
Science Coordination Group

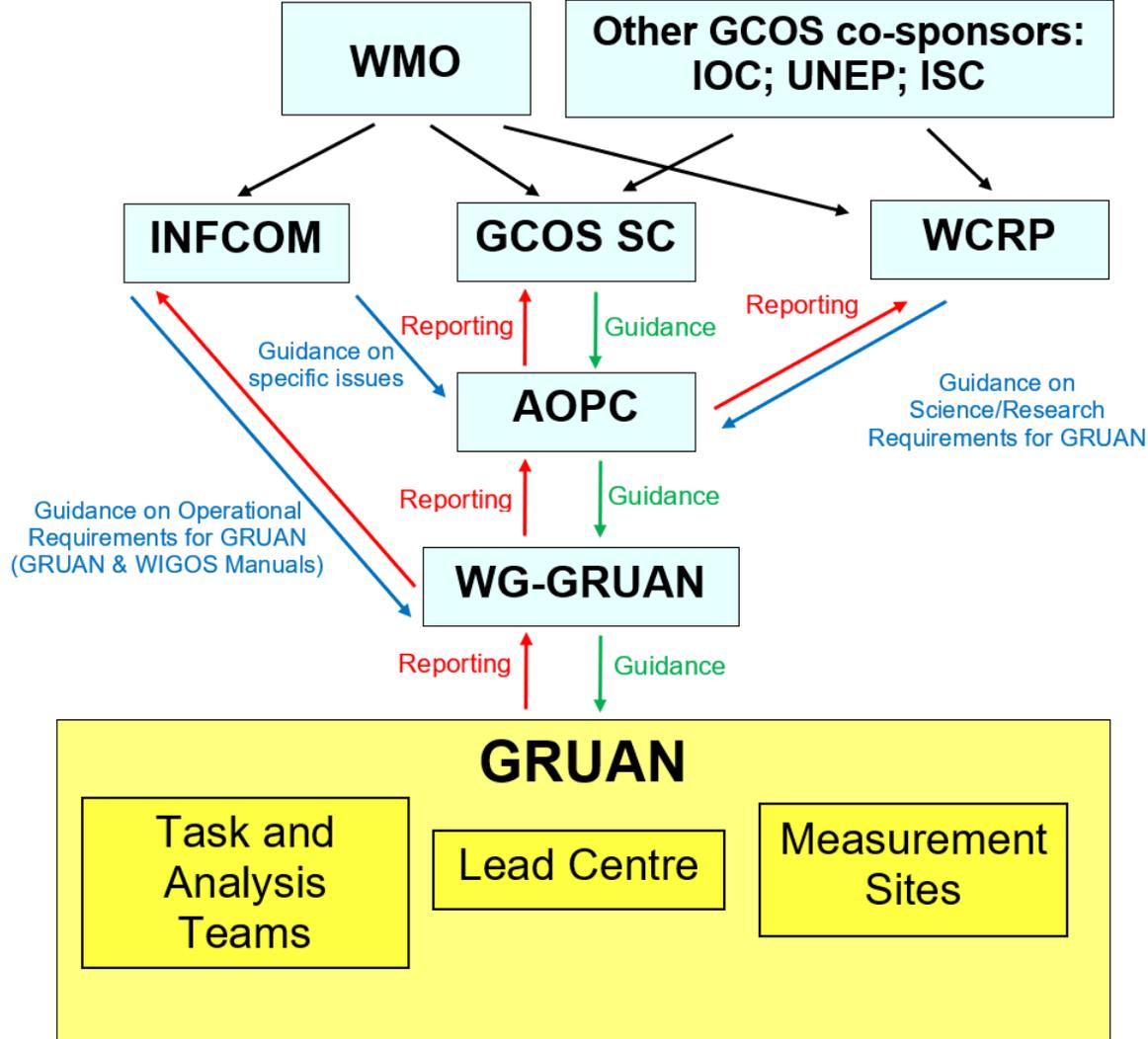
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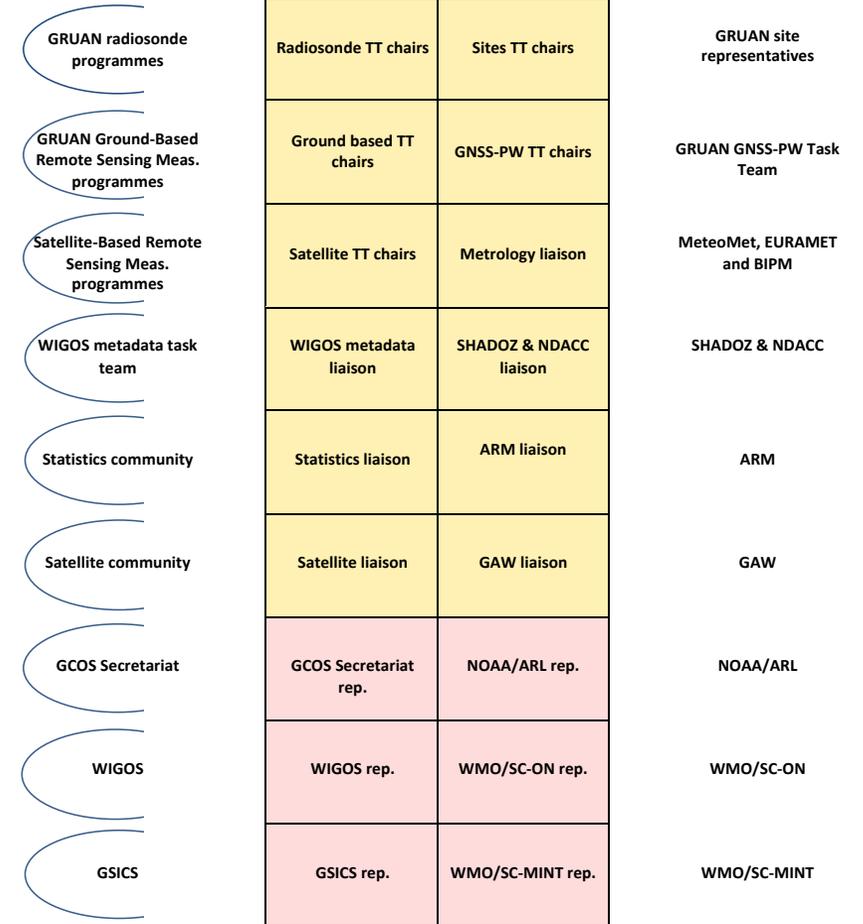




