

WORLD METEOROLOGICAL ORGANIZATION

RA I DISSEMINATION EXPERT GROUP

FOURTH MEETING

GENEVA, SWITZERLAND

11-12 JUNE 2013

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

The Chair J. Kongoti (KMD) opened the session at 9.00 on Tuesday 11 June 2013 in Room 7 Jura at the World Meteorological Organization (WMO) Headquarters, Geneva, Switzerland and welcomed all participants to the 4th Meeting of the WMO RA I Dissemination Expert Group.

During the Tour de Table, it was noted that on this occasion Surekha Ramessur was in attendance, replacing the regular MOI representative Ram Dhurmea.

From EUMETSAT V.Gabaglio welcomed the Group emphasising in his address the importance of this Group in the wider African integrated strategy of AMCOMET. In particular, the importance of future investment by African governments in ground segment, training and tools to support the exploitation of satellite data.

K. Konare in his address noted the success of this Group established through a joint undertaking between WMO and EUMETSAT. He also referred to the importance of this Group in light of the AMCOMET strategy and GFCS in Africa, and the work of WMO Regional Association I.

W. Zhang welcomed the Group on behalf of WMO SG highlighting the importance of the various WMO Programmes joining forces. In particular, he was pleased that this Group was now integrated into the WIGOS, and that the efforts of the Group in strengthening partnerships and sharing data, were going hand in hand with dissemination technology. He also emphasised the importance of the Group in the future GFCS and the AMCOMET strategy.

2. ADOPTION OF AGENDA

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

3. REVIEW OF ACTIONS FROM PREVIOUS MEETING

S. Wannop presented the review of actions.

01/03: Some discussion on how to reach out to these communities; it was noted that under item 4 further links with these communities could be made. It was also suggested that the Group increase their representation within the governance of the WIGOS and the Regional Association I subsidiary bodies. **Status ongoing**

01/04: Promote use of EUMETCast in various contexts - EUMETCast increasingly used to disseminate products generated in the Region (e.g. from South Africa). Members are encouraged to continue their efforts. **Status ongoing**

01/05: RETIM metadata - metadata are registered on WIS by Météo-France no further action required. **Status closed**

02/01: Successful installation of NWC-SAF by ACMAD, model information taken from GFS (NCEP); there were some comments regarding the available Internet bandwidth which hindered ACMAD's further redistribution of the products derived from the NWC software; Morocco also has expertise in installing the software and has a visualisation tool available; further validation of NWC-SAF in the African context would be useful; ACMAD and Morocco agreed to support Senegal in the installation of the software followed by further installation support to Kenya.

ACMAD also has access to the RDT product via an FTP site hosted by Météo-France. This product has been validated for AMMA. L. Razafindrakoto will make the link available to the group.

EUMETSAT reported that 3 of the cloud products from the NWC SAF software will be made available via EUMETCast-Africa during the course of 2013. **Status ongoing**

02/09: There is a permanent dialogue between EUMETSAT & NWP centres and now a good dialogue exists between RAIDEG & NWP centres. **Status closed**

02/10: New/updated NWP data streams are being incorporated into the Product Navigator when they become operational. **Status closed**

02/11: Additional data from ECMWF request has been made by ACMAD (excluding 400 and 300 hPa). This action is noted in the requirements list and it is therefore proposed to close it here. **Status closed**

02/13: Removal of products from baseline. A process is in place for the addition and removal of products therefore this action is redundant. **Status closed**

02/14: Letter has been prepared. Group has been recognised within the WIGOS and will be proposed as a regional sub-group. **Status ongoing**

03/01: Under item 4 links with JCOMM and other communities will be addressed. **Status closed**

03/02: Training in NWP data usage to be addressed with the Centres of Excellence (noting also the feedback received via the WMO 2012 survey). **Status closed**

03/03: System Admin training during MESA – addressed under item 11 – request for improved levels of training will be made through the project and RAIDEG member involvement in the project will be requested. **Status ongoing**

03/04: WMO 2012 survey results were made available to the Group. **Status closed**

03/05: Upgraded set of ECMWF/Arpege/UK LAM & ATDnet products available in 2013; further upgrades cannot be supported and would have to wait for MESA. **Status closed**

03/06: Access to DLR Cb TRAM data - N. Kroese to pursue this request. Given there is an action ongoing in the requirements list it is proposed to close it here. **Status closed**

