

WORLD METEOROLOGICAL ORGANIZATION

RA I DISSEMINATION EXPERT GROUP

SEVENTH MEETING

KIGALI, RWANDA

10-11 SEPTEMBER 2016

FINAL REPORT



WMO General Regulations

Regulation 42

Recommendations of working groups shall have no status within the Organization until they have been approved by the responsible constituent body. In the case of joint working groups the recommendations must be concurred with by the presidents of the constituent bodies concerned before being submitted to the designated constituent body.

Regulation 43

In the case of a recommendation made by a working group between sessions of the responsible constituent body, either in a session of a working group or by correspondence, the president of the body may, as an exceptional measure, approve the recommendation on behalf of the constituent body when the matter is, in his opinion, urgent and does not appear to imply new obligations for Members. He may then submit this recommendation for adoption by the Executive Council or to the President of the Organization for action in accordance with Regulation 9(5).

1. WELCOME

Wenjian Zhang (ASG) opened the meeting on behalf of the WMO Secretary-General, reminding everyone of the importance of the meeting, noting that RAIDEG is formally recognized by RA-I. The link between the RA-I user community and EUMETSAT is very important. Also we address the new generation of satellites (more channels starting with Himawari-8). EUMETSAT's partnership is very much appreciated. It is really very important to understand the requirements of the region and communicate them to the satellite partners.

The Chair, Mariane Diop Kane, welcomed all participants (see Appendix II).

2. ADOPTION OF AGENDA

The Agenda (see Appendix I) was adopted with no modifications.

3. REVIEW OF ACTIONS FROM PREVIOUS MEETING

The session reviewed Actions and provided updates as appropriate.

4. WMO RA I ONGOING ACTIVITIES

J. Mukabana presented ongoing WMO activities in RA-I, and preliminary results from the WMO 2016 Survey on the use of satellite data. He noted a huge demand on training with mixed signals. Participants noted some inconsistencies in the results, possibly related to data access and capacity. The question was raised whether using satellite data was part of the curriculum in all the training centers.

ACTION 7.1: VLab to survey all training centers in RA-I on how they are able to implement the satellite requirements in BIP-M and the competencies. The Guideline "Satellite Skills and Knowledge for Operational Meteorologists" should be a basis.

A question was raised on how to get access and train on private data (AWS) – can the WIGOS mechanism help?

The survey recognized soil moisture as an important tool, very few people can access and process the data (validation is tricky).

WMO AMCOMET has improved visibility of NMHSs but we are not where we need to be. The RAIDEG work is a foundation for a future African Space Programme.

5. REVIEW OF EUMETCAST-AFRICA DISSEMINATION BASELINE

W. Zhang asked whether all the Indian ocean data were disseminated. It should be checked whether the UKMO 4km model output can be displayed on PUMA2010 / 2015 stations now, or whether patches or upgrades were needed.

SAWS recommended to disseminate their 4km model analyses.

ACTION 7.2: EUMETSAT to explore with SAWS whether their model output could be added to the baseline.

ACTION 7.3: EUMETSAT to explore with UKMO model coverage of North and West Africa

6.7. REPORT FROM EACH REGION

- SADC – becoming more applications driven, noting that organizations are getting mandates for which they are not prepared. SADC have a request to WMO Space Program regarding Rainfall and Climate Monitoring priorities. Blended products, interim products (NWP +SAT) are really important. Air quality and land surface analysis are also needed. Request to H-SAF validation over Africa. CRR has replaced HydroEstimator. NWC SAF could replace the Action SAWS & EUM to explore how precipitation from all SAFs can be validated and choices/recommendations made. SADC would like to play a stronger role in MESA follow-on regarding data dissemination and access, and project design. Basic satellite skill is generally really low in the sub-region. Solutions could be basic training support, more practical initial training, more people going to a CoE Kenya course as pre-requisite. Build training around conceptual models and enabling skills. ASMET to recommend. Conceptual models are really useful, and development is ongoing.
- IGAD – Training WISER project support. Requests for salinity and current data. For MTG need to train on product development.
- Northern Africa (verbal): feedback for dissemination: no identified needs for data (as have Ku reception). Regarding the MAPS study and the RGB survey, they use RGBs based on the WMO standard and self-generated – use own interpretation table, very useful for forecasting. Scenarios – have responded and have remarks sent already.
- IOC (verbal): training for users planned but cancelled/postponed for PUMA-2015; are working on what data and products they need. MOI re-organizing to have R&D section. Will develop MOUs to get data and expertise. ASCAT really useful for cyclone low centre ID and track forecasting.
- CEMAC - 4 stations are working (PUMA2010). They want Met Office model output in the new PUMA station (could be a profile / product choice issue). RAIDEG should recommend that all data is flowing and working, and must be checked as part of the installation (will be continental and local requirements for which data).
- ECOWAS – little information, and no reply from sub-region. Request UKMO MET West to Cape Verde. PC3 sometimes going off, have to run in degraded mode (J. Kagenyi – this could be a housekeeping/disk issue – can people manage partitions? Or can be a synergdb cron tab issue). Sounds like housekeeping. Regarding training, they need more TOT (data manipulation, satellite product creation) and product evaluation. Also need to better understand the underlying products, particularly convection. Would like to have TOZ in PUMA . Would like to have WMO survey templates. What pre-convection products should be taught – GII, CII, KI?
- ACMAD - PUMA 2015 successfully installed. UKMET data available but not displayed in PUMA, these are on ACMAD website. Have RDT on website (for all Africa), which requires a firefox plugin to see.

