ClimateAdapt | eosc

Advancing climate adaptation through open science and data integration in the European Open Science Cloud (EOSC)

About Climate-Adapt4EOSC

- **Start Date:** January 1, 2025
- **Duration:** 48 months
- **Budget:** €7.9 million
- **Consortium:** 18 European partners
- **Countries involved:** 8
- **Project type:** Horizon Europe

Challenges

The CLIMATE-ADAPT4EOSC project tackles key obstacles to effective climate adaptation research and action, including fragmented data sources, poor interoperability, and inadequate infrastructure for generating and sharing FAIR data. Legal and organisational barriers, especially in cross-border contexts, limit access to existing datasets. Inconsistent metadata standards, non-harmonised file formats, and limited awareness of FAIR principles further hinder data integration and reuse across disciplines and sectors.

Objectives

- Create a seamless, FAIR-compliant research environment for climate adaptation data and services within EOSC
- Improve data accessibility, interoperability and trust through 5 dedicated frameworks
- Integrating, managing and reusing data to inform policies and research

3 use cases and 8 replication use cases

Aigaleo - Greece

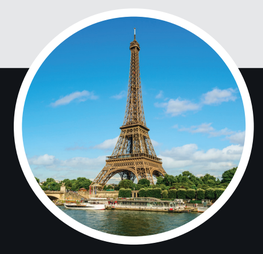
More inclusive and tailored urban resilience strategies targeting vulnerable communities.

- **Aveiro Port (Portugal)**
- **West Athens (Greece)**
- **Strovolos Municipality (Cyprus)**

Centro region - Portugal

Better anticipation of climate impacts and strengthened ecosystem-based adaptation.

- **Port of Piraeus (Greece)**
- **Rhodes Port (Greece)**
- **Port of Dunkirk (France)**



Metropolitan territory, France

Enhanced national exposure maps, lays the groundwork for a soil moisture-based alert system, proposes climate-resilient construction guidelines.

- **Rhodes island (Greece)**
- **Data4 (Poland)**

4 services to be implemented

Openhidra

Deliver a free, EOSC-based service for climate adaptation in coastal and port areas. It provides real-time alerts and on-demand forecasts to support port authorities and coastal managers in anticipating flood risks, sea-level rise, and operational disruptions.

Just-CURS

Combines high-resolution environmental models, socio-economic data, and citizen feedback to simulate local climate impacts. The service supports “what-if” scenario analysis, urban heat island mapping, and infrastructure stress assessments.

BDAnalytics

AI-powered analytical service designed to process large volumes of climate-related data efficiently. The service supports multiple tasks—including classification, detection, segmentation and forecasting—tailored to user-defined use cases such as urban heat risk, soil vulnerability, or coastal changes.

3SES – Shrink-Swell from Space2Earth Service :

Mapping and risk assessment tool addressing clay soil shrink-swell phenomena, which increasingly threaten buildings and infrastructure due to climate variability. 3SES promotes early risk mitigation and cost-effective renovation or construction strategies, especially in vulnerable urban and peri-urban areas.

Stakeholder Forum

The forum offers a privileged source of information and engagement with the project, its activities and outputs. It is open to individuals with an interest in the project’s outcomes, or who represent communities that could benefit, reuse or further develop similar project’s.

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Project Coordination

Dr Thanasis Sfetsos
NCSRD, Egaleo, GREECE
contact@climate-adapt4EOSC.eu

JOIN US

climate-adapt4eosc.eu
@eosc-climate-adapt-4
@eosc-climate-adapt-4