03/07: Additional information on dissemination frequency and alternate dissemination mechanisms has been included in the baseline document. **Status closed**

03/08: Generic EUMETCast training visualization tools (McIDAS, SYNERGIE, ...) are evolving and any form of mutual support makes things easier for individual NMHSs. EAMAC has the action to install and evaluate the McIDAS software. It was noted that EUMETSAT will disseminate copies of this software via the EUMETCast Training Channel. **Status ongoing**

03/09: Training in use of some Meteosat products (MPE, GII) form part of the basic training package provided by EUMETSAT. **Status closed**

03/10: Generic training issues - N.Kroese commented that Met services are being asked to support applications that increasingly go beyond meteorology and that training needs to go further, to make broader community interested in satellite applications. The Group was encouraged to make their training needs known to the Centres of Excellence. **Status closed**

NOTE: for actions 01/03, 01/04 and 02/14 it was agreed that this Group regularly report on the status of communication and integration with the status of:

- communication with focal points within in the NMHS
- communication with focal points from other environmental disciplines (e.g. ocean, hydrology, aviation and agricultural communities and climate projects)

- the further integration of RAIDEG within the RA I subsidiary bodies and the WIGOS

4. STATUS AND WORKING ARRANGEMENTS OF RAIDEG WITHIN RA I

The Chair presented an overview of the current status of the activities which the Group are engaged in. These included:

Status of PUMA2010 stations – Kenya reported that some configurations, which can be modified according to user priorities, have not been set to display the full set of products available through the workstation. Tanzania & Rwanda have also encountered problems.

Action 04/01: EUMETSAT to resend the configuration information to the PUMA 2010 users

Status of regional networks – the Chair stressed the need for improved recognition of the importance of the Group in the eyes of the PRs, the need for focal points within the NMHSs and enhanced recognition within the wider RA I community. In response K. Konare stated that the work of the Group was welcomed at the recent RA I Session in Marrakech, he also noted the need to formalise the role of the Group within the RA I structure (see Appendix III).

Recommendation 04/01: RAIDEG should be, in its integrity, recognized within the RA I subsidiary structure, such as by the Working Group on Observations and Infrastructure; the RA I Management Group should take appropriate action in this regard

Status of meteorological infrastructure within RA I – only a handful of countries have working radar system (Morocco, South Africa & Senegal), in-situ observations are scarce and technical skills to support such systems are limited in many NMHSs. KMD have 4 radar systems available but they have never been installed and used. The work of the group plays an important role in raising the awareness of the need for enhancements in the meteorological infrastructure within RA I.

5. WIGOS IMPLEMENTATION IN RA I

Igor Zahumensky briefed the Group on WIGOS implementation. All elements of WIGOS are part of a change management process. The elements of WIGOS are going to be reflected in updated WMO guidance material. The Regional WIGOS Implementation Plan identifies major issues for RA I and its five subregions.

The presentation aimed at making RAIDEG more aware of the Regional WIGOS implementation and its contribution to the gathering of user requirements.

Secretariat briefly demonstrated OSCAR website (<http://www.wmo.int/oscar>) and information on satellite capabilities which was welcomed by the Group.

6. THE WMO INFORMATION SYSTEM (WIS)

WIS aims to:

- Increase data visibility
- Broaden data access
- Simplify data use
- and provide an authoritative source of weather, climate and water information

In his presentation, S. Foreman explained the respective roles of GISCs, DCPCs, NCs. Challenges in RA I are mainly around maintenance, continuous technical upgrades and training and how to get data out of the Region. He showed some monitoring statistics showing very poor results for the RA I.

From within the region, Morocco and South Africa are currently going through the evaluation process to gain GISC status.

7. WMO SURVEY ON THE USE OF SATELLITE DATA 2012

S. Bojinski presented the executive summary from the WMO 2012 Survey, highlighting some of the results received from the RA I region. The raw data received from the survey could be made available to the group for further analysis if needed. During the discussion it was agreed that the survey provided useful results and that the findings should be addressed. It was questioned whether RAIDEG should conduct a refined survey in RA I. It was also noted that EUMETSAT typically performs a short survey prior to the User Forum in Africa and the next such survey (expected June 2014) could address specific questions from RAIDEG. EUMETSAT added that it is planned to perform an internal evaluation of the training. Noting the many comments relating to training it was felt that the CoEs and the VLab should take an active role in analysing the survey results.

