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EU SPACE WEEK 2023

7 - 9 November - Sevilla, Spain

Lobelia – Earth observation to address the climate emergency

European Commission

EUSPA European Union Agency for the Space Programme

User Consultation Platform – Environmental Session

Isadora Jiménez

UE23 PRESIDENCIA ESPAÑOLA CONSEJO DE LA UNIÓN EUROPEA

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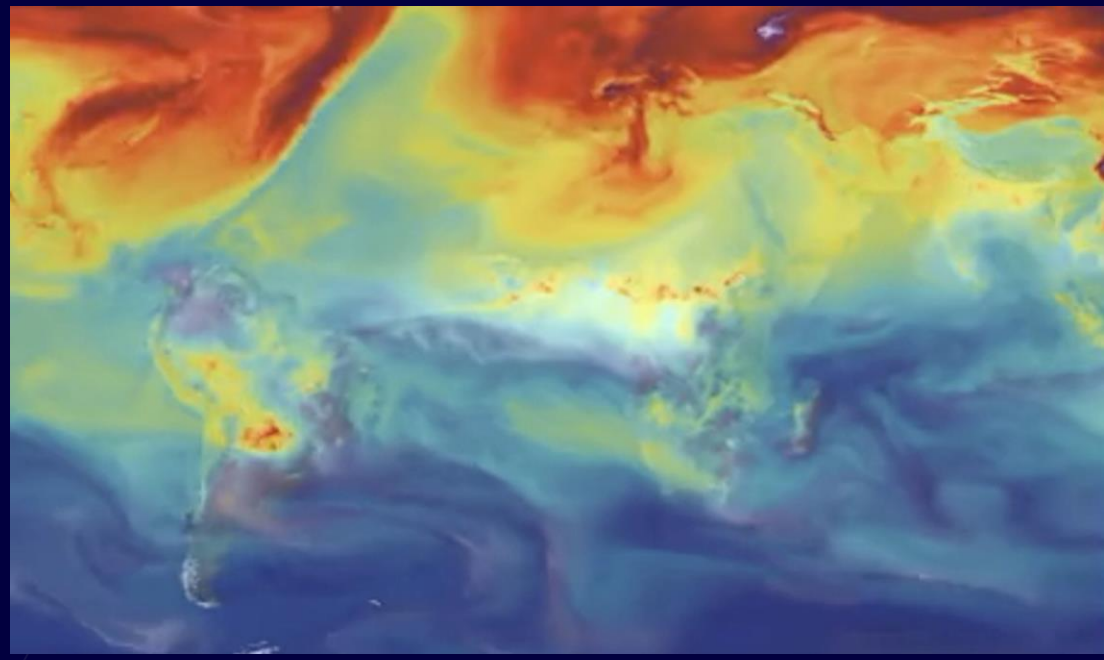
Earth observation to address the climate emergency.



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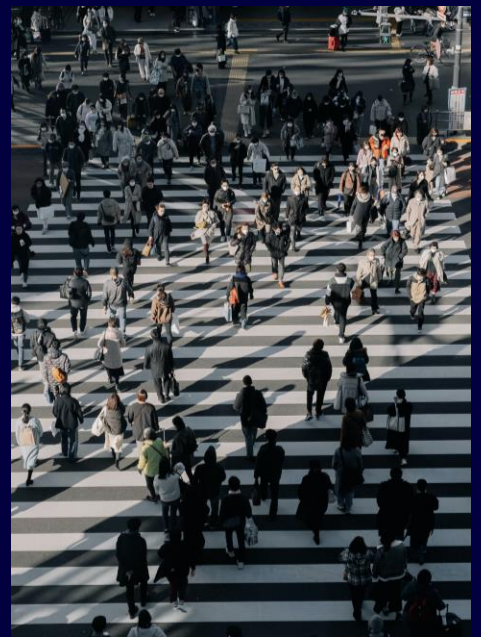
Cities & health

