



ThinkingEarth Press Release



Horizon Europe project ThinkingEarth aims to harness the power of Artificial Intelligence (AI), using cutting-edge techniques, including deep learning, causality, eXplainable AI, and physics-aware Machine Learning. We leverage the predictive abilities of Self-Supervised Learning and Graph Neural Networks to develop task-agnostic Copernicus Foundation Models and a Graph representation model of the Earth.

The 36-month long project involves the use of Artificial Intelligence techniques to create [Copernicus Foundation Models](#) and use them to deploy new AI pipelines through Use Cases and so-called Spotlight Applications (both developing solutions that should be further exploited during and after the project). The Use Cases address ambitious problems with high socio-environmental impact and new business growth opportunities, such as accelerating Europe's clean energy transition and independence from volatile fossil fuels, understanding Earth's processes by modelling causal Earth system teleconnections, and assessing and modelling the impact of current and future climate emergency in biodiversity and food security. There will be three use cases altogether - 1. Energy communities: distributed solar energy forecasting. 2a. Biodiversity monitoring at city scale 2b. Biomass monitoring for the carbon credit IFIs 3. Understanding food security under climate change.

The project is funded by Horizon Europe and features eleven partners from 7 countries, all providing expertise in the Earth Observation, Space industry and research and academia. The project began on the 1 January 2024 with a kick-off meeting in Athens, Greece on the 30 and 31 January.

Partners

[National Observatory of Athens](#) (NOA), Greece

[University of Valencia](#) (UVEG), Spain

[Technische Universität München](#) (TUM), Germany

[Centre for Research & Technology Hellas](#) (CERTH), Greece

[Evenflow](#) (EVF), Belgium



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[EnergyFamily](#) (EFY), Austria

[NVIDIA](#) (NVIDIA), Italy

[Stadtwerke Amstetten](#) (STWAM), Austria

[GlobeEye](#) (GE), France

[Aquatec](#) (AQUA), Spain

[UN World Food Programme](#) (WFP), Italy

[National Technical University of Athens](#) (NTUA), Greece

Contact

Dr. Ioannis Papoutsis, Project Coordinator, National Observatory of Athens,

email: ipapoutsis@noa.gr

Connect

X: <https://twitter.com/ThinkingEarthEU>

LinkedIn: <https://www.linkedin.com/showcase/thinkingearth/>



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