ECOPOTENTIAL

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ECOPOTENTIAL: Using Earth Observation to Protect Natural Landscapes

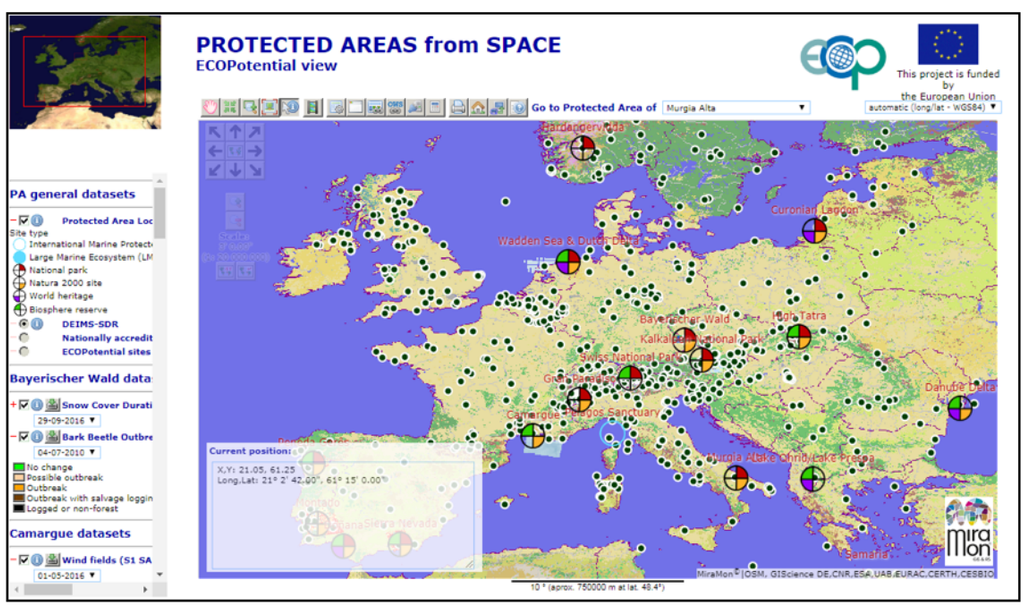
@ECOPOTENTIALprj EcoPotentialProject www.ecopotential-project.eu

The ECOPOTENTIAL Earth Observation On-line Services

1 Protected Areas from Space map browser

http://maps.ecopotential-project.eu/

ECOPOTENTIAL Protected Areas have benefited from the potential of monitoring through Earth Observations (EO). Many bio-geophysical variables (e.g., tree cover density, vegetation height, vegetation phenology, above ground biomass, soil moisture, NDVI, NDWI, LST, SST, Chl-a, hydroperiod and wind fields) have been derived from several satellites.



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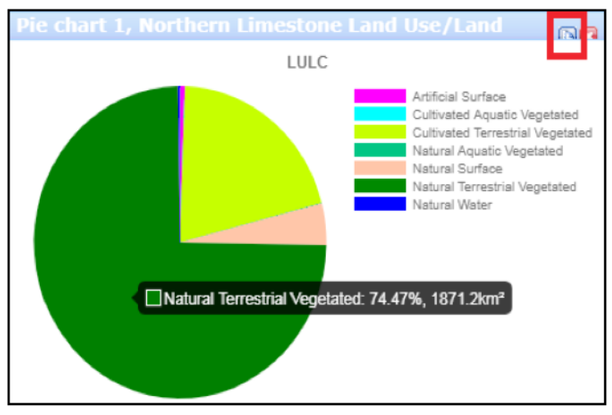
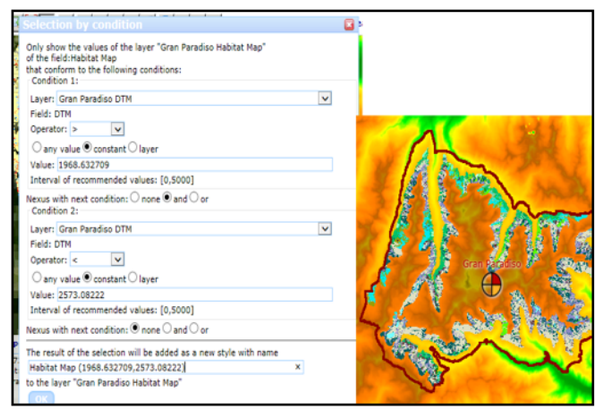
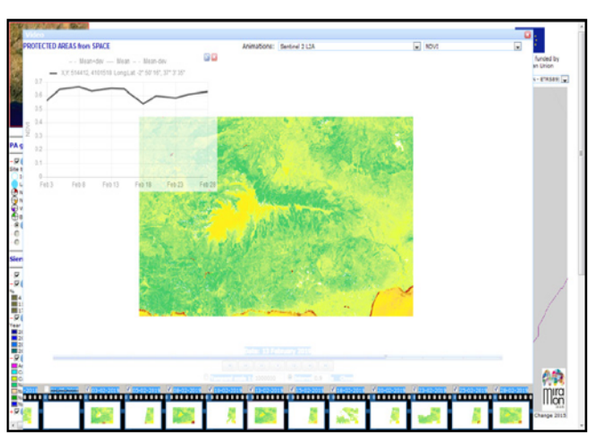


