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COMMISSION FOR BASIC SYSTEMS
OPEN PROGRAMME AREA GROUP
ON INTEGRATED OBSERVING SYSTEMS

ITEM: 5

EXPERT TEAM ON OBSERVATIONAL DATA
REQUIREMENTS
AND REDESIGN OF THE GLOBAL OBSERVING SYSTEM

Original: ENGLISH

REDUCED SESSION

OXFORD, ENGLAND, 1 – 5 JULY 2002

RECOMMENDATIONS FOR EVOLUTION OF THE GLOBAL OBSERVING SYSEM

(Submitted by Dr. Eyre)

Summary and purpose of Document

The document consists of comments by a member of the Expert Team, as requested by the chairman, of Annex III of the Final Report of the fourth meeting of this Expert Team from 28 January – 1 February 2002 (Annex III is reproduced as Document 6 for this meeting).

ACTION PROPOSED:

The Expert Team may wish to note these comments/thoughts in revising and updating its recommendations with respect to the design of the future composite GOS.

**Comments by John Eyre on:
Annex III of Report on 4th session of ET-ODRRGOS
Geneva; 28 January – 1 February 2002;**

Recommendations for evolution of the **space-based** component of the new GOS

1. LEO satellites (recs. 1-5) **Reorder to indicate priority**
2. LEO satellites. Add recommendation: **More timely data needed for Regional NWP – requires improved data distribution systems for LEO data.**
3. GEO satellites. Add recommendation: **Importance of continuity for Indian Ocean station.**
4. High-priority system-specific recommendations. Suggest to add preamble: **“There are well-established plans for operational satellite series up to at least 2012** (check date). **Co-ordinated planning is required for the following satellite series.”** Also, consideration is needed as to how plans for research satellites can be adjusted to improve their contribution to the GOS.
5. Rec.11. Change **MW/sub-mm** to **sub-mm** (since the missions we are encouraging are sub-mm). Hence consider change of title.
6. Recs.12-16 – reorder to indicate priority.
7. Rec.12. It is not yet clear what GPM will be in practice. Should we, firstly, explain and encourage the concept, and then encourage data availability and continuity.
8. Rec.15. “through sharing of ground positioning systems”: needs more detail to be intelligible.
9. Rec.19: **change in mesoscale to on the mesoscale**
10. Rec.21 needs a verb.

Recommendations for evolution of the **surface-based** component of the new GOS

11. Is list of applications complete? + OWF
12. Suggest we pick up here, as the first recommendation, Jim Caughey’s suggestion that we need more detailed, longer-term and properly-resourced studies of the optimal surface-based observing systems to complement the planned space-based observing system, with encouragement to observing system providers to collaborate on such studies. Then all subsequent recommendations are short-term, detailed recommendations to be implemented immediately.
13. Additional Recommendation (or intro to Rec. 1): GNWP and RNWP systems are increasingly able to extract information from sequences of observations at high temporal resolution (e.g. surface pressure observations), which are not generally distributed via the GTS. Their co-ordinated distribution is recommended.
14. Rec. 1: for “METARs” put “surface synoptic observations” or equivalent expression. [Can “synoptic” observations be hourly?]
15. Rec.1: Add laser ceilometer measurements (some of which are distributed in METAR code).
16. Rec.2: “full content”. Suggest revise – not necessarily “full” but sufficient to meet URs.
17. Rec.2: “raw report”. Reports of what? Radiosondes only, or others?
18. Rec.2: “...TEMP code ... BUFR code”. It is not just a question of the code, but also of reporting more vertical levels.
19. Rec.3 needs improvement and separation into different issues here. Ground-based ozone profiles need separate rec and explanation. We need a specific rec for a baseline system of in situ obs for “tuning” some components of the systems to exploit satellite data (e.g.

radiative transfer models). We recommend a further study to specify the detailed requirements and proposed implementation here. (Role of GUAN? Role of ARM? etc.)

20. Rec.5: "local time of day": add "and local meteorology".
21. Recs.6 and 8. Some duplication here. What are key points?
22. Rec.6: "challenged GOS areas"? [As in "vertically challenged" = not very tall?] Not generally understood expression – suggest reword.
23. Rec.9. The measure is a "path-integrated" measure. This equates, almost always, to a vertically-integrated measure because of the aspect ratio of the atmosphere. Suggest to simplify the wording here.
24. Rec.13. Suggest add that study is needed of the optimal surface pressure observing system to complement high-density surface winds from satellites.
25. Rec.13. Explain WOTAN (wind observation through ambient noise)
26. Rec.14. Explain OWF.
27. New recs on radar? - precipitation and wind.