

10. GRUAN work plan

The final session agreed on a specific GRUAN work plan for the forthcoming year based on the preceding discussions. Similar as during the previous meeting, the work plan discussed during ICM-6 is intended to be specific and clear. These action items will be tracked and discussed in the next meeting.

10.1 2014-15 GRUAN work plan

No	Action	Who	Deadline
1	GRUAN report synthesizing the four white papers developed through the GRUAN network expansion workshop. Circulation of 1st draft to author team	Greg Bodeker	Apr 14
2	Co-chairs to provide desired metrics on data usage / impact metrics to extent possible	WG-GRUAN co-chairs	May 14
3	Responses to requests from sites for letters from WG-GRUAN / GCOS to be actioned. Letters to be drafted and sent. Letters requested in site reports or at ICM-6	WG-GRUAN chairs, Lead Centre, GCOS Secretariat	May 14
4	A document detailing the operational challenges related to multi-payload soundings submitted either to peer reviewed literature (first choice) or to WG-GRUAN for review as a GRUAN report	TT radiosondes	Jun 14
5	Prepare plan for GRUAN launch activity at WMO congress and report plan to GRUAN community at ICM-7	WG-GRUAN, Lead Centre, Lars Peter Riishojgaard	Jun 14
6	Define necessary steps to undertake transition from RS-92 to RS-41.	TT-Sites, Lead Centre, HMEI, WIGOS project officer, GCOS Implementation Manager	Jun 14
7	TT and WG terms of reference to be revised by chairs and submitted to AOPC for approval to incl. inter-alia discussion around scientific coordinator role	TT and WG chairs	Jun 14
8	To close the feedback loop for instrument and processing performance, TT sites to summarize how they wish to receive near-real-time feedback.	TT sites, Lead Centre	Jun 14
9	Submitted BAMS article on the next steps in GRUAN including network expansion and some highlights. Greg Bodeker to contact BAMS editor. Paper to be submitted to ensure publication in time for WMO congress	WG-GRUAN, Greg Bodeker	Sep 14

10	TD omnibus of all things RS-92. Lead Centre to send everything to Bodeker Scientific for collation and editing. Gaps to be identified and Lead Centre will try to address the gaps. Greg Bodeker and Peter Thorne to determine how to accommodate updates.	Greg Bodeker, Lead Centre	Sep 14
11	Technical documentation completed for frostpoint hygrometer measurements	Lead Centre, Task team radiosondes	Sep 14
12	A short GRUAN report detailing the process implemented to provide feedback of observation minus background fields to the GRUAN Lead Centre	David Tan and Lead Centre	Oct 14
13	Sites reporting either TEMP or not reporting on the GTS / WIS to work with Lead Centre, WIGOS and HMEI to ensure GRUAN sonde launches are sent as 2s resolution BUFR. Briefly report progress and issues to ICM-7. Data flowing through WIS as BUFR high vertical resolution for as many sites as possible.	Lead Centre, TT sites, WIGOS project office, GCOS Implementation Manager, HMEI	Oct 14
14	An assessment of the advantages and disadvantages of manual vs. autosonde launches written up and submitted to the peer reviewed literature	TT radiosondes	Nov 14
15	Each site to produce a proposal of how they will document by photos seasonal and long-term site changes (regular e.g. quarterly from stated locations / daily webcam shots etc. as appropriate to their specific case, and 'on change'). Proposals collated and documented for WG-GRUAN review and feedback	TT sites	Nov 14
16	Technical documentation for GRUAN Lidar stream (Lidar Guide) submitted for review by WG-GRUAN	TT ancillary measurements	Dec 14
17	Microwave radiometer technical documentation (Microwave Guide) submitted for review by WG-GRUAN	TT ancillary measurements	Dec 14
18	FTIR technical documentation (FTIR Guide) submitted for review by WG-GRUAN	TT ancillary measurements	Dec 14
19	Manuscript(s) detailing operational considerations for controlled descents for frostpoint hygrometers submitted to a journal or detailed in a GRUAN Report	TT radiosondes	Dec 14

20	Manuscript describing the derivation of uncertainty estimates for GNSS-PW measurements submitted to a peer reviewed journal	TT GNSS-PW	Dec 14
21	In collaboration with partner networks, assess the relevance and tractability of the full suite of remaining GRUAN target variables defined in GCOS112 in the context of measurement capabilities and measurement programmes underway in partner networks. GRUAN report identifying potential target data streams and partners	WG-GRUAN Chairs, Lead Centre, TT ancillary measurements, TT site representatives	Dec 14
22	Develop frostpoint hygrometer data products. Guidance needs to account for operation of CFH, NOAA FPH. Paper submitted to a peer reviewed journal.	Lead Centre, Task Team Radiosondes	Dec 14
23	Develop a GRUAN ozonesonde data product in consultation with NDACC and GAW. Completed technical documents	Greg Bodeker, Lead Centre, Herman Smit	Jan 15
24	Lead Centre to report on data usage / impact metrics (following recommendations from #2) to extent possible	Lead Centre	Mar 15
25	Revise the RS-92 data stream based upon feedback received - revised version 3 release including qc flags vectors and data in different vectors (good, questionable, missing), including implementation of performance feedback.	Lead Centre, TT radiosondes	Mar 15
26	Perform demonstration study of SASBE at time of satellite overpass based on a realistic set of assumptions about the availability and colocation of sondes and ancillary measurements. Focus is on temperature and water vapour	TT ancillary measurements	Mar 15
27	Instigate a user review group to meet on a biennial basis. User review group terms of reference drafted and agreed to by WG-GRUAN for subsequent consideration by AOPC	WG-GRUAN Chairs	Mar 15
28	Develop GRUAN data product and processing stream for Modem radiosondes. First draft of technical document describing processing streams for all Modem radiosondes	CNRS, Lead Centre, TT radiosondes	Mar 15

29	Determine the status of BSRN and re-engage with GRUAN. Report back to WG on BSRN status and whether their measurements are reference quality and if not what we would need to do extra. Invite someone to ICM-7 from BSRN. GRUAN representation at BSRN meeting in September	Richard Querel	Mar 15
30	Develop an advanced 'template document' for non-RS92 radiosondes for later distribution to specific users	Lead Centre, TT radiosondes	Mar 15
31	Develop a GRUAN GNSS-PW product. Technical documentation completed for GNSSPW measurements (GNSS-PW Guide)	TT GNSS-PW	Mar 15
32	Pedagogical paper on appropriate propagation of uncertainties and generic code – paper draft available for comment	Greg Bodeker	Mar 15
33	Reports from WG and GRUAN community members on efforts to further contributory site set. Single page write ups for each site by selected GRUAN leads at ICM-7 (list of sites and contact points in main report) and also reports on phone calls	WG-GRUAN, Lead Centre, ICM-6 participants	Mar 15
34	Develop GRUAN humidity and temperature lidar data products in collaboration with NDACC. Paper describing GRUAN lidar products submitted to peer reviewed journal	TT ancillary measurements	Jun 15
35	Establish closer working ties between tropical GRUAN sites and SHADOZ sites - short report on how to establish greater linkages	Greg Bodeker	Jun 14
36	Prepare public outreach material. This includes updating the GRUAN brochure	Greg Bodeker	Jun 14