

CLMS NCP: Bio-geophysical parameters

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Ines Marinosci – ISPRA
Antonella Tornato - ISPRA

Questions

Q: Does HRVPP provide added value for crop type characterization compared to Copernicus HR Croplands?

A: Yes, HR-VPP can provide added value for crop type characterization, but mainly as complementary temporal/physiological information, not as a replacement for HRL Croplands Crop Types (CTY)

Q: How fast NRT snow cover and snow state products are available after observation?

A: Yes, snow extent and snow state are both available in NRT, that means 3h after availability of the image (Sentinel-1 or Sentinel-2) in ESA's archive. The NRT data for snow are: Fractional Snow Cover, Gap-filled Fractional Snow Cover, Wet/Dry Snow, SAR Wet Snow

Q: Have you done any further research on forests? Specifically, the recognition of biotic and/or abiotic variations, such as forest use (felling) or bark beetle attack.

A: HR-VPP2 is intended to support tree cover disturbance monitoring, both intra and inter annual disturbances and regeneration/regreening, but it is not yet reporting a confirmed biotic/abiotic cause. However there are several EO examples addressing disturbance agents, and we are running feasibility studies to see if this is feasible in the context of CLMS, giving its operational mandate and giving accuracy requirements.

Questions

Q: how was the classification between permanent and temporary water defined, and which temporal thresholds were applied? Also, just to clarify data availability: are these products currently available at an annual aggregation only, for the years 2021 through 2024? Would it be possible to ask for products at different time of aggregation?

A: The so called Water Layer is generated for the reference years 2021 and 2024, but they are the aggregation of 7 years time series of monthly water masks. On top of that we have the annual product, called Water Cover Duration, that is generated for the hydrological years from 2016-2017 onwards. So, every year between 2016-2017 to the end of the production contract that is going to be 2027. We do not offer solutions tuned to specific requests. Methodology: [HR-WSI-DT-064-MAG ATBD WATER v1.3](#)

The main classification, the Water Layer (WL) is finally created from the WPI. Here, a water presence index above 85% is considered as permanent water, below 25% as dry or mostly dry and everything between 25% - 85% as temporary water as defined in Table 7." Reference, page 50 to the document shared above

Table 7. Classification criteria for the primary WL product

These are the criteria:

Code	Class	Frequency	
		Water relative frequency	Dry relative frequency
1	Permanent water (always water with minor instances of dry/non-water)	> 85 %	<= 15 %
2	Temporary water (alternation of dry and water)	> 25 % - 85 %	<= 75 %
0	No water (dry; always or mostly dry/no water with minor instances of water)	< 25 %	> 75 %

Questions

Q: Was the ramp-up test over the Po river basin district conducted with the contribution/support of the River Basin District Authority of the Po river? Which data and data sources were then used for the ramp-up test over the Po river basin district?

A: There was no formal agreement or collaboration with the River Basin Authority, but happy to explore opportunities as the test areas will be reprocessed as part of the production phase. As indicated in the presentation, we have a number of data sources at European and national level used (the latter typically for refinement and improvement). We can share the list of the datasets used across the three test areas but with the caveat that these will not necessarily be the final ones used within production (as mentioned above, we are now compiling as much as possible data on man-made structures at national and regional level) - the test areas were mostly created to demonstrate the feasibility of the methodology. For example, one of the datasets from Italy in the test area is the DBSN (Database di Sintesi Nazionale). In production we have not yet reached Italy, but I can say that in Spain, some of the ancillary datasets identified to be fed into Hydro-ART come from the Ministry of Environment or the IGN Spain. The test areas of EU-Hydro 2.0 are also using WISE centrelines and surface water bodies for manual corrections.

Questions

Q: Hydro products (WBO or DEM)" Do you use any ground measurements, or is it all generated from satellite data?

A: Well, we use a number of ancillary data (=geospatial reference data). We will publish a list of European and national ancillary data used together with the dataset.

Q: Regarding the longitudinal barrier structures shown on your map: are these sourced from regional or local infrastructure cadasters or extrapolated from your analysis? Also, I missed what is your primary objective here - is it to predict the potential presence of unmapped barriers, or do you have other goals in mind? Lastly, have you tested this approach on other river basins in Italy or Europe, or has your study focused solely on the Po River basin so far?

A: For the layer "Hydro-ART" we are working only with existing ancillary data at national and European level - "as is" (there is no satellite-derived data included, we only remove obvious duplicates or ostensibly inaccurate data). We are working as we speak to compile as much information as possible and available at national and sub-national level (from public authorities). The final objective is to have an inventory of barriers and related structures at pan-European level for policy analysis, that could be, if all goes well, complemented and improved with the reported data by the countries within the NRR context (free-flowing rivers). In the ramp-up phase, we covered also Andarax (ES) and Råne (SE).

Questions

Q: for the Nebulous, are the data layers in the Nebulous demo platform available in near real time? and does Nebulous allow the identification of heat islands caused by surface characteristics versus anthropogenic heat emissions?

A: Yes, those coming from meteorological data using open meteo or lot sensors.

At the end, the UHI index is a compendium of land surface temperature, albedo, pollution, altitude, NDVI, NDMI and some urbanistic parameters, so it encloses surface characteristics and anthropogenic emissions, but unfortunately does not discriminate which belongs to one category or to the other.

Q: who has access to the 10-meter-resolution Copernicus datasets? Are they restricted to specific institutions or user groups?

A: The Copernicus Contributing Mission data (VHR imagery, optical and radar) access is governed under this page: <https://dataspace.copernicus.eu/explore-data/data-collections/copernicus-contributing-missions/ccm-user-categories>

And also:

<https://dataspace.copernicus.eu/explore-data/data-collections/copernicus-contributing-missions/collections-description/COP-DEM>

The following registered users can download all instances of the Copernicus DEM: Public authorities, Copernicus Services, EU institutions, Space research projects (EU funded), Non-space research projects (EU funded), Copernicus Operators

Questions and Conclusions

ANY OTHER QUESTIONS?

Contact us at:

clms.ncp@isprambiente.it

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CLMS NCP ITALY:UPCOMING EVENT

- Date: March 20th
- Location: ISPRA Headquarters, Rome
- Format: Hybrid event (In-person & Online)
- Objective: Closing of Phase I
- Language: Italian

Italian User Community Case Studies will be presented during the event.

Several proposals have already been received following the first meeting, but there's still time to contribute. **Submit your proposal by March 13th!**

You are all cordially invited to participate!

 clms.ncp@isprambiente.it

Questions and Conclusions

Please complete the online survey to receive your certificate of attendance from the EEA

<https://forms.gle/MgX2PEZWXYZfrPCVd8>



THANK YOU!

clms.ncp@isprambiente.it

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