Action 04/02: RAIDEG members to review the survey results and to comment accordingly at the next meeting.

Recommendation 04/02: WMO Centres of Excellence and the VLab are invited to review the WMO survey 2012 results in particular references to the need for further training and to feedback to RAIDEG any strategy developed to address the issues raised.

8. REPORT FROM EACH REGION

Each regional representative was invited to provide a brief summary from their region:

North Africa – T. Saouri, Morocco, reported that there were no data access issues in Morocco. Once again he reported that communication with other Maghreb countries is difficult.

Central Africa – E. Kenne reported problems in attending training events due to visa issues. He will provide details to EUMETSAT offline. He also reported that the staff in Cameroon have been moved to a new building and no longer have access to the PUMA 2010 station. He also reported that DMC are having difficulties receiving some SYNOPS data due to a problem with their GTS access.

ACMAD - G. L. Razafindrakoto confirmed that the request for additional ECMWF data had been made, response pending (response from ECMWF provided under item 14). It was agreed that ACMAD would share the FTP address to the Rapidly Developing Thunderstorm (RDT) product from Météo-France.

South Africa – N. Kroese reported upon the maintenance issues with regard to SAWS SUMO software. WMO recalled to the group that a list of software (freeware and commercial) is available via the WMO web site: http://www.wmo.int/pages/prog/sat/accessandtools_en.php
In his presentation he addressed the broadening of forecasting skills required by NMHSs and the importance of access to a wide range of meteorological and environmental satellite data. He also commented on the need for basic data in support of aviation forecasting to ensure service do not lose their ICAO rating.

West Africa – M. Diop reported that there were no significant data access issues in the region. Once again it was reiterated that the 300 & 400 hPa levels from ECMWF would be useful.

East Africa – issues addressed in Chair's report.

Indian Ocean - R. Dhurmea reported offline that there are still issues regarding communication with other NMHSs in his region. His comments regarding the status of the NWC SAF software have

been addressed in early items. He would like support in training on the use of the McIDAS software. It is noted that EAMAC are planning to install this software and may be able to offer some guidance. EUMETSAT commented that the University of Wisconsin provide support documentation and if users register through the university's website they are granted access to the support forum.

9. DISSEMINATION BASELINE UPDATE DOCUMENT EUMETCAST-AFRICA

S. Wannop gave an overview of the current EUMETCast-Africa dissemination baseline document. N. Kroese asked whether products of "global significance" were automatically included in EUMETCast Africa; it was clarified that user requests have to be specific in order to be acted upon. The same applies to non-satellite products, such as NWP output, where coordinated requests have to be raised with NWP centres.

In response to a question from S. Bojinski, S. Wannop clarified that scientific background and algorithms related to products will be made available online through the new version of the EUMETSAT Product Navigator. Products considered for future dissemination are added to the baseline either by request of users, or as placeholders even before launch of a satellite, or confirmed functioning of its payload (e.g., MADRAS instrument on Megha-Tropiques currently not fully operational).

S. Wannop presented the EUMETCast Data & Product Requirements in a way structured consistent with ET-SUP recommendation. The Group then discussed modifications to the baseline, and assigned responsibilities for each addition. Follow-up with NWP centres requires direct contact with them. Noting the potential interest in data from the Megha-Tropiques mission, it was agreed that EUMETSAT would confirm to the Group the status of data policy and to make available to RA I some sample data sets.

Action 04/03: EUMETSAT to confirm the data policy associated with the Megha-Tropiques data and to provide sample data sets to RA I when these become available.

10. STATUS OF PUMA 2013 SOFTWARE UPGRADE ACTIVITIES

S. Wannop informed on the planned 2013 upgrade of PUMA stations. In 2010, AMESD upgraded existing PUMA2010 stations. The 2013 upgrade undertaken by TeleSpazio and Meteo-France International, which includes an update of Archipel on the processing station, and an update of Arpege on the visualization station. Upgrade is underway and to be rolled-out in October/November 2013. The presentation provided the list of products included in the visualisation upgrade.

The WMO commented that there the Manual on the Global Data-Processing and Forecasting System (GDPFS)¹ provides guidance on products and visualization standards relevant to forecasters; the GDPFS Manual is currently under revision.

