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GRUAN Technical Note 14

GRUAN Policy on Silent Sites

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Abstract

For various reasons, sites may either: i) become a candidate site but fail to establish a stable data flow that is required for certification; or ii) be certified but cease operations. This document describes the GRUAN policy for dealing with such silent sites, while working with the site to attempt to resume operations. The policy consists of a series of escalating steps, ranging from monthly email reminders to, eventually, removal of the site from GRUAN if it proves impossible to resolve the issues. At all stages in the process the main objective is to resume the site's active participation within GRUAN.

Editor Remarks

Contacting GRUAN Lead Centre

Please contact the GRUAN Lead Centre (gruan.lc@dwd.de) if you have any questions or comments in relation to this document.

Revision history

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1.0 (2023-09-26)	All	First published version

1 Introduction

Currently, the GRUAN network consists of more than 30 sites, which are a mix of certified and candidate sites, coming close to achieving one of the main aims stipulated in the GRUAN guide, namely to expand to 30-40 sites. The advantages of joining the network and becoming a GRUAN site are discussed in the outreach material, including the GRUAN video, brochure and flyer. However, the above mentioned number of 30 sites does not truly reflect the operational status of the network, because not all sites currently show the required level of performance regarding measurement activities and data submission, with in fact some sites not having submitted data since joining GRUAN as a candidate site.

The issue of inactive and underperforming sites has been a continuous challenge, and has been topic of discussion at numerous ICMs. To date, the issue has been dealt with on an ad-hoc basis based primarily on peer pressure, based on the expectation that the contrast with the better-performing sites noted in updates and various diagnostics would inspire these sites to address the issues and meet performance requirements. Unfortunately, it did not succeed in preventing the current situation with several sites showing no data streams as being submitted and processed in the data flow chart (Fig. 1).

Leaving sites that are inactive in the long-term as 'GRUAN sites' makes the network seem larger and in greater health than it actually is. Furthermore, it is not fair to those sites that are committed to the network and that put a lot of effort in conscientiously maintaining a measurement program to provide reference data.

Therefore, at ICM-12 it was decided to implement a more formal policy in which sites that do not meet expectations are formally identified and a set of rectifying actions set in train. This mechanism includes a series of escalating steps, which starts with regular (monthly) friendly email reminders to the manager of the affected site, and ultimately can lead to a site losing its status as a GRUAN site.

This document describes these steps while taking into account factors like the certification or candidate status of a site. The escalation steps are applied to sites that fell silent for reasons directly in their control (e.g. ceasing measurements, refusal to share and submit data etc.) and not for reasons beyond their control (e.g. equipment failure, data submission challenges etc.).

This version primarily focuses on data streams from measurement systems for which a GRUAN data product (GDP) is either available or under active development with a defined data flow and verified data receipt by a designated body. Therefore it currently is limited for practical purposes to radiosounding data streams that are either certified or in advanced development and which the Lead Centre can verify data stream availability from the site via the RsLaunchClient (RLC) or other bespoke arrangements. Data streams from other measurement systems will be included in the assessment of a site's activity, once GDPs and data exchange modalities for these systems become sufficiently defined.

2 Requirements of a GRUAN site

The requirements for a GRUAN site regarding a measurement program and measurement quality are listed in the GRUAN manual and guide. For radiosoundings this includes

- at least one weekly measurement of temperature and pressure up to 30 km, and of humidity in the troposphere, and

- monthly water vapor profile observations up to 30 km.

Sites propose a measurement program that at least meets, and ideally exceeds, these requirements as part of the certification process.

The annual site reports (example) summarize the data that has been submitted to the Lead Centre by each site, and the sounding activity is displayed similar to the GRUAN data flow chart (see Fig. 1), presenting an easily accessible overview of the site's measurement activity for various instrument types.
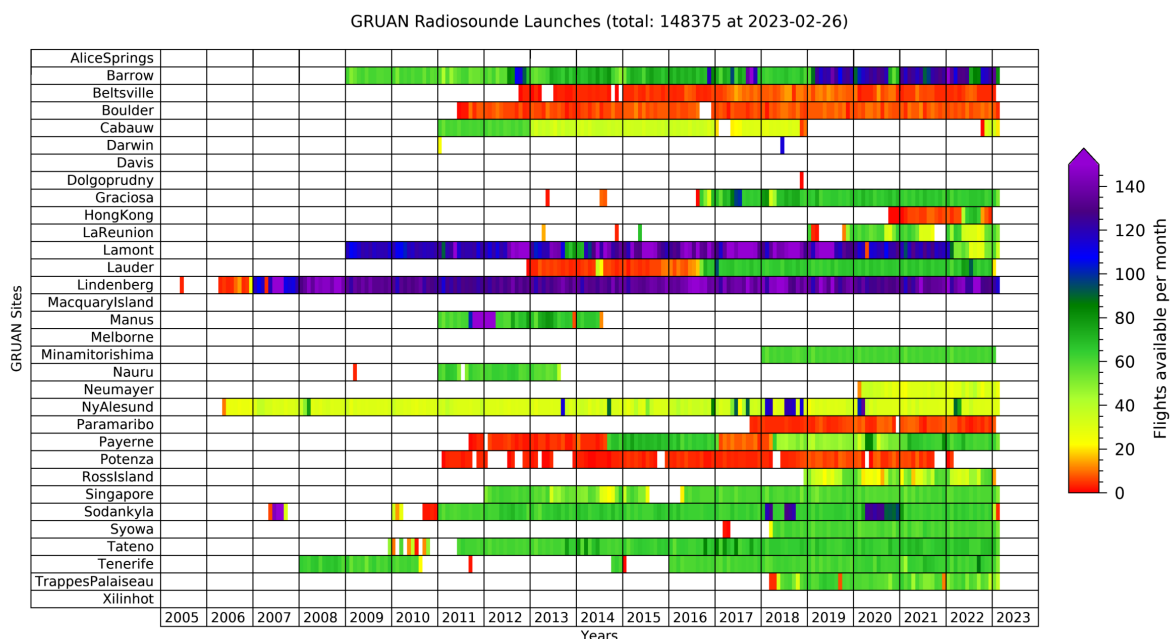

