

# Destination Earth - Data Portfolio

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Harmonised Data Access (HDA)

Tomorrow's Solutions Start Here  
Simulating Tomorrow Today

## DestinE Digital Twin Data

ECMWF EuroHPC JU pre-exascale supercomputers

### Climate Change Adaptation DT

- Global Multi-decadal climate projections with local granularity up to 2050
- Models: IFS-NEMO, ICON, IFS-FESOM
- High resolution: 5 or 10 km
- HEALPix grid
- Future projection: 2020-2050
- Hourly and daily data, surface and multi-level atmosphere/ocean fields



Overview



Fact Sheet

example question: What would the 2019 European heatwave look like in a +2°C world?

ECMWF EuroHPC JU pre-exascale supercomputers

### Weather-induced Extremes DT

- Improving prediction of extreme weather and its impacts
- 4 day forecast (daily):
  - Global, Regional, Local
- Models: IFS-NEMO
- High resolution: Atm 4.4km, Ocean 25km
- Hourly and daily data, surface and multi-level atmosphere/ocean fields



Overview



Fact Sheet

example question: How much wind energy production can we expect during a windstorm?

EuroHPC  
Lumi, Leonardo,  
MareNostum...

## User-Generated Data

- Data generated by users using their own algorithms on DestinE Data.
- This data is made accessible to the user community following review

Share / Collaborate

## Federated Datasets

Diverse / Large Amount of Data  
Data Fusion

### Big Data Services

EUMETSAT ≈ 40 Metop, Meteosat, Sentinel-3-Marine

### Copernicus Data Space Ecosystem

esa ≈ 10 Sentinel-1, Sentinel-2, Sentinel-3-Land, Sentinel-5P

### EC EUROPA Data Store

European Commission ≈ 5 Population, Greenhouse emissions, Energy Sources...

### EC JRC /Copernicus

European Commission ≈ 5 Global Surface Water

### ISIMIP

ISIMIP Climate Change, Socio-Economic

### Copernicus Services

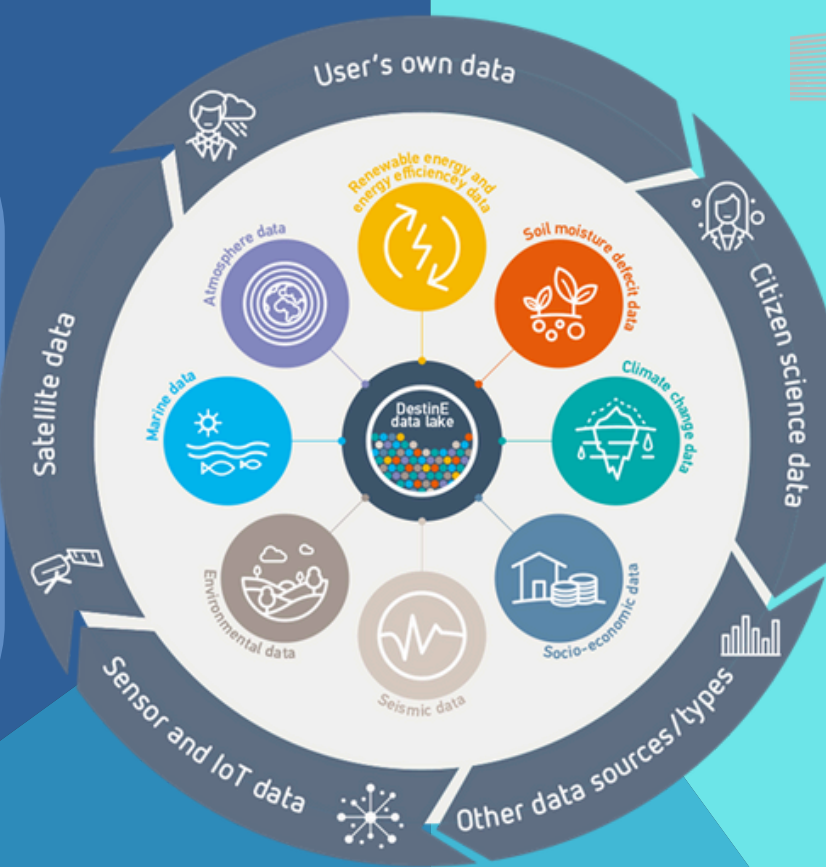
- ≈ 10 Atmospheric Monitoring (ADS)
- ≈ 30 Climate Change (C3S)
- ≈ 40 Marine (CMEMS)
- ≈ 10 Global Land (CLMS)
- ≈ 10 Emergency (CEMS)

### IAGOS

IAGOS Aircraft Observation

### Landsat

Landsat Land Observation / Change



## User-Driven Evolutions

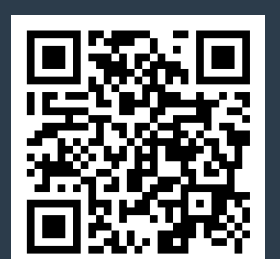
- Data Providers, Collections and functionalities will evolve over time based on DestinE user needs

User / Community Driven

Data Portfolio



Destination Earth



Funded by the European Union

Destination Earth

IMPLEMENTED BY