J. Kotongi to discuss the RGB visualization issues using Synergie encountered by his colleague Ignatius Gitonga (KMD) and raised at WMO ET-SUP-7. EUMETSAT commented that this problem was most likely a configuration issue and took the action to resend the information on modifying these configurations.

Action 04/04: EUMETSAT to resend to PUMA 2010 users information on how to modify the preset display configurations.

¹ http://www.wmo.int/pages/prog/www/DPFS/Manual_GDPFS.html

11. MESA-PUMA 2015 UPDATE

V. Gabaglio informed the group of planned upgrade of PUMA station infrastructure in the upcoming MESA project. This involved:

- Technical assistance in Addis Ababa to support African Union Commission (AUC) and the Regional Implementation Centres (RICs)
- Seven grants for thematic applications implemented by RICs (service development, training, workshops)
- Infrastructure contract (EUMETCast stations maintenance and upgrade)
- Training contract

The infrastructure element involves upgrade of existing station HW and SW of existing PUMA2010 to PUMA2015. Bidding for MESA contracts has to follow EU rules of open competition (for AMESD there were four competitors). Noting the importance of the visualisation/processing systems to be implemented in the new PUMA2015 stations the following actions were noted:

Action 04/05: EUMETSAT to investigate if a representative from the RAIDEG community can participate in the MESA infrastructure procurement process.

Action 04/06: EUMETSAT to circulate to RAIDEG the high-level station requirements.

Action 04/07: EUMETSAT to investigate if representatives (system administrator and forecasting expert) from the RAIDEG community can participate in the PUMA 2015 Factory Acceptance Test (as per AMESD).

Action 04/08: RA I Members are encouraged to work with the RICs to ensure maximum benefit from the MESA project.

12. RARS-AFRICA

V. Gabaglio informed the Group on plans to extend RARS coverage over Africa. So far, no level 1 data from polar satellite are disseminated via EUMETCast-Africa (only level 2). The number of users of global level 1 data in Africa is limited (<5).

Plans are to build on an existing ARGOS direct readout station in Cape Town, which will be operational by the end of 2013. Installation of new X/L band HRPT stations in 2014-2015 (target locations are Gabon, Kenya) is planned, however no funds have been made available as yet.

J. Lafeuille pointed out several dimensions of RARS: target data types (can CrIS, IASI be received), timeliness, reception frequencies (L/X band). For CrIS, IASI data rates and subsampling are becoming an issue. Pre-processed level 1c data must be globally consistent to be useable to NWP centres.

S. Bojinski raised the point of cost-benefit ratio; the relative gains of these additional stations should be taken into account (gaps on the RARS map does not mean data are not accessible, since sounder data are available on the GTS). The time gain in data access and reduction of latency through additional RARS stations probably has a small impact on NWP output, however, benefits may lie in building the regional level 1c data assimilation capacity (to run pre-processing packages etc.), and to justify additional investments.

V. Gabaglio noted that investments in this infrastructure would need to be framed as part of a regional disaster risk reduction strategy, and potential donors may go elsewhere if the priority is not clearly expressed.

N. Kroese expressed SAWS interest in utilising the locally received data and confirmed SAWS commitment to the proposed project.

13. LINKAGE OF RAIDEG WITH DATA EXCHANGE NEEDS OF WMO COMMUNITIES

13.1 JCOMM

B. Lee briefed the Group on JCOMM activities. Priority areas include: marine services and forecasting system; enhanced operational ocean forecasting system development; coastal services through CIFDP; and maritime safety. She described the most important parameters and relevant sources of data for the marine meteorological and ocean community (e.g. SST, altimetry, ocean winds). Improvements of sea state information are the objective of a JCOMM white paper. Significant wave height is key for marine safety, but not sufficient in some contexts, needs additional analysis of multiple waves (frequencies) and wave energy. Initial work on generating an extreme wave dataset is underway. JCOMM has also been working closely with the ESA through eSurge project, that aims at building up a Surge Event Database containing a range of relevant datasets. Efforts are extended to building national operational capacities for marine modelling and forecasting, such as the JCOMM-TCP Training Workshop series on Storm Surge and Wave Forecasting. These workshops also provides a forum for building and updating requirements for operational forecasting of waves and surges - for example, Kenya, Madagascar, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania participated in the 8th workshop in Kenya (November 2012), and developed the regional requirements for wave model guidance data for West Indian and South Atlantic Oceans.

