PROCESSO BIOGEOGRÁFICO NATURA 2000
REGIÃO BIOGEOGRÁFICA MACARONÉSICA

BIOGEOGRAPHICAL PROCESS NATURA 2000 - MACARONESIAN REGION

ENVIRONMENTAL DATA FOR THE STUDYING OF THE COHERENCE OF NATURA 2000 NETWORK

Neftalí Sillero (Centro de Investigação em Ciências Geo-Espaciais – Universidade do Porto)

NATURA 2000

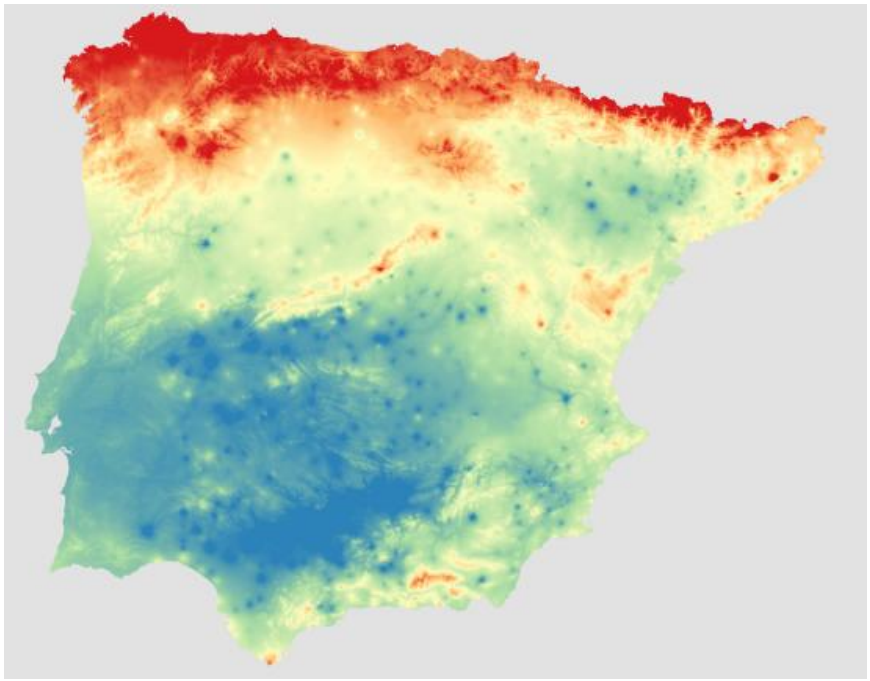
European Commission

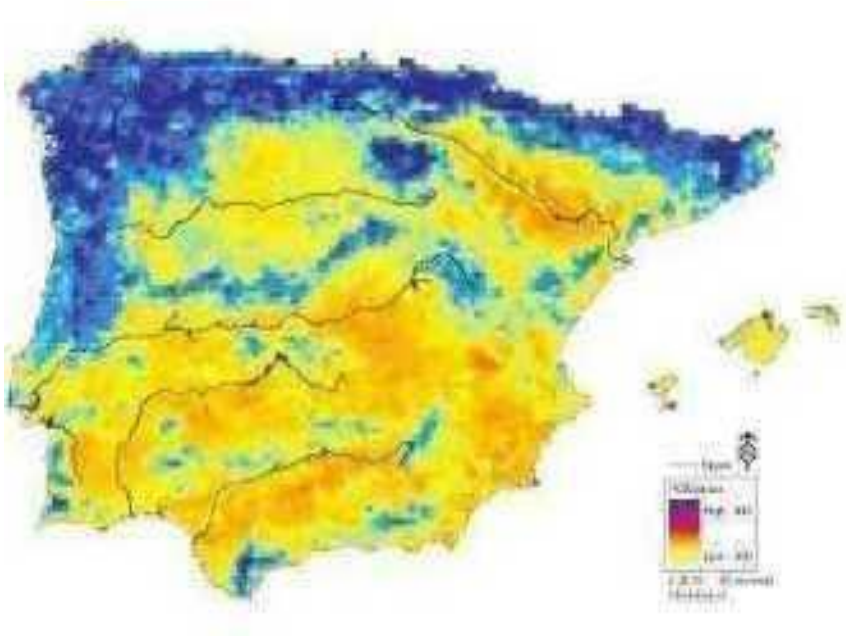
Tragsatec
GrupoTragsa

GOBIERNO DE ESPAÑA
MINISTERIO PARA LA TRANSICIÓN ECOLÓGICA Y EL RETO DEMOGRÁFICO

TYPES OF ENVIROMENTAL DATA

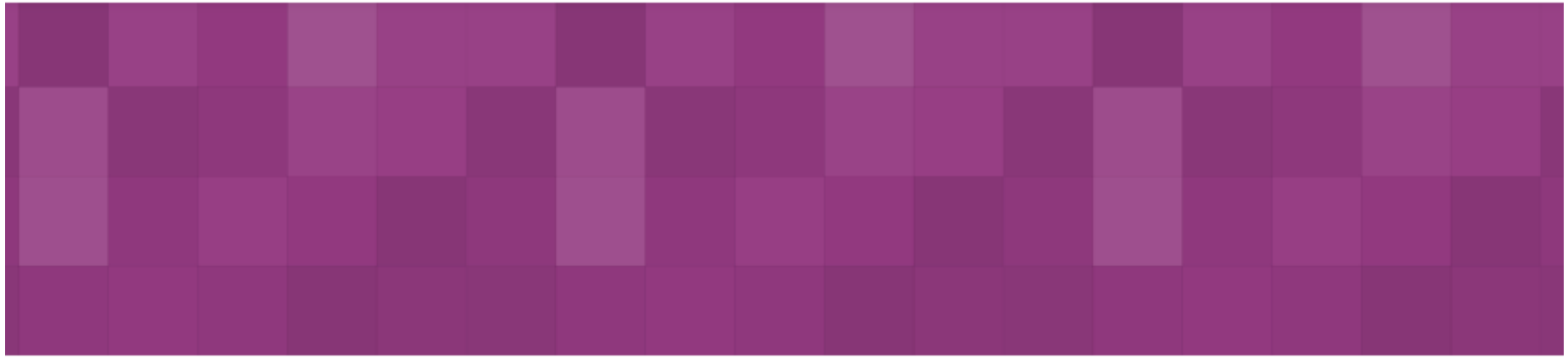
- Climate (temperature, precipitation)
- Topography (altitude, slope, aspect)
- Land cover / land use
- Hydrology
- Human impacts





WORLDCLIM

WorldClim



Global climate and weather data

Historical climate data
Historical monthly weather data
Future climate data

Welcome to the WorldClim data website.