	Co-chairs	Head of the Lead Centre	
	Science coordinators		
GRUAN radiosonde programmes	Radiosonde TT chairs	Sites TT chairs	GRUAN site representatives
GRUAN Ground-Based Remote Sensing Meas. programmes	Ground based TT chairs	GNSS-PW TT chairs	GRUAN GNSS-PW Task Team
Satellite-Based Remote Sensing Meas. programmes	Satellite TT chairs	Metrology liaison	MeteoMet, EURAMET and BIPM
WIGOS metadata task team	WIGOS metadata liaison	SHADOZ & NDACC liaison	SHADOZ & NDACC
Statistics community	Statistics liaison	ARM liaison	ARM
Satellite community	Satellite liaison	GAW liaison	GAW
GCOS Secretariat	GCOS Secretariat rep.	NOAA/ARL rep.	NOAA/ARL
WIGOS	WIGOS rep.	WMO/SC-ON rep.	WMO/SC-ON
GSICS	GSICS rep.	WMO/SC-MINT rep.	WMO/SC-MINT

Task

- The GRUAN Scientific Coordination Group (SCG) guides the initiation and undertaking of specific research projects in support of GRUAN operations with final aim to stimulate the usage of the GRUAN data and enhance its impact in the broadest community of potential end-users, within and outside the academy/research realm.