N. Kroese stated that SAWS had a responsibility for marine services to Antarctica which are subject to iceberg threats, so far forecasting has relied on SAR and MODIS imagery. Additional products on this theme would be useful. B. Lee suggested that SAWS discuss this issue with others with similar needs and from this to develop a requirement to satellite operators.

13.2 OPERATIONAL FORECASTING, INCLUDING SWFDP

A. Soares introduced motivation for the SWFDP to reduce the gap in forecasting capability across WMO members, and reported on the status of the various projects. A number of thematic liaisons are established depending on regional needs (agriculture, marine, aviation, flash flood / hydrology) and infrastructure (satellites, public weather services). She highlighted some of the synergies with the RAIDEG data requirements e.g. SWFDP requires NWP products, utilize the NWC software and the importance of precipitation products include the JMA Heavy Precipitation Index and the HydroEstimator.

Responding to a request from M. Diop, A. Soares confirmed that there were plans to extend the project to West Africa when resources became available. She commented that Central Africa is covered through regional overlap.

Noting that the SWFDP output products are currently only available via the project Websites the Group considered that their inclusion on EUMETCast could prove useful. If needed, WMO Secretariat should pursue this with EUMETSAT.

13.3 AGRICULTURAL METEOROLOGY

B. Stefanski pointed out some of the main hydrometeorological phenomena relevant to agricultural production. The SWFDP East Africa Agricultural Working Group identified a number of requirements. Some observational platforms in support of agriculture (fisheries platforms, in-situ networks outside the GTS) are limited and that there is a need for satellite-based data collection and transmission systems

EUMETSAT commented that there were a number of land application products disseminated on EUMETCast which may be of benefit to the agro-meteorological community, (e.g. AGRICAB (EU FP7 project), TAMSAT rainfall estimates, ASCAT Surface Soil Moisture, Land SAF product).

13.4 HYDROLOGY

T. Abrate expanded on hydrology-based initiatives in Africa. In the framework of WHYCOS projects, 250+ stations have been installed in Africa, equipped mostly with satellite transmitters. However data relay using mobile phone networks is becoming more important. Issues pertain mainly to technical maintenance, correct installation and coding of DCP. Data needs are real (near-real) time discharge data, real-time rainfall estimates. The use of altimetry-based products is still at the early stage in operational hydrology.

During the discussion, it was noted that CNES provide altimetry products for inland water applications, see CNES/LEGOS website with satellite altimetry based river and lake level time series: <http://www.legos.obs-mip.fr/soa/hydrologie/hydroweb/Objets.html>

13.5 CLIMATE RESEARCH / CORDEX

The WCRP briefing was given by M. Rixen. WCRP are developing their climate services information system. The traditional focus on global coupled climate models and inter-comparisons and now efforts were being placed on regional modelling. He outlined the ESGF state-of-the-art data exchange platform, to become the data exchange platform for all WCRP projects. He briefly outlined the role of CORDEX which encompasses 14 domains involving the inter-comparison of models, reanalyses and reprocessed datasets. He highlighted the upcoming Africa Climate Conference which is taking place in Africa in Oct 2013.

Action 04/09: RAIDEG members are invited to engage with the climate communities within their region and the report back on any potential cooperation at subsequent meetings.

13.6 AERONAUTICAL METEOROLOGY

H. Puempel briefed the Group on the various channels for the distribution of aeronautical data and their future enhancements e.g. (OpMet) using METAR format, WAFS (World Area Forecast System): upper-air wind and temperature, turbulence, icing, convection. He also informed the Group of plans to move from table-driven formats to XML/GML-based weather exchange models and a new project to increase availability of aircraft-based profile data over Africa, Caribbean and South America. He showed some AMDAR data characteristics including expected accuracies and coverage. Coverage of Africa is limited except along South African routes. However, some North African airlines are changing to new aircraft fleets which would allow participation in AMDAR. He added that the contribution of AMDAR to wave vapour profiling in the US is now superior to that for radiosondes and that due to the very low costs AMDAR an important source of observations. He explained that the data are owned by airlines, and shared for free through the GTS.

13.7 GFCS

F. Lucio provided an overview of the Global Framework for Climate Services: elements, principles, data needs (including socio-economic and associated issues of data sharing; Resolution 2 (EC-65) on WMO policy for international exchange of climate data and products to support implementation of GFCS).

