



# Data policy (C3)

Ruud Dirksen GRUAN Lead Centre, DWD

14<sup>th</sup> GRUAN Implementation and Coordination Meeting (ICM-14) Saint Denis, La Reunion 28 Nov- 2 Dec 2022









- Issue raised by some sites:
  - $\circ~$  Restrict sharing data of certain instruments connected to the radiosonde
  - First discussed at ICM-11





# **GRUAN Guide (GCOS 171)**



- > A facility for imposing time limits on making the data available to the end-user community for different sites should be implemented as this does not contravene WMO Resolution 40 (Cg-XII). In this way sites are more likely to be willing to make their raw data immediately available within the GRUAN community without compromising their rights to first publication of the data (some funding agencies may even insist that such a data policy is in place).
- GRUAN complies to WMO resolution 42 (Cg-Ext2021)
  - free and unrestricted access to measurement data
  - Core observational data for Climate: Data shall be made available in a timely manner, with a tentative maximum delay of one year.
- Determine length of this time limit





# **Research sounding (Lindenberg)**

**Deutscher Wetterdienst** 







#### Radiosondes

- RS41
- RS92
- DFM09/17
- iMS-100
- M10

## **Operational research**

- Ozone sonde
- CFH
- COBALD
- Skydew

- "Guests"
- FLASH-B
- PCFH





# Data types



#### Original Raw

- o Manufacturer-generated raw data (e.g. DC3DB, MWX, GSFZ)
- Includes metadata, processed data, additional sondes (Ozone, CFH, CPS etc)

#### Converted Raw

 $\circ~$  same as Original Raw, in NetCDF format

#### Intermediate Raw (NetCDF)

- o Composite, filtered data, tailored for a specific application
- o e.g. Radiosonde GDP + raw data CFH

## ➢ EDT

- $\circ~$  Manufacturer-processed data, in NetCDF format
- Application: intercomparisons







#### ➢ GDP

- GRUAN data product (NetCDF)
- o Includes a.o. uncertainties, corrections, raw data, metadata
- o Maturity levels
  - Alpha development stage
  - Beta ready for analysis/validation/certification
  - Numbered version (GDP-2) final data product





## **Data users classification**



1. LC

- 2. GRUAN-internal / GRUAN community
  - $\circ$  WG + TT
- 3. External on request
  - Registered users
  - $\circ~$  Campaigns, special interest in GRUAN data. Not part of 2
- 4. World
  - $\circ~$  Freely available to everyone







|                              |       |                       |          | External              |       |
|------------------------------|-------|-----------------------|----------|-----------------------|-------|
|                              |       | Lead Centre           | internal | on request            | World |
| Original Raw                 |       | ~                     |          |                       |       |
| Converted Raw<br>(NetCDF)    |       | ~                     | ~        |                       |       |
| Intermediate Raw<br>(netCDF) |       | ~                     | ~        | ~                     |       |
| EDT (netCDF)                 |       | <ul> <li>✓</li> </ul> | ~        | <ul> <li>✓</li> </ul> | ~     |
| GDP (netCDF)                 | Alpha | <ul> <li>✓</li> </ul> | ~        | ~                     |       |
|                              | Beta  | V                     | ~        | <ul> <li>✓</li> </ul> |       |
|                              | Final | V                     | ~        | <ul> <li>✓</li> </ul> | ~     |









To ensure first-publication rights for the site in case of e.g. campaign activities.

- > Not for essential (regular?) GRUAN measurements
  - $\circ$  Radiosoundings, GNSS-PW, strat. H<sub>2</sub>O observations
- Can be implemented via the Intermediate-Raw data format







Draft-version, based on discussion at ICM-11

Feedback

- ➤ M. Maturilli:
  - $\circ~$  FAIR use of data by public users
  - o see e.g. BSRN data policy https://bsrn.awi.de/data/conditions-of-data-release/
- Recognition for sites' efforts: site-specific DOI-numbers







**Deutscher Wetterdienst** Wetter und Klima aus einer Hand



- Update TN-10
- Circulate in TT-sites & WG