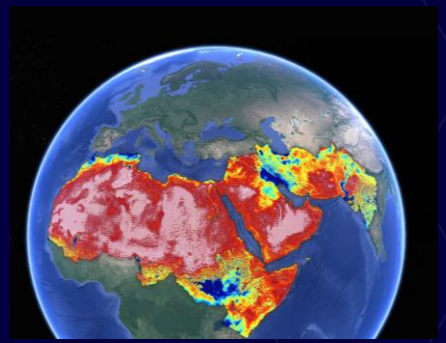
Agri-food

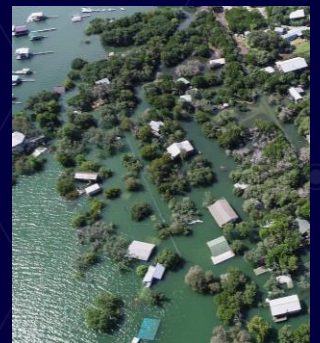
Land ecosystems

Ocean ecosyster

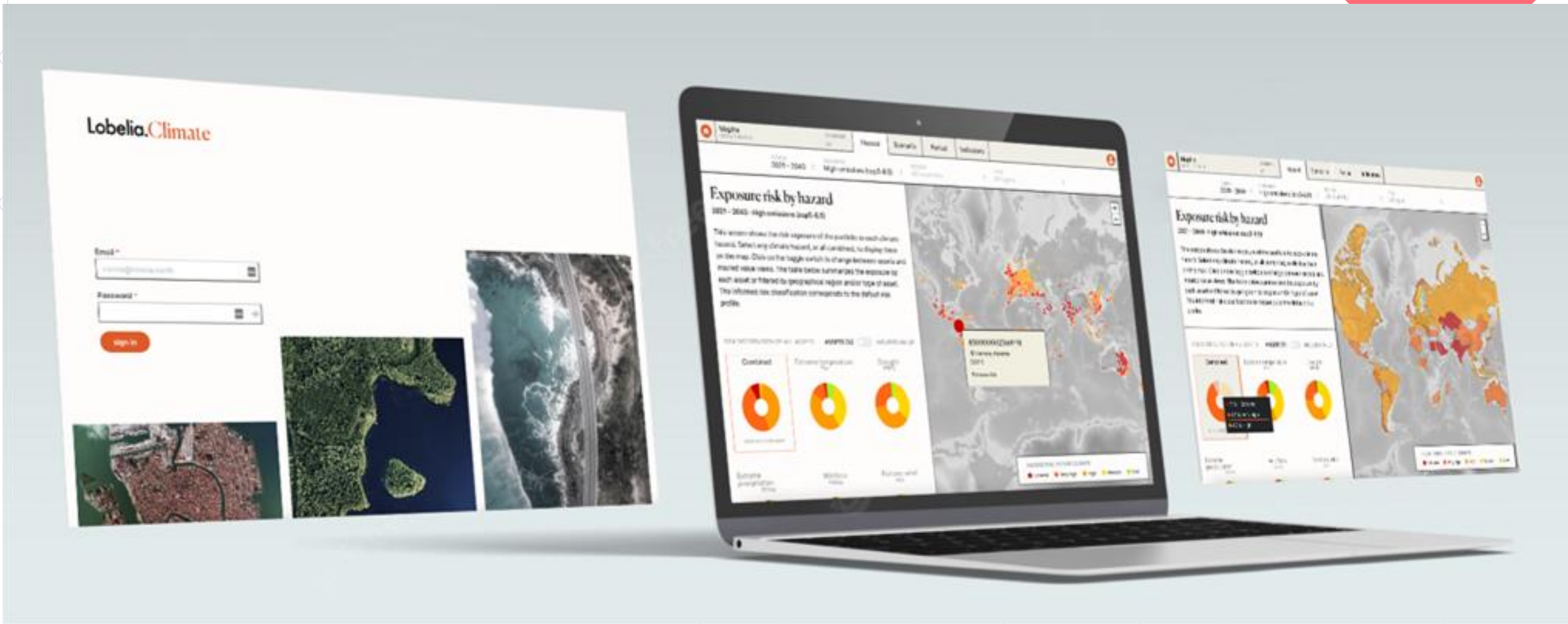
Physical Climate risks







A dashboard to easily quantify climate risks at asset level



Lobelia's climate services are used for:

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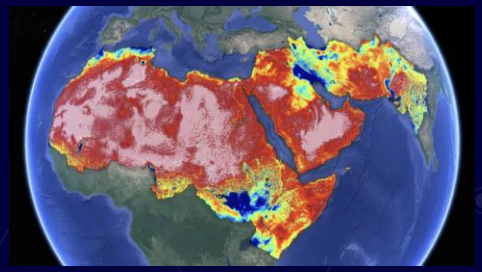
Climate risks disclosures

In-depth analysis of climate risks

Climate adaptation strategies

Present-time monitoring



Our clients

Insurance

Infrastructure

Corporate

Institutions

Cities

MAPFRE

AXA

Royal HaskoningDHV

Willis Towers Watson

MOTT MACDONALD

WORLD BANK GROUP

wsp

OXFAM

esa European Space Agency

MERCATOR OCEAN INTERNATIONAL

ECMWF

European Commission

FAO FIAT PANIS

UN-HABITAT

NASA

NOAA

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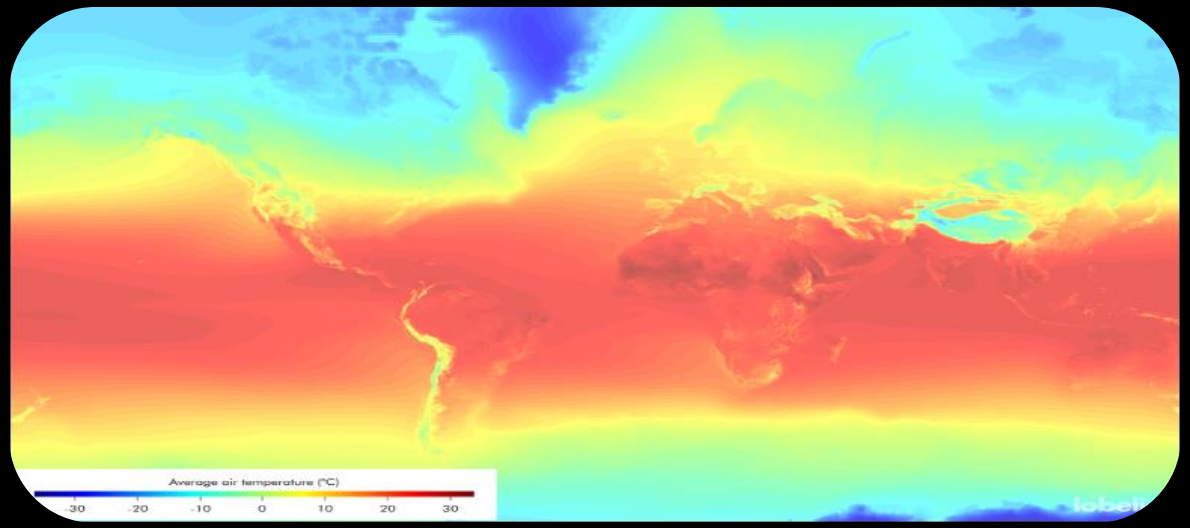
Merging satellite and climate data



SMOS/SMAP ▶

Sentinel 1 – SAR ▶

Sentinel 2 ▶

CHIRPS, CHRTS (obs. ref.) ▶

[Sentinel 6 – under research] ▶

◀ CMIP6

◀ CORDEX

◀ ERA5

◀ EOBS (observational reference)