14. BRIEFINGS BY THE NWP CENTRES

Three WebEx sessions were arranged to allow the NWP centres to remotely present to the Group their upcoming service enhancements.

UKMO

K. McCourt presented the forthcoming updates to the Met Office model output which included:

- Global model resolution to increase from 25km to 16km (start of 2014)
- 12km models (Africa LAM) will become redundant as global performance becomes superior, and will be retired
- More emphasis on focused 4km domains - e.g. Lake Victoria – and potential for expansion over East Africa
- Partnership with SAWS who hope to run a 4km model over southern Africa
- Global model Africa 'cutout' currently being sent over EUMETCAST: update to parameters after upcoming PUMA 2010 upgrade
- ATDNet visualisation after upcoming PUMA 2010 upgrade
- New website to complement/replace old website and to also be available over EUMETCAST Training Channel

ECMWF

E. Andersson presented the forthcoming updates the ECMWF model output which included:

- Current status of model output on EUMETCast
- Dissemination strategy following WMO Res 40 (essential, additional data)
- SWFDP support
- Status of the ACMAD request for additional data, which is now pending Council approval

ECMWF were reminded about the EUMETSAT approval cycle for changes to EUMETCast baseline: namely, any extension of the ECMWF data set provided to ACMAD via EUMETCast should be notified to EUMETSAT as soon as possible. Information about data volumes should reach EUMETSAT by end of July or early August. The EUMETSAT Council will meet in December, and decision about changes to the EUMETCast data provision will be made then.

It was noted that for PUMA2015, the baseline product for the visualisation system would need to be known in the coming months, so finalising current data requirements would be useful.

Following a question from M. Diop about the current resolution - is it 1x1 or 0.5x0.5 degrees (with the latter being preferred by the users), ECMWF pointed out that 0.5x0.5 degree data is available via the ECMWF data server and GTS/WIS.

Météo-France

L. Perron presented the forthcoming updates the Météo-France model output which included: an increase in the Arpege resolution to 0.5 degrees at 3-hrly intervals. He also envisaged the importance of standardisation in model output to ensure ease of visualisation by processing systems like those of PUMA 2010.

In response to a question from EUMETSAT L. Perron agreed that the Excel table describing the contents of Arpege for reference in the Product Navigator.

Action 04/10: EUMETSAT to include a link to details of Arpege model in the Product Navigator.

15. REVIEW OF NEW INPUT TO THE EUMETCAST-AFRICA BASELINE

Following the review of the baseline and the discussions during the meeting it was agreed that S. Wannop will update the requirements table for inclusion in the Minutes (Appendix IV).

16. CONCLUSIONS OF MEETING & REVIEW OF ACTIONS

It was agreed that the Group would meet again in person at the time of the next User Forum in Africa which is scheduled for October 2014. Noting the importance of maintaining regular communication, it was additionally agreed that the Group meet remotely, once per quarter to discuss ongoing actions and any significant developments.

Action 04/11: EUMETSAT to establish regular WebEx sessions for 2013/2014 and the Group to evaluate their usefulness at the 5th Meeting.

S. Wannop proposed that RAIDEG may wish to develop a web page which would highlight the activities of the Group to encourage others within the region to participate and benefit from the work of the Group.

Action 04/12: EUMETSAT & WMO Secretariat to explore ways to enhance the visibility of RAIDEG through a web presence and to report on findings at the next meeting.

Under AOB, EUMETSAT invited the Centres of Excellence and the RAIDEG Members to participate in the forthcoming EUMETCast Training Channel trial. A notification will be sent to those concerned. The Trial is anticipated to start in July 2013.

Additionally, EUMETSAT reminded the Group of the previously announced decontamination of Meteosat-10 which is scheduled to take place 1-9 July 2013. During this period Meteosat-9 data will be provided as a replacement 0 degree service.