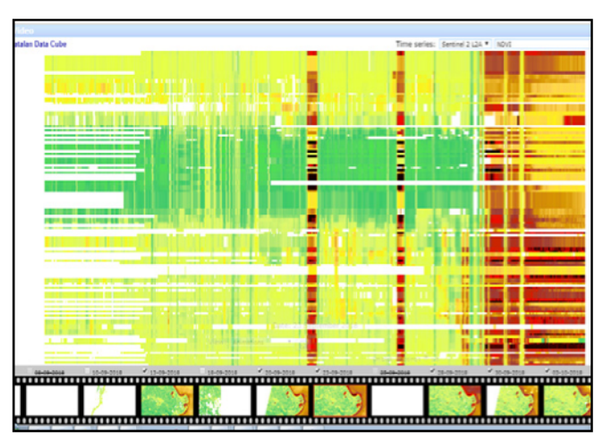
Generation of data statistics, histograms or pie charts.



Application of spatial filters and complex band maths.



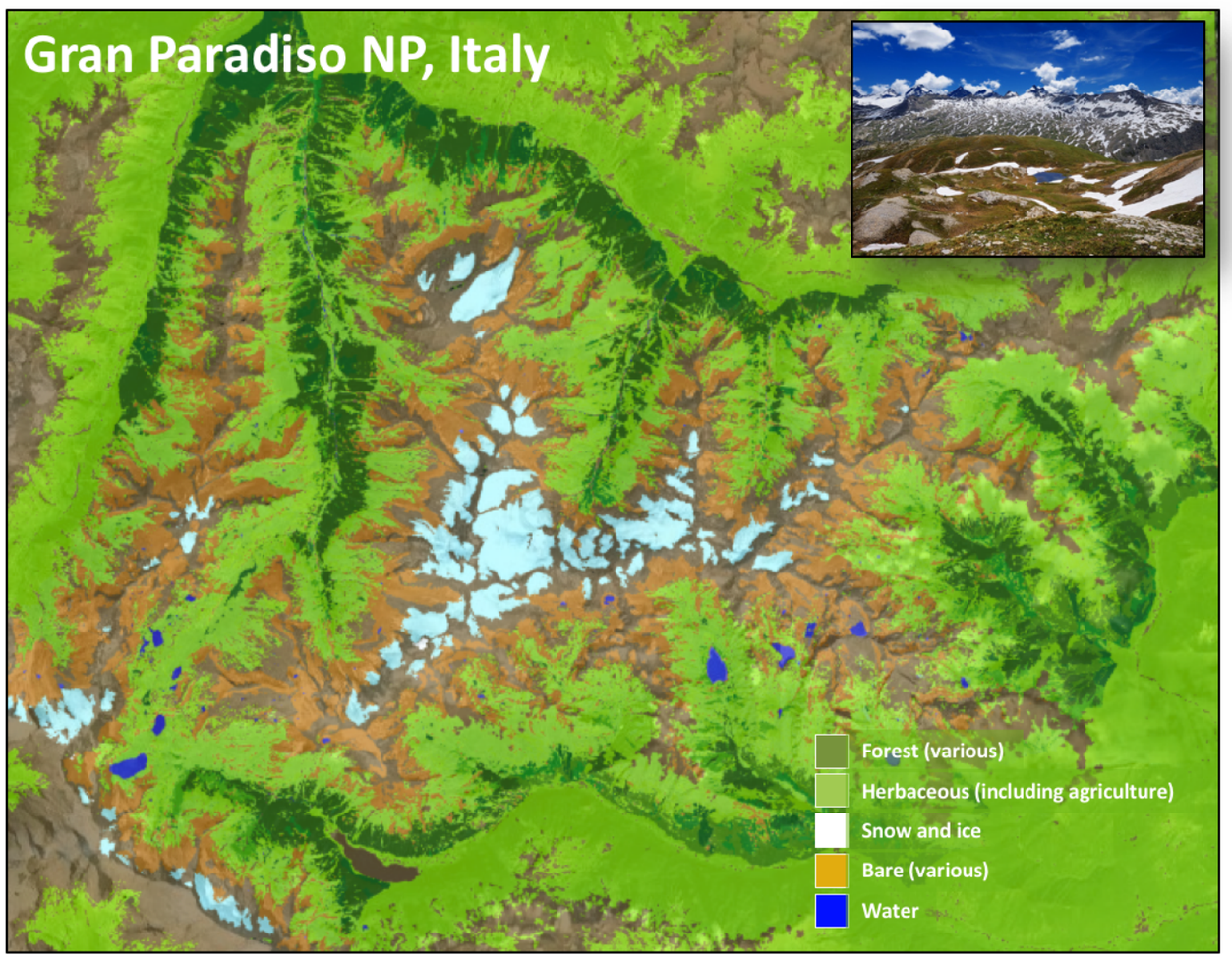
Animated time-series functionality and space-time analysis.

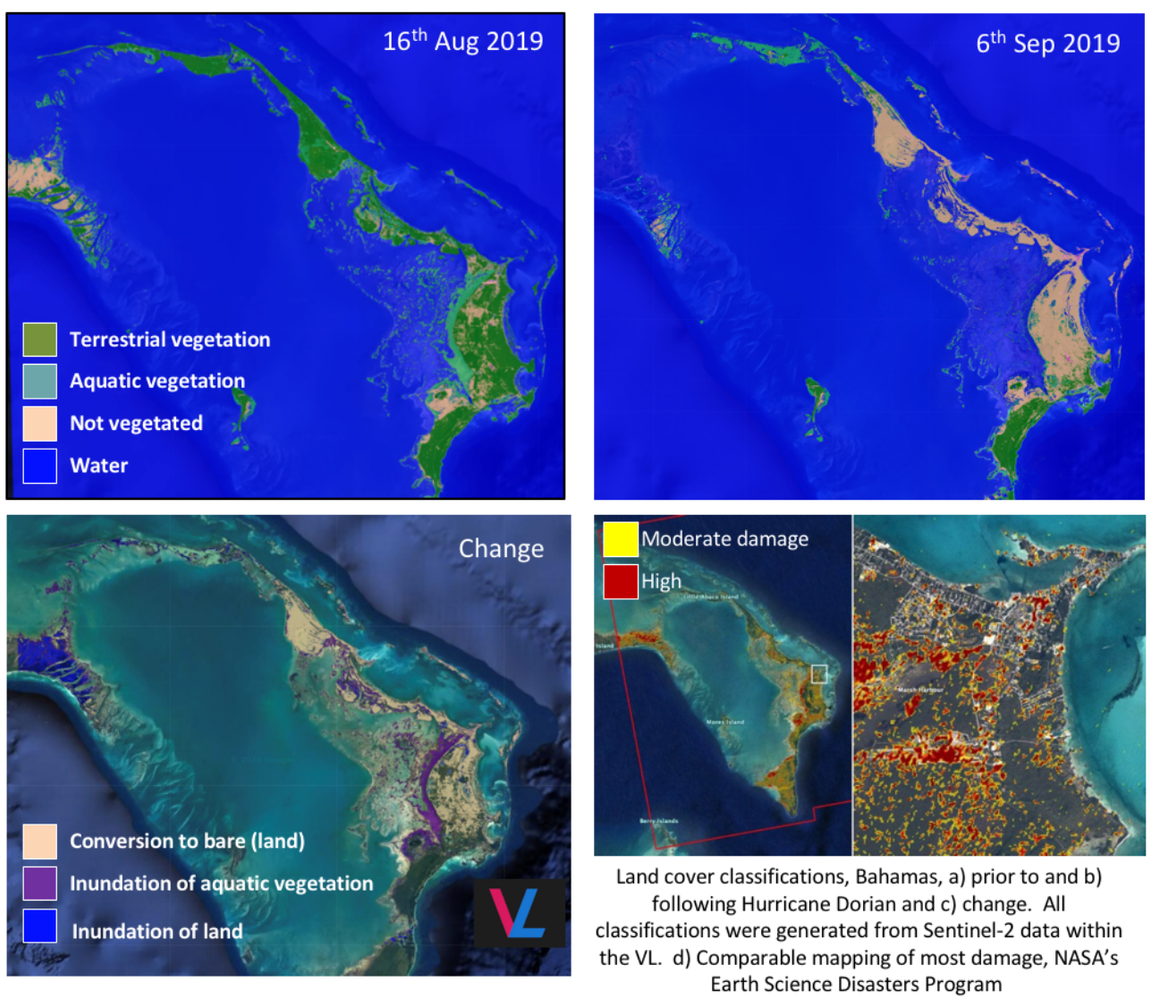


Detailed time evolution graph for a given point by generating time profiles of the given position

2 The Earth Observation Data for Ecosystem Monitoring (EODESM)

https://essilab.wixsite.com/eodesm



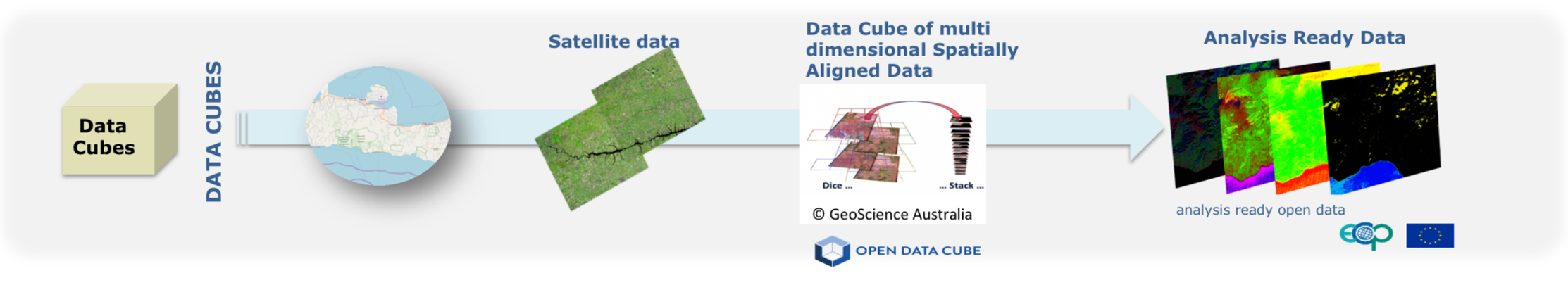


Land cover classifications, Bahamas, a) prior to and b) following Hurricane Dorian and c) change. All classifications were generated from Sentinel-2 data within the VL. d) Comparable mapping of most damage, NASA's Earth Science Disasters Program

EODESM was designed to generate land cover and evidence-based change maps by simply combining environmental variables retrieved primarily from EO data.

EODESM is available through the Virtual Laboratory and allows direct classification and change detection (including same day) for any location worldwide by combining Sentinel-2 data from any two dates from the Sentinel hub.

3 ECOPOTENTIAL DataCubes ECOPOTENTIAL contributed to and makes use of Data Cubes



ECOPOTENTIAL DataCube for Protected Areas allows easy access, manage and analysis of a multidimensional cube (space and time) of Sentinel-2 L2A time series for 18 protected areas.

http://maps.ecopotential-project.eu/

The Greek Data Cube allows to monitor land resources. GDC contains Sentinel-2, Landsat 5,7 and 8 Analysis Ready Data for West Crete. It will provide online services for protected areas in Greece.

http://datacube.iti.gr/

Examples from the **Swiss data cube:**
Snow Cover evolution using 34 years of Landsat in Gran Paradiso National Park.
http://www.swissdatacube.ch
https://www.mdpi.com/2306-5729/4/4/138
Global marine ecosystem functional types with high whale presence
https://www-iuem.univ-brest.fr/datacube/sample-apps/rshiny_app/