



EUMETNET
EUROPEAN METEOROLOGICAL
SERVICES NETWORK

Summary of EWGLAM Surface Sessions 2024

Patrick Samuelsson (SMHI)
Chair of Surface Expert team

Parallel session on surface aspects

Wednesday October 2nd 08:30-10:30 CEST

Chairs: Patrick Samuelsson (SMHI) and Gabriel Stachura (IMGW)

- Martina Tudor (DHMZ, Croatia): “**LACE activities on surface**”
- Jürgen Helmert (DWD, Germany): “Towards implementation of **HiHydroSoil v2.0** in the ICON-(ART) system at DWD: Global Maps of Soil Hydraulic Properties at 250m Resolution”
- Jan-Peter Schulz (DWD, Germany) et al.: “A new **urban parameterisation for the ICON** atmospheric model”
- Russell Glazer (University of Reading, UK): “**Evaluation of a mixed-layer height detection algorithm** in the Unified Model using data from the urbisphere-Berlin field campaign”
- Abhishek Lodh (SMHI, Sweden): “Using **Ensemble Land Data Assimilation** Spread for evaluating impact of Surface Observations in the ISBA coupled Harmonie- Arome model”
- Ekaterina Kurzeneva (FMI) and Patrick Samuelsson (SMHI): “How can the ML-based decametric physiography framework be used for C-SRNWP?”

[All presentations are available via this link](#)

Chiara Marsigli showed this slide last Monday in her presentation about “News about C-SRNWP”

C-SRNWP 2024 – 2028 - requirements

Req no.	Requirement description	Priority
C-SRNWP_1	Ensure efficient exchange of information between Participating Members and European LAM consortia in relation to scientific, technical and operational aspects of NWP.	M
		RU
C-SRNWP_2	Ensure the maintenance of resources (e.g. existing software) and development of new resources under the EUMETNET 'umbrella' to support the NWP community, e.g. in data assimilation (DA) and parametrization.	M
		RU

<ul style="list-style-type: none"> • EWGLAM/SRNWP annual workshop • Expert Teams of selected topics • SRNWP website • Contact with the OBS programmes -> A. Cress, DWD • Short Term Scientific Missions -> E-WFC • Inform about other conferences/projects • Follow the DestinE project • Organise thematic workshops
<ul style="list-style-type: none"> • Catalogue of resources • Maintain and develop existing resources (Global Lake Database, SRNWP Surface Data Pool) -> new proposal from ET SURF?

Circumstances around the maintenance of the Global Lake Database has changed and the resources allocated cannot currently be used.

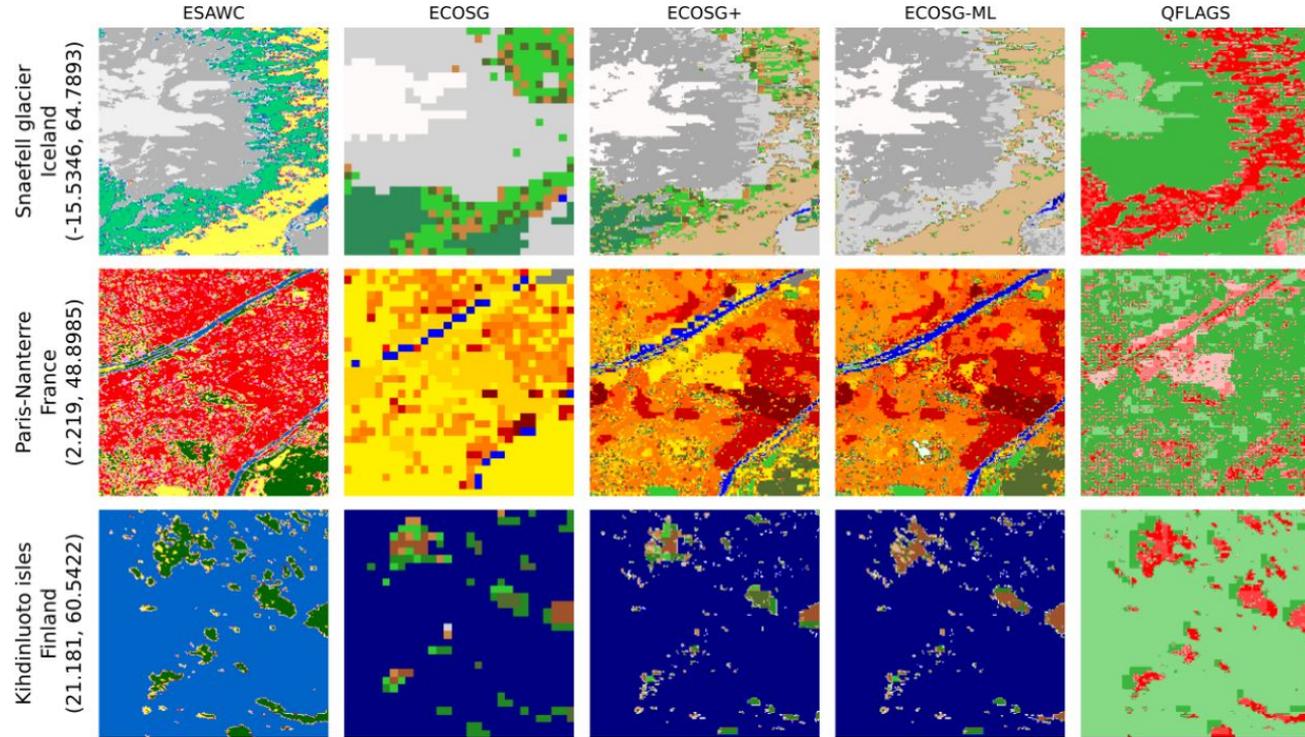
Therefore, as a temporary solution, these resources are now suggested to be directed to the ML-based European physiography product presented Tuesday morning, and yesterday at the surface side meeting, ...

Next generation of physiography data is based on Machine Learning

Here, physiography generated by these two methods are compared to ESA CCI landcover Word Cover map (ESAWC) and ECOSG, accompanied by quality flags (QFLAGS).

Links to documentation:
Geoffrey Bessardon et al. (2024),
doi: [10.20944/preprints202409.0953.v1](https://doi.org/10.20944/preprints202409.0953.v1)
Thomas Rieutord et al. (2024),
doi: [10.20944/preprints202409.0942.v1](https://doi.org/10.20944/preprints202409.0942.v1)

Work now continues at FMI by
Rudolf Mård and Panu Maalampi.

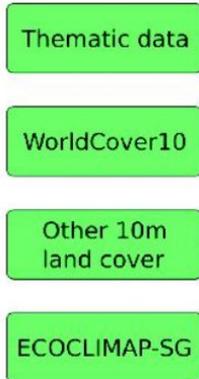


Slide by Ekaterina Kurzeneva at the side meeting

Step 1: decision tree

Datasets

Reprojected +
downscaled/upscaled
to 60-m resolution



Processing

1. Do high resolution maps match?
2. Is there any more reliable thematic map?
3. Does the WC10 map agree with thematic map?
4. Does the WC10 map agree with ECO-SG?

Outcome

Highest quality

Quality flag: 1

Quality flag: 2

Quality flag: 3

Quality flag: 10

Quality flag: 11

Quality flag: 12

Lowest quality

} Apply thematic label

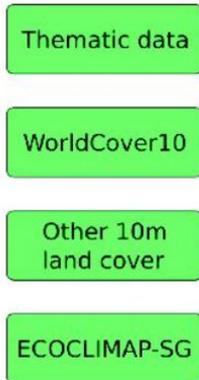
ECOSG land cover labels at 60 m resolution over Europe!

Slide by Ekaterina Kurzeneva at the side meeting

Step 1: decision tree

Datasets

Reprojected +
downscaled/upscaled
to 60-m resolution



Processing

1. Do high resolution maps match?
2. Is there any more reliable thematic map?
3. Does the WC10 map agree with thematic map?
4. Does the WC10 map agree with ECO-SG?

Outcome

Highest quality

Quality flag: 1

Quality flag: 2

Quality flag: 3

Quality flag: 10

Quality flag: 11

Quality flag: 12

Lowest quality

} Apply thematic label

**Suggestion:
ESA-CCI land cover labels at 60 m resolution over Europe!?**

Next step

The C-SRNWP Expert team on “Surface and soil processes (model and data assimilation)” (hmhm, outdated list of members) will be called for a meeting to discuss and decide on how to go forward with this suggestion...