WorldClim is a database of high spatial resolution global weather and climate data. These data can be used for mapping and spatial modeling. The data are provided for use in research and related activities; and some specialized skill and knowledge is needed to use them (here is some help). More easily available data for the general public will soon be available here.

You can download gridded weather and climate data for historical (near current) and future conditions.

www.worldclim.org

WORLDCLIM

INTERNATIONAL JOURNAL OF CLIMATOLOGY
Int. J. Climatol. **25**: 1965–1978 (2005)
Published online in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/joc.1276

VERY HIGH RESOLUTION INTERPOLATED CLIMATE SURFACES FOR GLOBAL LAND AREAS

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INTERNATIONAL JOURNAL OF CLIMATOLOGY
Int. J. Climatol. (2017)
Published online in Wiley Online Library
(wileyonlinelibrary.com) DOI: 10.1002/joc.5086

RMetS
Royal Meteorological Society

WorldClim 2: new 1-km spatial resolution climate surfaces for global land areas

Stephen E. Fick[a*] and Robert J. Hijmans[b]
[a] *Department of Plant Sciences, University of California, Davis, CA, USA*
[b] *Department of Environmental Science and Policy, University of California, Davis, CA, USA*

www.worldclim.org

WORLDCLIM

- global monthly averages
- period 1970-2000
- mean, maximum and minimum temperature, and precipitation
- 19 Bioclim variables
- spatial resolution of ~1 km
- future RCP scenarios for 2040, 2060, 2080, 2100
- past climate scenarios
  - Last Interglacial period
  - Last Glacial Maximum
  - Holocene

www.worldclim.org

CHELSA

Home | About | Bioclim | Last Glacial Maximum Climate | Timeseries | Future (CMIP5)

Downloads | Known issues | CHELSAcruts (1901-2016)

CHELSA – Free climate data at high resolution

http://chelsa-climate.org

CHELSA

- global monthly mean temperature and precipitation
- period 1981-2010
- spatial resolution of ~1 km
- monthly precipitation, maximum, minimum, and mean temperatures
- temporal series: yearly variables (1979-2018)
- future RCP scenarios for 2040, 2070 and 2100
- past climate scenarios for the Last Glacial Maximum

http://chelsa-climate.org

CLIMOND

www.climond.org/

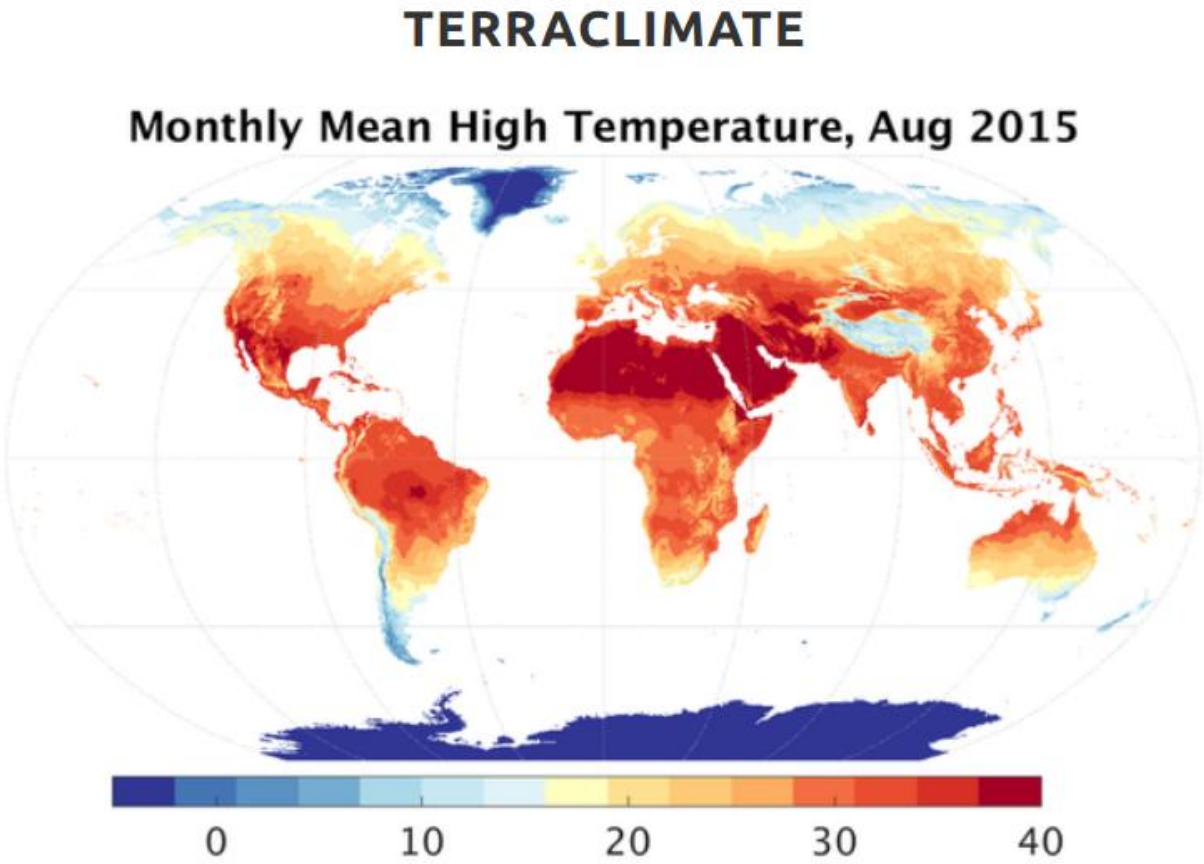
CLIMOND

- interpolated surfaces at 10' and 30' of spatial resolution
- recent historical climate
- future climate scenarios
- monthly climate data
- 40 Bioclim variables
- CLIMEX format
- CliMond uses Worldclim and the Climate Research Unit (CRU) (CL1.0 and CL2.0) datasets