W. Zhang suggested that the following structure should be used for all sub-regional reports in the future, in line with the RAIDEG terms of reference:

1. Status of access to products and training, as well as new needs and requirements
2. Status of data and products utilization, as well as new requirements
3. Training (including activities organized in the inter-sessional period, and identified new requirements, including recommendations for new training modules

(all above 3 items should be detailed to the countries within each sub-region)

4. Recommendations to WMO (RA I Management Group, D/AFLCP, and Space Programme, ETR, etc), EUMETSAT, AMCOMET)

It was noted that Members provided only very limited response to the 2015 WMO request to nominate focal points to RAIDEG, to act as interfaces for RAIDEG members. Effective communication between countries and RAIDEG is important to appropriately represent Members' needs.

RECOMMENDATION 7.4: PRs in RA-I to nominate focal points to enable effective communication with RAIDEG, as per the 2015 WMO request letter.

8. CENTRES OF EXCELLENCE TRAINING REQUIREMENTS

Training requirements arising from dissemination baseline update:

- Climate monitoring: which products are available, what do they mean (interpretation), what role does satellite imagery play (what are the useful applications). Role of climatology in forecast community (dangerous ground for public communication side – national disaster people can cope). Train training centers first. And what can the data contribute to climate services and support existing climate units.
- Air quality (composition) monitoring (chemistry and aerosols): what is available, what does it mean how can use these data in NRT operations - Health; and how they affect day to day operations day to day (aviation - VIS, PWS - temps). [note WHO has standards on Air Quality limits]. How does the forecast support the air quality forecast (inversion/subsidence affecting build-up of trapped aerosols). Air transport models & modeling.
- Renewable energy: need to understand the training requirements (wind,solar, ...): what do you need that you cannot yet get. Train staff to handle enquires to handle those requirements. How to compute the wind potential & solar potential (for PVGIS). Need wind obs over land at 30m height.
- Data access – more awareness, what data are available now?
 - o Storage and computing power is an issue: training is needed in meteorological to understand how to address these questions.
 - o Assuming an MTG African (storage and processing) hub(s) ... scaled to MTG and the large potential number of users; this is potentially huge and we need some first steps
- Data Visualization - What can each software do and what formats can they handle hardware & OS requirements, scripting (python, R). GRADs, ncl, cdo, panoply, ... mcidas-v
- NWP: interpretation how to apply data at various resolutions / grid sizes and time resolutions., understand assimilation and differences in models, how to evaluate /validate model analysis (what fields to compare with which data – different tropics, mid latitude) and forecasts [NWP enabling skills] is model dependant. Particular issue is parameterization of convective precip (& radiation).
- Convection related products: ToT – indices and where they come from and what is good (LI □ CII,MPE/HE □ CRR) etc); how to integrate the products in the forecast flow (how to use CII, dust RGB, NWP, together); guidance required on what works well.

- Health: data available for health or that go into physiological indices
Much of this is good practice / body of knowledge sharing and product info briefing

9. STATUS OF RARS AFRICA

Leon Razafindrakoto gave an update on this project. Lee-Ann Simpson raised issues of bandwidth to access direct readout data, and how much data is needed for local NWP (for input reception data and boundary conditions and output dissemination).

10. MARINE SERVICES FOR RA-I

10.1 Update on Marine Services provided by EUMETSAT

Mark Higgins gave an update on the status of marine services and satellite data use in RA-I. Data handling for Sentinel-3 needs to be addressed as the data rates are high – people may need help to think about this.