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What is needed

from EU Earth Observation data to support climate services

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1

Soil moisture with L-band radiometer

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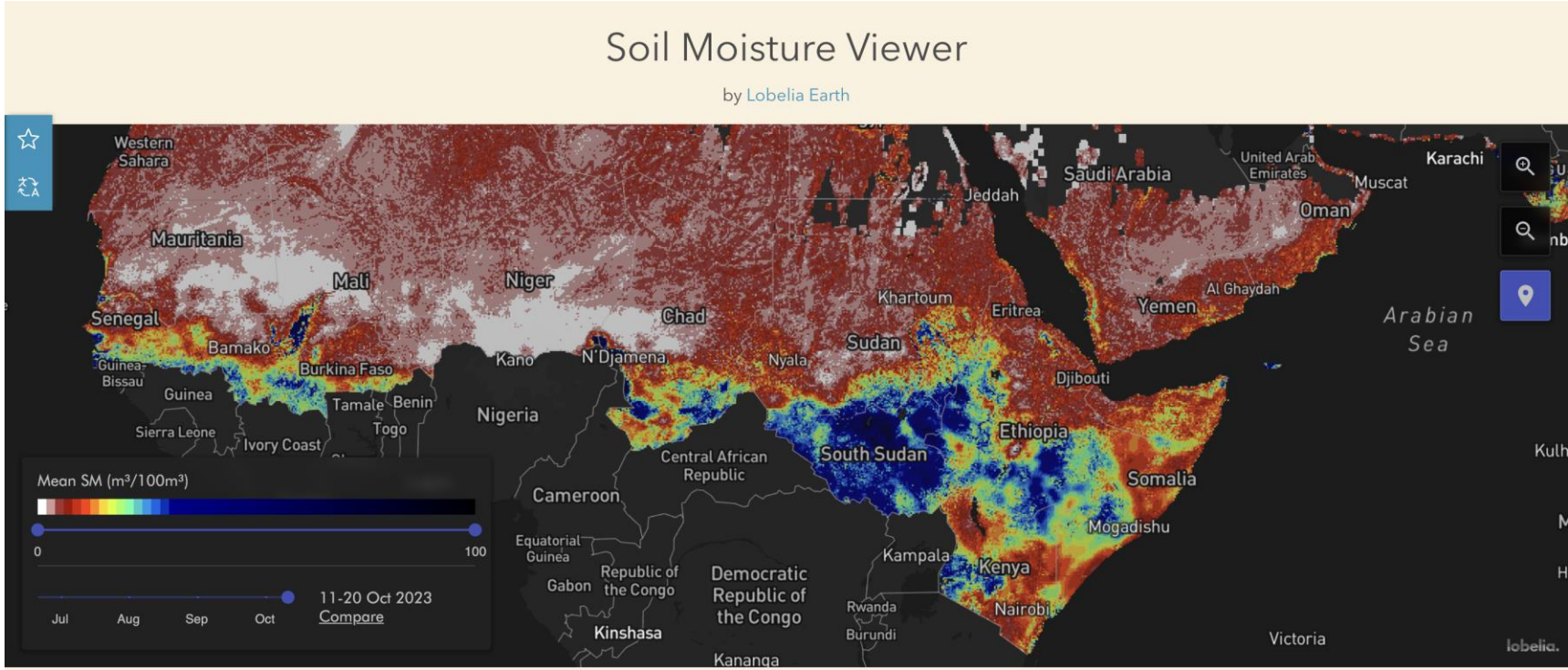
SMOS sensitivity helps us monitor soil moisture and inform droughts, floods and heatwaves.

SMOS is beyond its life cycle and Sentinel 1 does not provide the same quality in semi-arid areas.