www.climond.org/

TERRACLIMATE

About | Download | Updates | References



www.climatologylab.org/terraclimate.html

TERRACLIMATE

- temporal series: yearly variables (1958-2015)
- spatial resolution of ~4-km (1/24th degree)
- climatic variables: maximum temperature, minimum temperature, vapour pressure, precipitation accumulation, downward surface short-wave radiation, and wind-speed
- climatic water balance variables: reference evapotranspiration, runoff, actual evapotranspiration, climate water deficit, soil moisture, snow water equivalent, drought severity index, vapour pressure deficit

www.climatologylab.org/terraclimate.html

EUMEDCLIM

frontiers in Ecology and Evolution

DATA REPORT
published: 04 April 2018
doi: 10.3389/fevo.2018.00031

Check for updates

The EuMedClim Database: Yearly Climate Data (1901–2014) of 1 km Resolution Grids for Europe and the Mediterranean Basin

Thibaut Fréjaville and Marta Benito Garzón*

Biodiversité Gènes et Communautés (UMR 1202), Institut National de la Recherche Agronomique, Université de Bordeaux, Pessac, France

Keywords: anomaly, bioclim, climatic extremes, CRU, interpolation, precipitation, temperature, WorldClim

http://gentree.data.inra.fr/climate/

EUMEDCLIM

- temporal series: yearly climate data
- 1901–2014 of 1 km resolution
- for Europe and the Mediterranean Basin
- seven Bioclim variables (bio1, 2, 5, 6, 12, 13, 14)
- annual precipitation
- seasonal temperature and precipitation
- annual potential evapotranspiration
- minimal and maximal monthly potential evapotranspiration
- annual water balance
- minimal and maximal monthly water balance

http://gentree.data.inra.fr/climate/

OCEAN COLOR

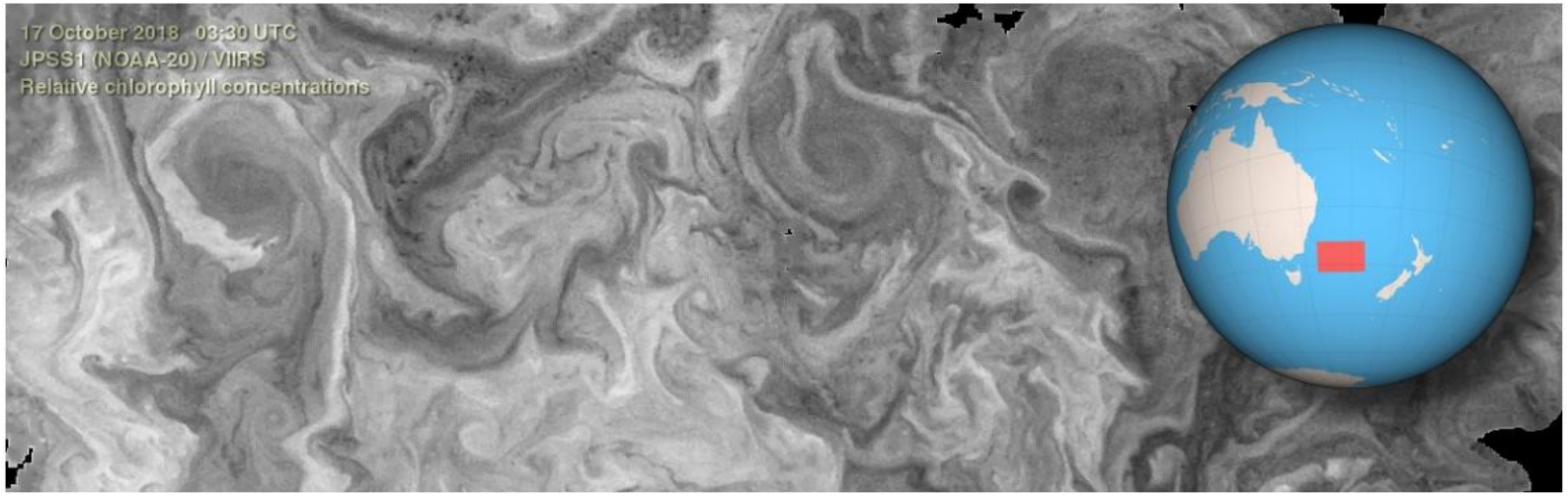
OceanColor WEB

ABOUT MISSIONS DATA DOCS SERVICES

NASA's OceanColor Web is supported by the Ocean Biology Processing Group (OBPG) at NASA's Goddard Space Flight Center. Our responsibilities include the collection, processing, calibration, validation, archive and distribution of ocean-related products from a large number of operational, satellite-based remote-sensing missions providing ocean color, sea surface temperature and sea surface salinity data to the international research community since 1996.

