data and artificial intelligence. This model will use AI to monitor the health of landscapes (case study areas) and conduct simulations of interconnected systems, including human behavior. Digital Twin will use information derived from point clouds and will be integrated into landscape quality analysis, targeting both the public and experts. This integrated approach aims to enhance our understanding of landscapes, leveraging advanced technologies to provide a more in-depth Landscape Character Assessment.

CONSORTIUM: