WMO Observing System Regulatory Material & GRUAN Guide

(Adapted from:)

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Outline

How GRUAN should be incorporated in the below WMO Regulatory Material if implemented as part of the WMO Observing System:

- **Manual on the GOS,** (WMO-No. 544)
  (General purpose & guidance)
- **Guide on the GOS,** (WMO-No. 488)
  (More specific purposes & guidance)
- **CIMO Guide,** (WMO-No. 8)
  (Instrument-level guidance)

Why? Formal buy-in by all WMO Members; firm up what GRUAN really is

Manual on the GOS
Volume I – Global Aspects

Part I: General principles

- Purpose of GRUAN
- Organization and Design of GRUAN
- Implementation of GRUAN

Part III: Surface-based Subsystem

General text on:

- Composition of GRUAN
- Implementation of Elements of GRUAN
- Equipment and Methods of Observation applied for GRUAN

Guide to the GOS
Part III: The Surface-based subsystem

- **Design of GRUAN network**
- **Planning of GRUAN network and stations**
- **Management of GRUAN network:**
  - Administrative arrangements and operational tasks,
  - Staff,
  - Logistics and supplies,
  - Establishment of new station,
  - Regular inspections,
  - Procurement of instruments,
  - Instrument check, maintenance, calibration,
  - Coordination, planning and budgeting,
  - Network performance monitoring.

CIMO Guide - Part I, Chapter 12 Measurement of upper air pressure, temperature, humidity

Insert text relevant to GRUAN into chapters:

12.1 General (Definitions, units, requirements, methods of measurements)
12.2 Radiosonde electronics
12.3 Temperature sensors
12.4 Pressure sensors
12.5 Relative humidity sensors
12.6 Ground station equipment
12.7 Radiosonde operations
12.8 Errors of radiosondes
12.9 Comparisons, calibration, maintenance
12.10 Computations and reporting procedures

CIMO Guide - Part II, Chapter 5
Special profiling techniques for the boundary layer and the troposphere

Insert text relevant to GRUAN into chapter:

5.2 Ground-based remote sensing techniques

- Acoustic sounders (sodars)
- Wind profiler radars
- Radio-acoustic sounding systems (RASS)
- Microwave radiometers
- Laser radars (lidars)
- Etc.