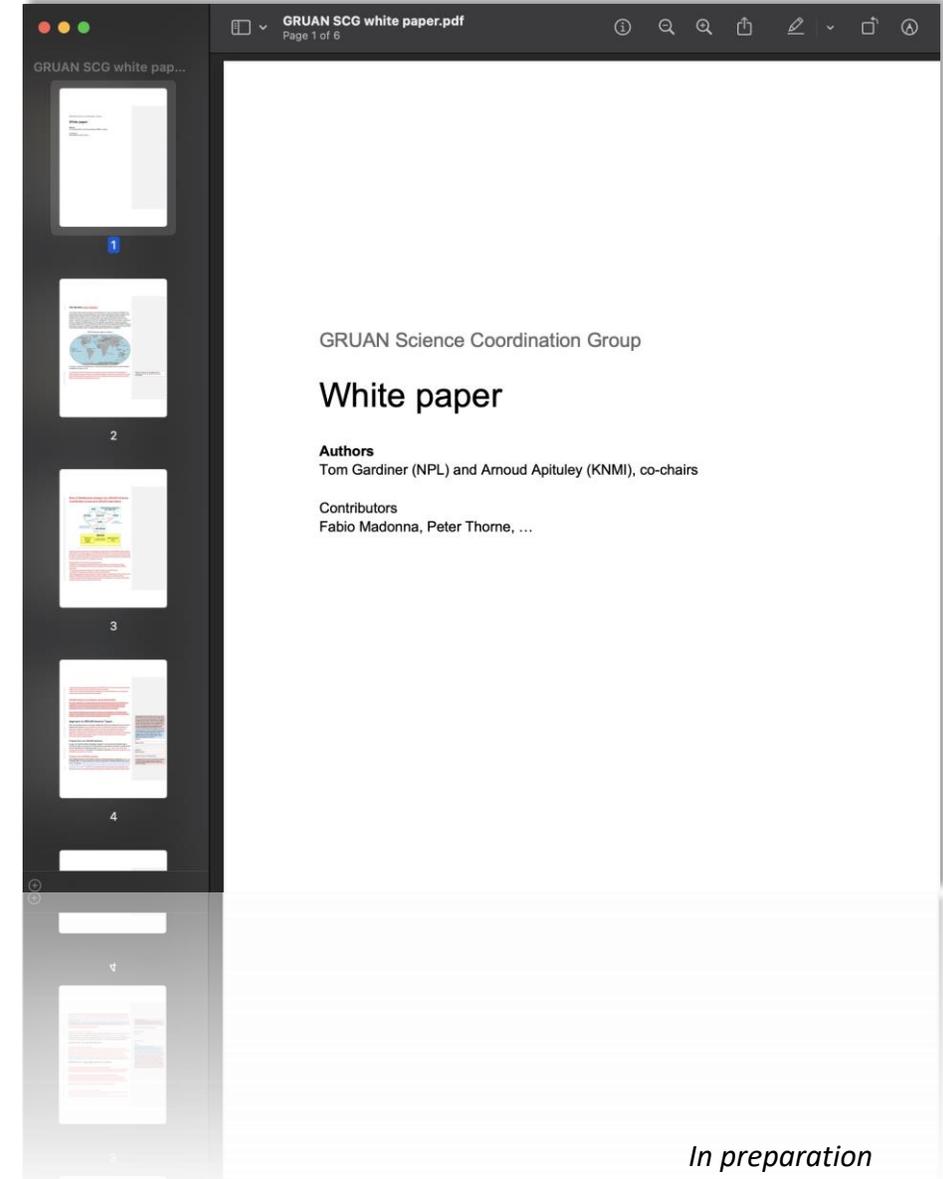


Responsibilities

- Establish and oversee the GRUAN Scientific Coordination Group (SCG) by ensuring contributions from GRUAN scientists and by selected scientists from outside the GRUAN community.
- Provide and update the description of the SCG mission and scope of work.
- Coordinate the assignment of tasks to specific SCG members.
- Monitoring progress in the assessment of scientific topics, identified by the SCG, related to the usage of GRUAN Data Products (GDPs) and the consistency among different GDPs.
- Liaise with GRUAN Task Teams to transfer relevant knowledge and encourage collaborative scientific activities across the GRUAN community.
- Oversee funding opportunities of interest for the GRUAN community and coordinate proposal initiation with the support of the GCOS Sec and the co-chairs.
- Work with the liaison representatives to engage with external GRUAN user communities to identify relevant scientific activities and challenges.

Approach

- The GRUAN network is voluntary a collaborative effort
 - Most activities shall have to rely on opportunistic funding
 - Projects from
 - non-GRUAN partners
 - GRUAN partners
- SCG co-coordinators shall
 - oversee the coordinated effort with the GRUAN community to apply for funding opportunities, and
 - coordinate the community effort to initiate proposals.
- Work from
 - Inventory or catalogue of science questions
 - Liase with/participate in Task Team meetings to fill the catalogue
 - Recommendations for future work highlighted in international reviews.



Initial Catalogue

1. Demonstrate the value of reference networks in support of baseline/comprehensive radiosounding capabilities or other observing networks.
2. Using GDPs for estimating climate trends.
3. Demonstrate the added value of GDPs in quantifying climate indicators (e.g., QBO, tropical or full arctic amplification).
4. Using GDPs for the evaluation of atmospheric reanalysis and historical climate model simulations and for quantifying their uncertainties.
5. Assess the impact of robust uncertainties in atmospheric datasets to properly capture the magnitude of extreme weather and climate events.
6. **Integration of GDPs with RTMs to support satellite cal/val including development of GDP covariance matrices.**
7. Develop applications using GDPs as the backbone of a broader observing network of data using machine learning.
8. Estimate how tropospheric water vapor is affected by tropical cyclones or typhoons during the GRUAN era.
9. Impact of using GDPs in engineering hydrological models for better quantifying uncertainties in hydrologic prediction and manage risks.