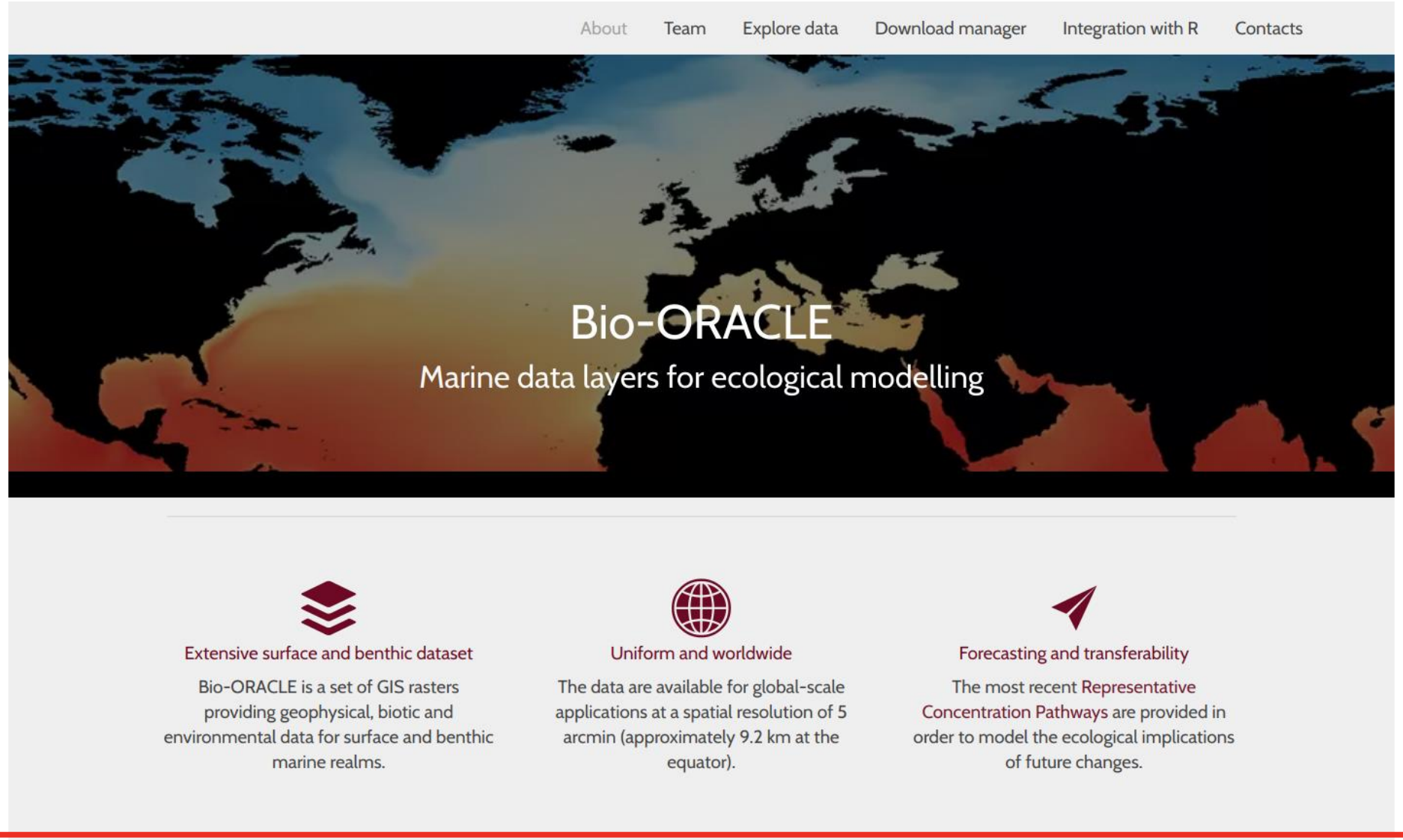
Ocean Color Feature

Tasman Sea Chlorophyll



https://oceancolor.gsfc.nasa.gov/

BIO/ORACLE

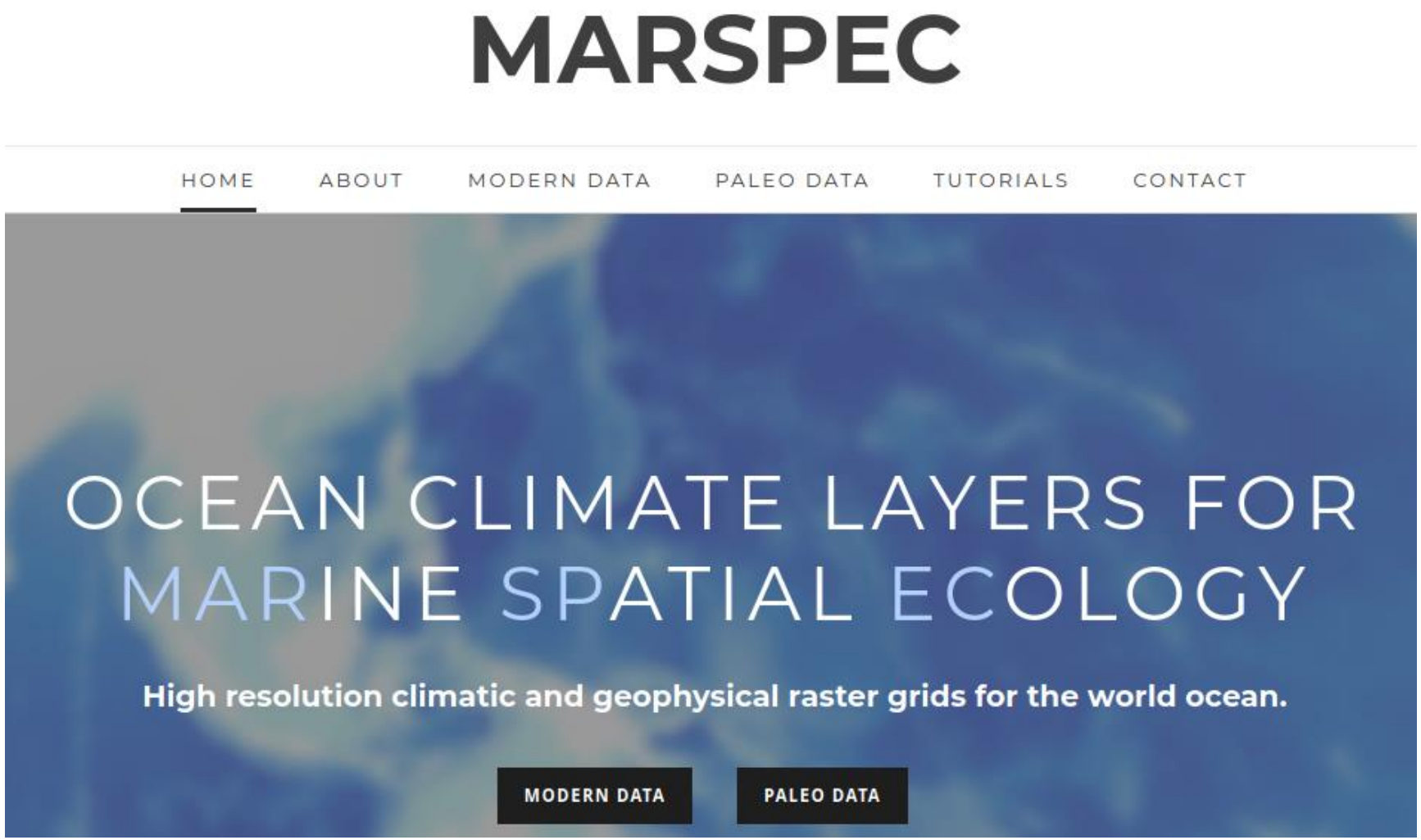


http://bio-oracle.org

BIO/ORACLE

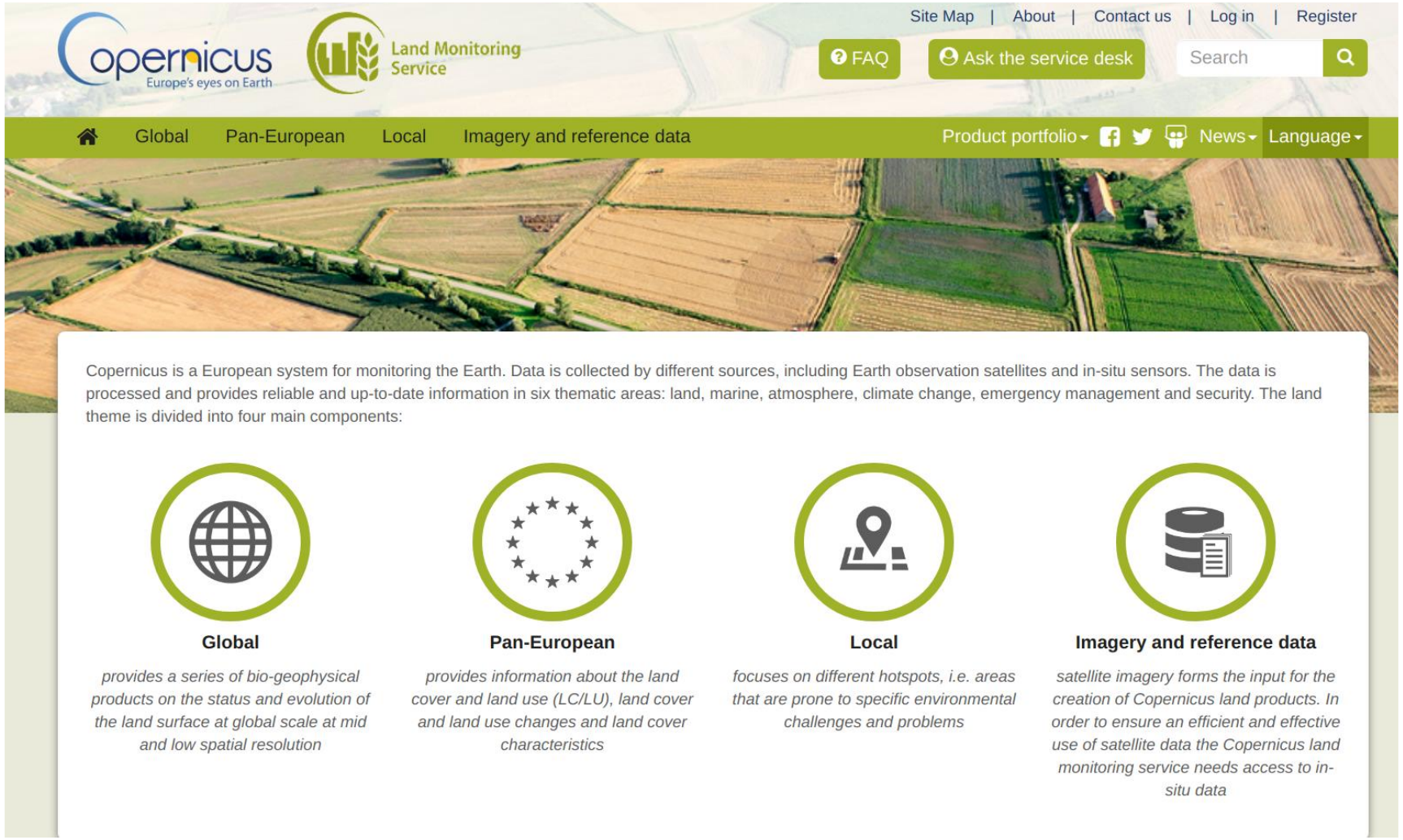
- geophysical, biotic and environmental data
- surface and benthic global marine environments
- spatial resolution of 5 arcmins (approximately 9.2 km at the equator)
- only dataset for ocean environments with future climate scenarios
- temperature, salinity, currents velocity, ice thickness, sea ice concentration, nitrate, phosphate, silicate, dissolved molecular oxygen, iron, chlorophyll, phytoplankton, primary productivity, calcite, pH, photosynthetic available radiation, diffuse attenuation, and cloud cover.

MARSPEC



http://marspec.weebly.com/

COPERNICUS LAND MONITORING SERVICE

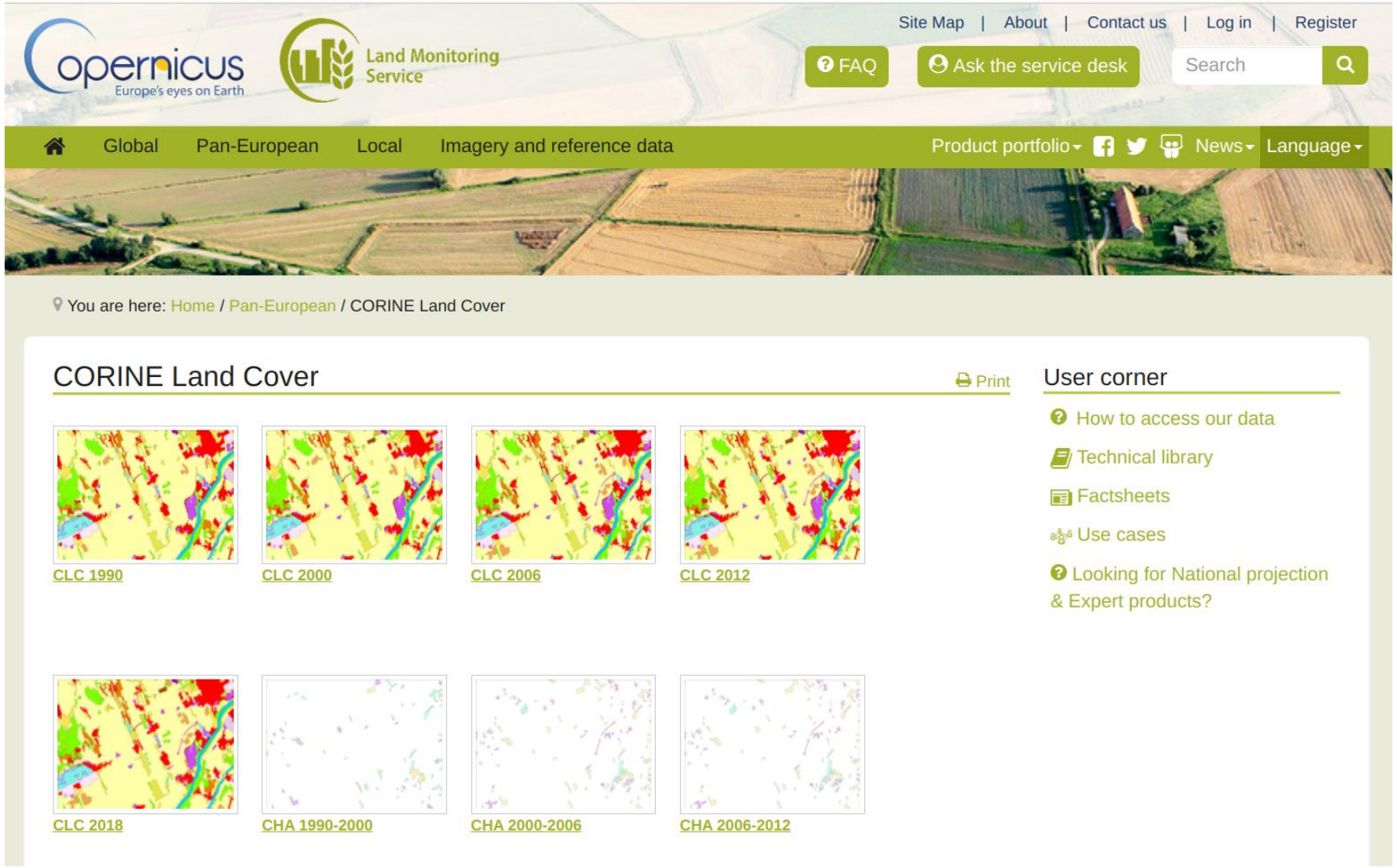


https://land.copernicus.eu/

COPERNICUS LAND MONITORING SERVICE

https://land.copernicus.eu/pan-european

CORINE LAND COVER DATA



https://land.copernicus.eu/pan-european/corine-land-cover

SRTM: SHUTTLE RADAR TOPOGRAPHY MISSION

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Jet Propulsion Laboratory
California Institute of Technology

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Shuttle Radar Topography Mission
The Mission to Map the World

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- Italian Space Agency

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U.S. Releases Enhanced Shuttle Land Elevation Data

On September 23, 2014, the White House announced that the highest-resolution topographic data generated from NASA's Shuttle Radar Topography Mission (SRTM) in 2000 was to be released globally by late 2015. The announcement was made at the United Nations Heads of State Climate Summit in New York. Since then the schedule was accelerated, and all global SRTM data have been released.

See the full JPL Release 2014-321.

Previously, SRTM data for regions outside the United States were sampled for public release at 3 arc-seconds, which is 1/1200th of a degree of latitude and longitude, or about 90 meters (295 feet). The new data have been released with a 1 arc-second, or about 30 meters (98 feet), sampling that reveals the full resolution of the original measurements.

See an index map of the newly available full-resolution data. (SRTM did not produce data for the northernmost latitudes or Antarctica.)

The new data are available for download from the USGS EROS Data Center - see Public Data Distribution for details.

See the Africa image above and its caption at the PIA04965. A fly around video of the Crater

https://www2.jpl.nasa.gov/srtm/

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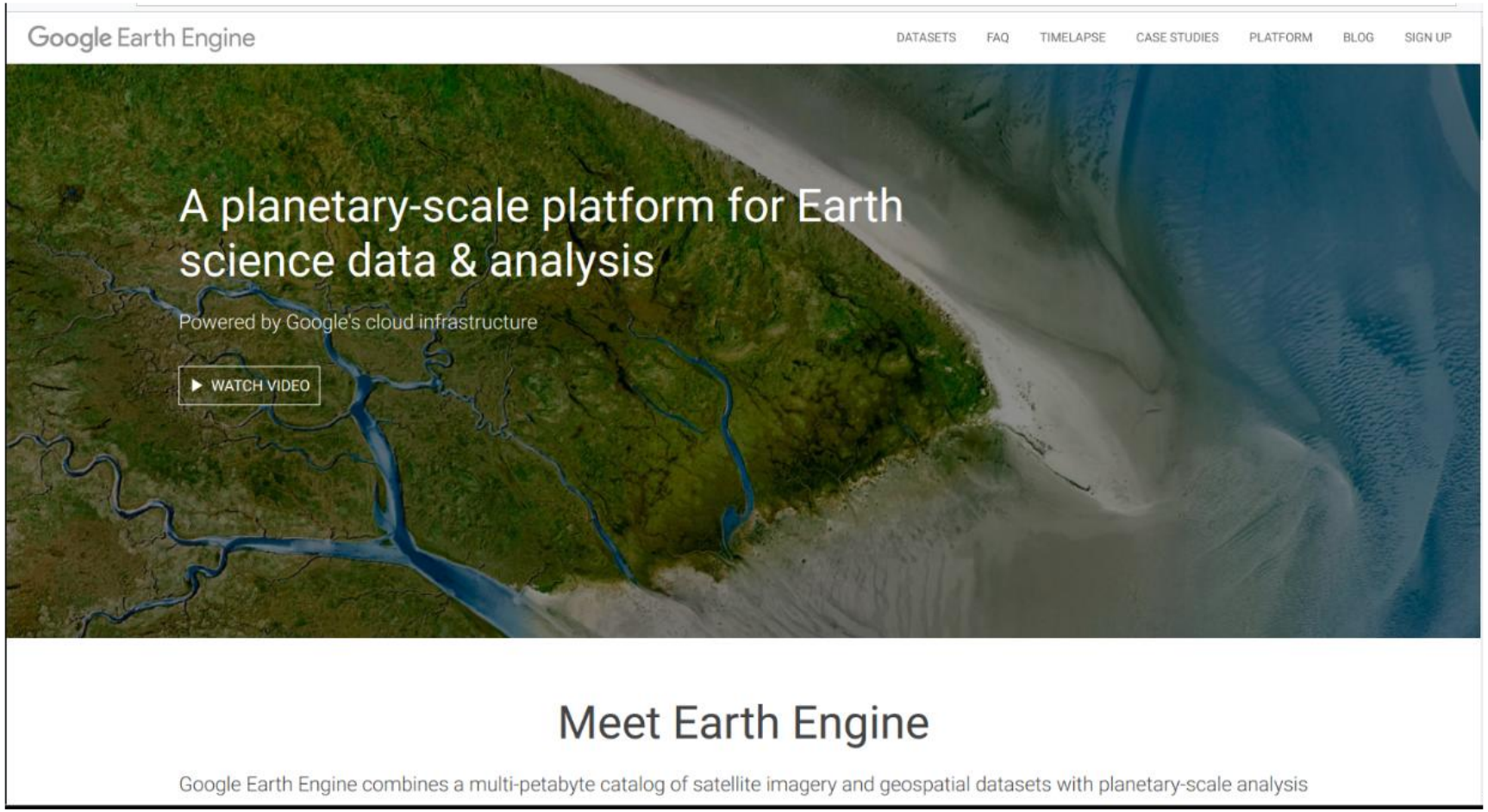
ASRER GLOBAL DIGITAL ELEVATION MODEL

