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Comments on EUCOS monitoring standards (SRNWP)

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Questions by EUCOS

- Data Availability standards
- Data Timeliness standards
- Data Accuracy standards
- Other categories for monitoring

- Current standards and related questions distributed through the Data Assimilation Expert Team of C-SRNWP

- Answers from: Denmak, Hungary (implicitly LACE), Russia, UK

(LACE: Austria, Croatia, Czech Republic, Hungary, Romania, Slovakia, Slovenia)

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Data availability

- Current standards are satisfactory!

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Data timeliness

- Current timeliness:
  - nominal obs time + 100 min
  - nominal obs time + 50 min

- Proposed timeliness:
  - nominal obs time + 100 min (long cut-off)
  - nominal obs time + 50 min (short cut-off)
  - Nominal obs time + 15 min (nowcasting)

Data accuracy

- reduce the AMDAR Temperature RMSE target from 1.5K to 1K (to have it equal to radiosonds) → similar quality of the two instrument is expected

- reduce RMSE target by a factor of 1.5 or even 2. The proposed targets are:
  - Temperature: synops: 0.5 K, radiosondes: 0.5 K in the troposhere and 0.75 K in the stratosphere, aircraft observations: 0.5 K
  - Geopotential: 50 m in the troposphere
  - Surface pressure: 0.5 hPa
  - Wind : synops: 1.5 m/s, radiosondes: 2 m/s, aircraft observations: 2.5 m/s

- propose less than 250 km for synop stations' horizontal spacing: 100-150 km or typical distance of national automated networks

- reduce pressure RMSE target from 1 hPa to 0.5 hPa

- reduce relative humidity RMSE target from 10% to 5% or better (maybe too challenging!)

Data accuracy

- reduce wind RMSE targets (5 m/s) for land surface stations → reporting calm winds all the time would meet 5 m/s rms target at some stations

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Other categories

- None proposed by the SRNWP community

Additional remarks

- what is the status of "Ocean platform Ekofisk"? It doesn't appear in WMO Pub9 - could be reporting in SHIP code (and TEMP SHIP code?)

- radiosonde reports in North Sea should be added

- possibly 1 h precipitation to be included in the SYNOP data exchanged and monitored → exchange of these will be vital in obtaining a reliable radar based precipitation product for verification of nowcasting models

- we would furthermore like to change the horisontal spacing of synops to "as high as national automated network". Again useful for high res nowcasting, and the amount of data is for todays standards quite small, it should not be a technical problem to distribute these data

Radar data monitoring

HIRLAM and ALADIN answers:

- Both the composite and the raw data should be monitored
- For the raw data the monitoring should be done radar by radar and on as raw data as possible
- For ground truth NWP is not proposed. Rather the combination of rain gauges, satellite products, RH2m
- Blacklisting should be based on NWP - radar offsets (requires a radar to model operator)

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Thank you for your attention!