Figure 1: Example of the GRUAN dataflow chart available at the GRUAN website

For the purpose of this TN five site categories are defined, to three of these the escalation steps apply that are discussed in Chapter 3.

Potential Site

- A site which has been checked as suitable for GRUAN operations, along with initial communication with the site operator/owner confirming a willingness to be part of GRUAN.

- Presented and discussed at either an ICM or with WG-GRUAN.

- Added to an 'ad-hoc' list of potential sites, along with relevant information. This list is maintained by the GRUAN LC.

- Sites on this list should not be added to the GRUAN map or the data processing system.

- Sites remain on this list in perpetuity so that a record of communication is kept for future reference.

Candidate Sites

- Documented site and instrument metadata for GRUAN operations.

- Approval by WG-GRUAN.

- Letter from country (WMO PR), following request letter from GCOS Secretariat, confirming commitment to GRUAN, along with a site point of contact/PI.

- Site is added to the GRUAN map, with the label **candidate site**.

- Site is not included in GRUAN network statistics or operational data processing plots/tables.

- Remains as a candidate site until a data flow is initiated, for a continuous period of at least 3 months.

Uncertified Site

- A candidate site which has initiated a dataflow to the GRUAN LC for a continuous period of at least 3 months.

- Site is added to operational data processing plots and tables.

- Site is displayed on the GRUAN map with the label **uncertified site**.

- Included in GRUAN network statistics for uncertified sites.

Certified Site

- A site which has undergone the GRUAN certification process and has been approved by WG-GRUAN.

- Site is displayed on the GRUAN map with the label **certified site**.

- Included in GRUAN network statistics for certified sites.

Associated Site

- A site which provides to the GRUAN LC (Processing Centre) the necessary data and metadata for GRUAN data processing. This can be for a campaign (limited time period) or on an ongoing basis.

- Working level agreement between GRUAN LC and the site's operators/owners.

- Oversight by WG-GRUAN.

- Site will not be added to the GRUAN map or operational processing plots and tables, but a separate monitoring tool (statistics/data) might be added for associated sites.

3 Escalation steps

The escalation steps are applied to silent sites, where silent sites are those sites falling silent for reasons directly in their control (e.g. ceasing measurements, refusal to share and submit data etc.) and not for reasons beyond their control (e.g. equipment failure, data submission challenges etc.).

Certified site

If a certified site falls silent for reasons within its control then the escalation steps are as follows:

Time silent	Action
4 months	A formal letter to the site manager
8 months	A letter to the supervisor of the site manager (cc site manager)
12 months	Revoke the site's certification
18 months	An email and/or letter to Permanent Representative
24 months	Revoke status of being a GRUAN site (+ letter to PR). Metadata and data archives maintained as a historical GRUAN site.

Uncertified site

If an uncertified site falls silent for reasons within its control then the escalation steps are as follows:

Time silent	Action
6 months	A formal letter to the site manager
12 months	A letter to the supervisor of the site manager (cc site manager)
18 months	An email and/or letter to Permanent Representative
24 months	Revoke status of being a GRUAN site (+ letter to PR). Metadata and data archives maintained as a historical GRUAN site.

Candidate site

Following approval as a candidate site, an implementation period of two years (expandable based upon Lead Centre judgement as to the status of the site interactions and with WG-GRUAN endorsement) will be given to enable the site to set up procedures and data sharing protocols. If, after this implementation period the site is not providing data, for reasons within its control, then the escalation steps are as follows:

Time silent	Action
1 month	A formal letter to the site manager
6 months	A letter to the supervisor of the site manager (cc site manager)
12 months	An email and/or letter to Permanent Representative
24 months	Revoke status of being a GRUAN site (+ letter to PR)

4 Closing remarks

It is also proposed to display the sites' involvement on the GRUAN website, in the form of a traffic sign indicating performance on aspects such as data submission, site reporting, certification status, and involvement in task teams, working group or data product development.