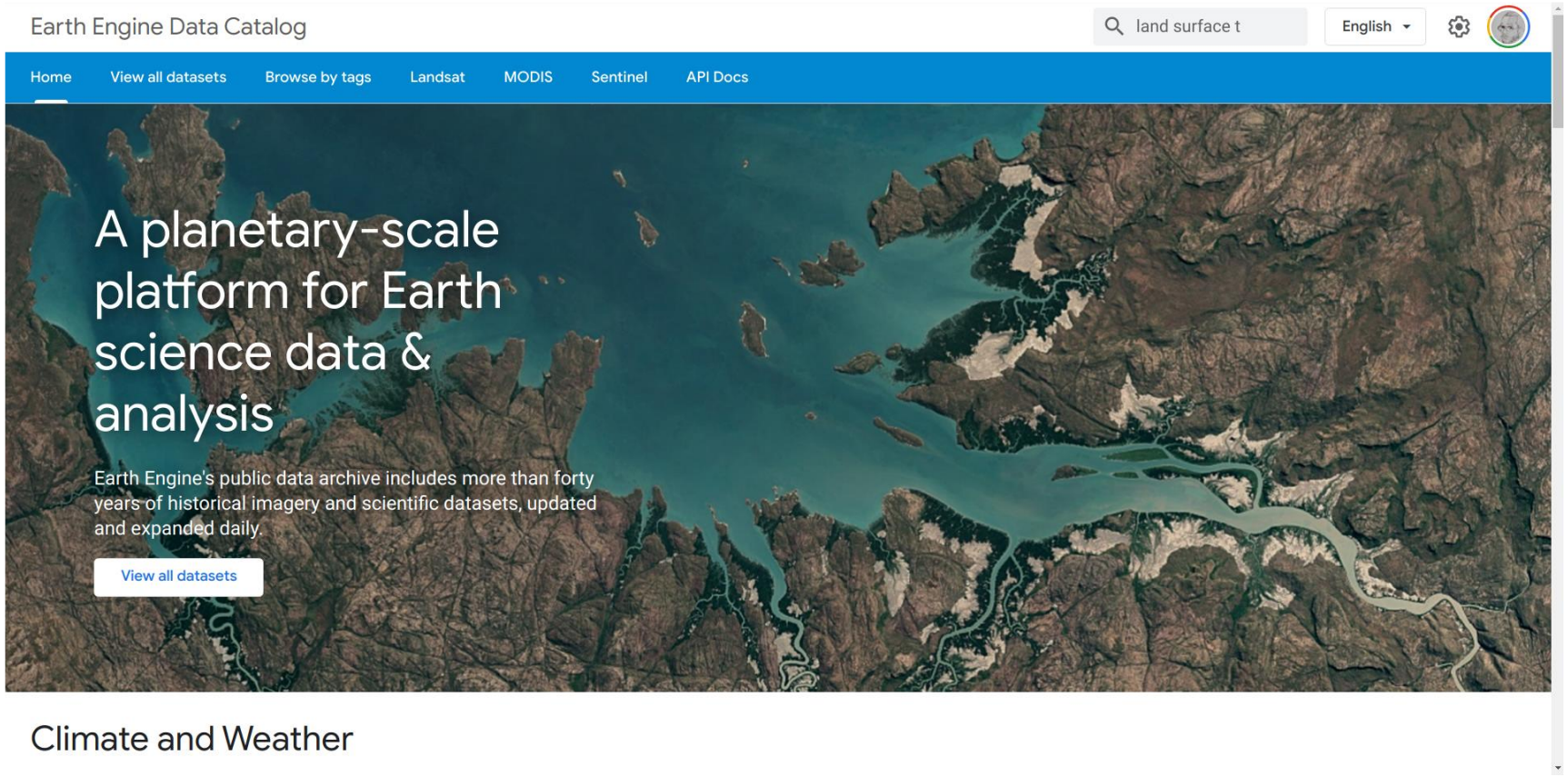
http://asterweb.jpl.nasa.gov/

GOOGLE EARTH ENGINE



https://earthengine.google.com

GOOGLE EARTH ENGINE CATALOG



https://developers.google.com/earth-engine/datasets

GOOGLE EARTH ENGINE CATALOG

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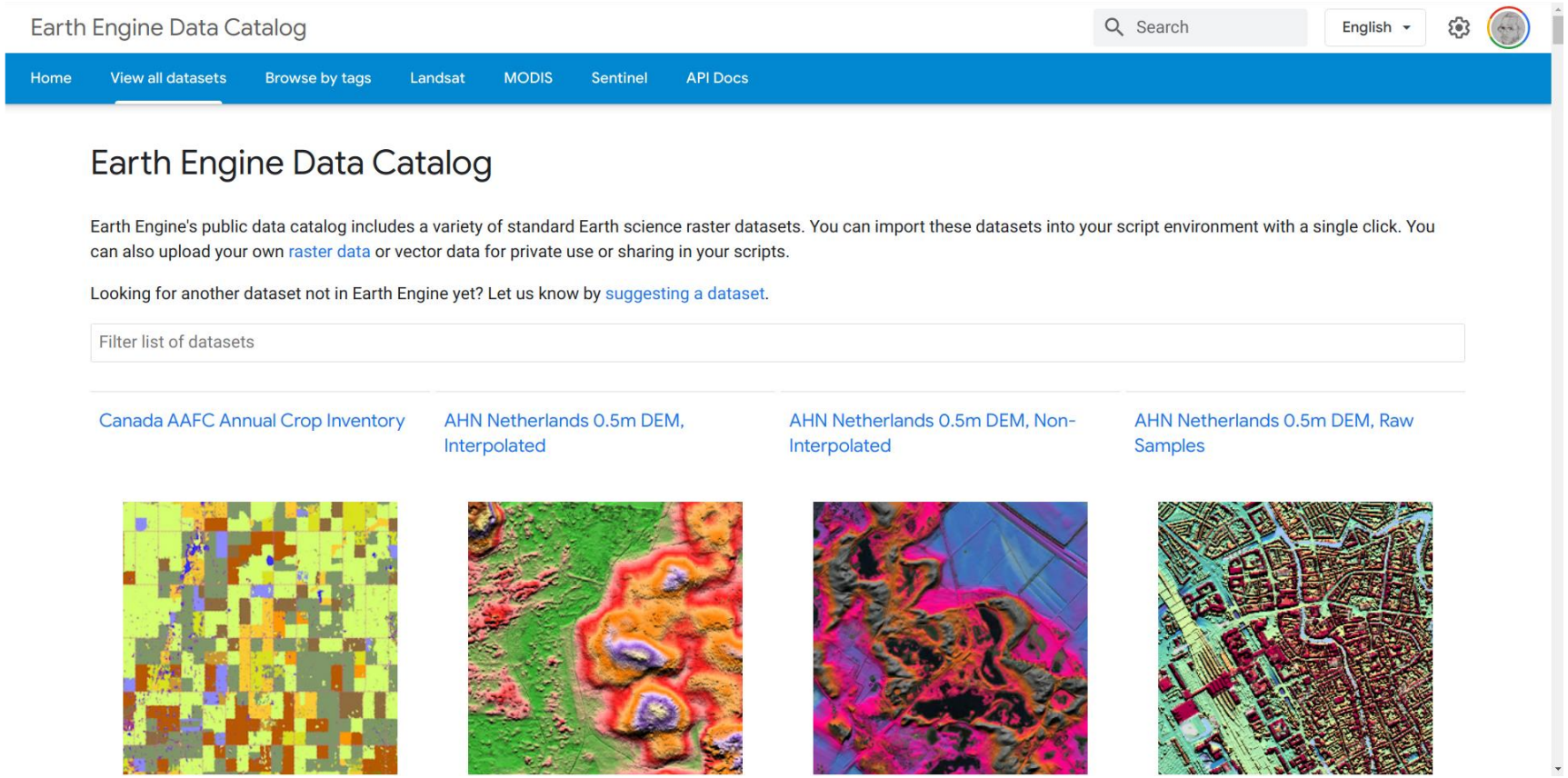

https://developers.google.com/earth-engine/datasets

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Thanks for your attention!
Muito obrigado!
¡Muchas gracias!