10.2 JCOMM & MESA Marine Requirements

Kwame Adu Agyekum (University of Ghana) gave an update. More products are underway with aspiration to disseminate in EUMETCast. Allowed to disseminate by cell phone in their countries with their permission / or via their own centers. Mariane Diop Kane asked how to maintain single voice on forecasts.

11.-13. MTG FOR AFRICA PROJECT (MAPS) FEEDBACK

- Denis Fayard (EUMETSAT) presented two scenarios for RAIDEG to think about
- Feedback so far: mixed views; some say 10min scanning interval of the FCI is needed. For others 20min is ok.
- Prioritization is also very mixed, so there is a continuing need to discuss
- Will look as SAF products on product by product basis in the future

RECOMMENDATION 7.5: EUMETSAT to continue investigations into optimising both temporal and spatial resolutions of MTG data disseminated to Africa.

RECOMMENDATION 7.6: Noting the limitations on EUMETCast bandwidth, and appreciating the efforts of EUMETSAT to guarantee continuity of optimum service, the African user community should seek extra funding resources for bandwidth and infrastructure in order to make best use of MTG.

MESA UPDATE & GMES AFRICA

Vincent Gabaglio updated the Group; more will be at MESA sessions later in the week.

GMES Africa will also be presented later – RAIDEG should be aware. There will be a call for African centers to propose MESA continuation mainly on land and water, and coastal and marine resources management (5 projects on land, 5 on marine) for GMES Africa.

In parallel there is a discussion between AUC and EU on access to Copernicus data. Marine Sentinel-3 was a first request. Sentinel-3 land data is being explored. AUC will start a broader survey to define Sentinel-1 & Sentinel-2 needs.

Note the questionnaire that has been distributed; there is interest in feedback on the process / questions so that it can be distributed during the core forum – particularly on the status of PUMA 2010.

RECOMMENDATION 7.7: MESA Regional Implementation Centres (RIC) to work with RAIDEG to document their needs.

AOB & CLOSURE OF THE MEETING

No other business raised. The Chair closed the meeting on 11 September at 12.00.

APPENDIX I

APPENDIX I - AGENDA

WORLD METEOROLOGICAL ORGANIZATION

RAIDEG-7/Doc. 1
(08.08.16)

RA I DISSEMINATION EXPERT GROUP, 7th MEETING
WORKSHOP ON THE MTG AFRICA PREPARATION STUDY (MAPS)

Lemigo Hotel, Kigali, Rwanda, 10-11 September 2016

PROVISIONAL AGENDA

10 SEPTEMBER 2016

9:00	1. Welcome	Wenjian Zhang Assistant Secretary-General (WMO)
9:10	2. Adoption of Agenda	Mariane Diop Kane (Chair)
9:15	3. Review of Actions from Previous Meeting	Mark Higgins (EUMETSAT)
9:45	4. WMO RAI Ongoing Activities 4.1 WMO RAI and WICOS 4.2 WMO 2016 Survey Feedback	Joseph Mukabana (WMO)
10:45	<i>Break</i>	
11:00	5. Dissemination Baseline Update Document EUMETCast-Africa	Mark Higgins (EUMETSAT)
11:30	6. Report from each region (15-mins per region)	All concerned
12:30	<i>Lunch Break</i>	
13:30	7. Report from each region (15-mins per region)	All concerned
14:30	8. Centres of Excellence Training Requirements arising from the Dissemination Baseline (15-mins per CoE)	All concerned
15:30	<i>Break</i>	
15:50	9. Status of RARS Africa	Leon Guy Razafindrakoto (ACMAD)
16:20	10. Marine Services for RAI	
	10.1 Update on Marine Services provided by EUMETSAT	Mark Higgins (EUMETSAT)
	10.2 JCOMM & MESA Marine Requirements	tbc (JCOMM)
17:00	<i>Adjourn for Day 1</i>	

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11 SEPTEMBER 2016

9:00	11. MTG for Africa Project (MAPS) Feedback 11.1 Status of Project 11.2 Scenarios and Presentation to Forum	
11:00	<i>Break</i>	
11:15	12. Group Photo	All concerned
11:20	13. MAPS cont.	All concerned
12:00	MESA update & GMES Africa	Vincent Gabaglio (EUMETSAT)
12:20	AOB & Closure of the Meeting	Mariane Diop Kane (Chair)
12:30	<i>Lunch Break</i>	
14:00	14. AMCOMET SESSION RAIDEG members are invited to join the AMCOMET meeting	All

APPENDIX II

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APPENDIX IV