Need for L-band radiometers



Food and Agriculture Organization of the United Nations

Locust Hub

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2

High resolution surface Temperature

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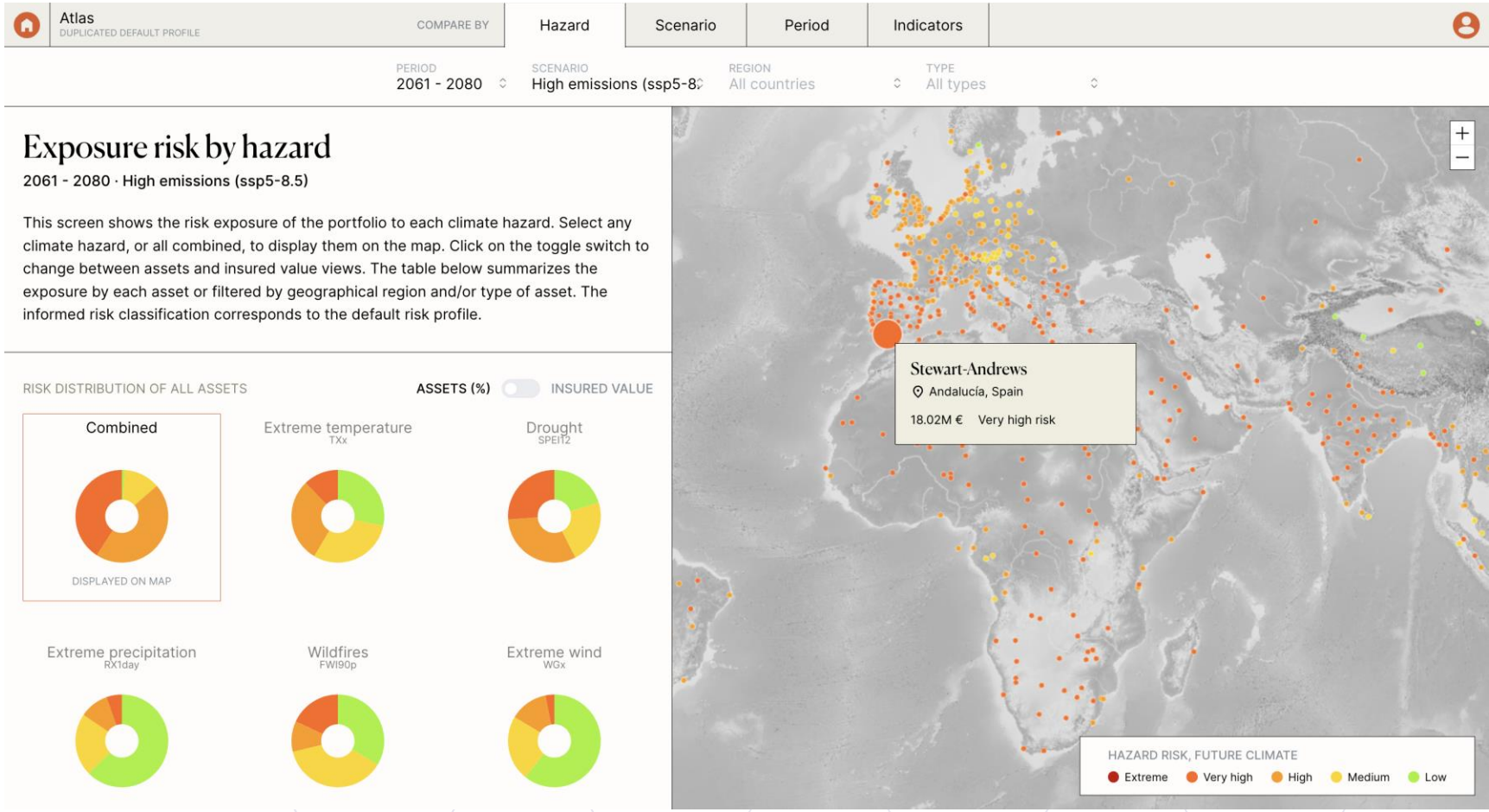
High temporal and spatial resolution is key for:

- Drought monitoring
- Process SMOS data
- Bias adjust climate data



3

A Service Level Agreement (SLA)

Land, ocean and climate data have SLAs.

Space data need similar SLAs

Operational services for clients can’t fail. We need reliability in the delivery of images and the expected release dates.

4

Data access without quotas

Data quotas can kill some commercial opportunities.

The download of large volumes of data without quotas should be possible.

Serving geospatial big data is not easy and requires work on the alignment of data access technology.

5

Transparency on delivery

If there is an error, all users need to know it as soon as possible.

Operational services require all related information, including possible errors.

This is key to avoid penalties for breaching our SLAs with final clients.

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4. Data access without quotas
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