APPENDIX I

WORLD METEOROLOGICAL ORGANIZATION

RAIDEG-4/Doc. 1 (Rev. 2)
(3.VI.2013)

RA I DISSEMINATION EXPERT GROUP

4th MEETING

GENEVA, SWITZERLAND, 11-12 JUNE 2013

PROVISIONAL AGENDA (20130603)

11 JUNE 2013

8:30	Registration (WMO Headquarters, Salle 7 Jura)	
9:00	1. Welcome	James Kongoti (Chair) Kaliba Konaré, Wenjian Zhang (WMO) Sally Wannop (EUMETSAT)
9:20	2. Adoption of Agenda	
9:30	3. Review of Actions from Previous Meeting	Sally Wannop (EUMETSAT)
9:45	4. Status and working arrangements of RAIDEG within RA I	James Kongoti (Chair)
10:15	5. WIGOS implementation in RA I	Igor Zahumensky (WMO)
10:30	Break	
11:00	6. The WMO Information System (WIS)	Steve Foreman (WMO)
11:30	7. WMO Survey on the Use of Satellite Data 2012	Stephan Bojinski (WMO)
12:30	Lunch Break	
13:30	8. Report from each region – tour de table (~15 min per region)	All concerned
15:00	Break	
15:30	9. Dissemination Baseline Update Document EUMETCast-Africa	Sally Wannop (EUMETSAT)
16:00	10. Status of PUMA 2013 software upgrade activities	Sally Wannop (EUMETSAT)
16:30	11. MESA-PUMA 2015 Update	Vincent Gabaglio (EUMETSAT)
17:00	12. RARS-Africa	Vincent Gabaglio (EUMETSAT)
17:30	Adjourn for Day 1	

12 JUNE 2013

9:00	13. Linkage of RAIDEG with data exchange needs of WMO communities (15 minutes each + discussion)	
	13.1 JCOMM	Boram Lee (WMO)
	13.2 Operational Forecasting, including SWFDP	Alice Soares (WMO)
	13.3 Agricultural Meteorology	Bob Stefanski (WMO)
10:30	<i>Break</i>	
11:00	13.4 Hydrology	Julius Wellens-Mensah (WMO)
	13.5 Climate Research / CORDEX	Michel Rixen (WCRP)
	13.6 Data Exchange for Sub-Regional Service Delivery in Aeronautical Meteorology	Herbert Pümpel (WMO; WDR AEM)
	13.7 GFCS	Filipe Lucio (WMO)
12:20	<i>Lunch Break</i>	
13:30	14. Briefings by NWP Centres	UKMO, ECMWF, MeteoFrance, NWC-SAF
15:30	<i>Break</i>	
15:45	15. Review of new input to the EUMETCast-Africa Baseline	James Kongoti (Chair)
16:45	16. Conclusions of Meeting & Review of Actions	James Kongoti (Chair)
17:30	17. CLOSURE OF THE MEETING	

APPENDIX II

APPENDIX II: LIST OF PARTICIPANTS

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APPENDIX II

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APPENDIX III: RA I SUBSIDIARY BODIES

Abstract below full reference & report: WMO (2011): Abridged Final Report of the Fifteenth Session of Regional Association I (Africa), Marrakech 1-8 November 2010, WMO-No. 1068, section 5.1.8

ftp://ftp.wmo.int/Documents/PublicWeb/mainweb/meetings/cbodies/governance/ra_reports/english/pdf/1068_en.pdf

5 RAI SUBSIDIARY BODIES:

(a) Management Group (MG), with:

- (i) The president of RA I (Chairperson of MG);
- (ii) The vice-president;
- (iii) EC members of RA I;
- (iv) Chair of RA I Working Groups;

The MG responsible for Capacity Building

The MG, in consultation with the Members, will keep under review the needs of the Association, especially with regard to new or emerging issues, and will establish task teams or projects as needed to address those needs.

(b) Working Group on Observations and Infrastructure , with:

- (i) Two regional experts on WMO Integrated Global Observing Systems (WIGOS);
- (ii) Two regional experts on WMO Information System (WIS);
 - Senegal Ms Mariane Diop Kane
 - Sudan Hanan Magzob Mohamed Rabah
 - Morocco Rabii Merrouchi
 - Kenya Henry Karanja (hkaranja2001@yahoo.com and hkaranja@meteo.go.ke)
- (iii) Two regional experts on instruments and methods of observation (CIMO) (one specializing in conventional observation systems, and the other in remote sensing);
 - Botswana Ms Gasewasepe K. Nthobastsang
 - Uganda Ms Lukiya Tazalika
- (iv) Two telecommunications experts.
 - South Africa Nish Devanathan
 - Egypt Walid Mohammed Abd El-Hamied

NB Uganda will serve as Chair

(c) Working Group on Climate Matters and Applications, with:

- (i) Two regional experts on climate data and data management;
 - Kenya James Muhindi
 - Zimbabwe Mrs Joyce Banda
- (ii) Two regional experts on climatic forecast;
 - Congo Alphonse Kanga
 - Morocco Ms Fatima Driouech
- (iii) Two experts on climate research and modelling
 - Nigeria Ernest A. Afesimama
 - Zambia Joseph Kanyanga
- (iv) Two regional experts on agricultural meteorology;
 - Guinea Yaya Bangoura
 - (alphayaya2009@yahoo.fr)
 - Mali Daouda Diarra
- (v) Two Experts on climate and health.
 - Ethiopia Tesefaye Gissila-
 - Senegal Ousmane N'Diaye

NB Ethiopia will serve as Chair

APPENDIX III

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Troisième Vice-président OMM
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- 13) Mr Birama Diarra (Mali) chair of **Working
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- 14) Dr Frigui Hassen Lotfi hfrigui@yahoo.fr (Tunisia) chair of
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- 15) Dr Mohamed Tawfik Abdel-Fattah (Egypt) chair of **Working
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APPENDIX IV

APPENDIX IV: REQUIREMENTS TABLE

Ongoing requirements from WMO RA I

Date of Entry	Data Type	Data Provider	Product Name	Coverage	Product Description	Format	File Size	Frequency	Requesting Region	Responsible Member	EUMETCast Status	Status of Request
2011/06	Satellite Product	SAWS	Combined Instability Index(CII)	Africa-South of Equator	CII is a product that combines the average of 4 Instability indices (KI,LI, PW,TT) to indicate the probability of convective development later in the day. This product is useful as a nowcasting tool for early warning of convective activity.	Binary	0.2 MB (Zipped)	Between 0300 and 1400 UTC- every 15 minutes. 44 (per day)	SADC	N. Kroese	New	Pending initial discussion with Data Provider. SAWS to provide update
2011/06	Satellite Product	SAWS	Hydro-Estimator (HE)	Africa-South of Equator	HE is a Quantitative Precipitation Estimation (QPE) technique combining the MSG-satellite and numerical model precipitation estimation. The MSG 10.7 μm brightness temperature is used together with the Unified Model (UM) from the UK-Met Office.	Binary	0.2 MB (Zipped)	96 / day	SADC	N. Kroese	New	Pending initial discussion with Data Provider. SAWS to provide update
2011/06	Satellite Product	SAWS	Southern Africa Limited Area Model (LAM)	Africa-South of Equator	UK Met Office- Unified Model (UM) output for Africa South of the equator in a 12 x 12 km spatial resolution, 3 hour temporal resolution for a 48 hour Forecasting period . Plans are to increase the forecasting	GRIB	tbd	1 / day	SADC	N. Kroese	New	Pending initial discussion with Data Provider.

APPENDIX IV

Date of Entry	Data Type	Data Provider	Product Name	Coverage	Product Description	Format	File Size	Frequency	Requesting Region	Responsible Member	EUMETCast Status	Status of Request
					period to 72 hours to coincide with the WMO definition of Short Range Forecasts							
2011/06	Satellite Product	German Aerospace Center (DLR)	Cumulonimbus Tracking and Monitoring (Cb TRAM)	Africa	Early detection and tracking of convection. This product is useful as a now casting tool for disaster management purposes.	XML	≈2 MB	96 / day	SADC / North Africa	N. Kroese	New	Pending initial discussion with Data Provider. SAWS to provide update
2011/06	Satellite Product	O3M SAF	Near Real Time Total Column - Metop (NTO)	Global	The Near Real Time Total Column (NTO) product provides information about total columns of two trace gases in the atmosphere: O3 (Ozone) and NO2 (Nitrogen Dioxide), as well as tropospheric NO2.	BUFR	30 KB	250 / day	SADC / North Africa	S. Wannop	EUMETCast-Europe	Approved in Baseline - Pending implementation
2011/06	Satellite Product	O3M SAF	Near Real Time Ozone Profiles - Metop (NOP)	Global	The NRT Ozone Profile (NOP) product provides ozone profiles reported as partial columns, in Dobson Units, between 41 pressure levels logarithmically spaced between and including surface pressure and 0.1 hPa	BUFR	45 KB	250 / day	SADC / North Africa	S. Wannop	EUMETCast-Europe	Approved in Baseline - Pending implementation

APPENDIX IV

Date of Entry	Data Type	Data Provider	Product Name	Coverage	Product Description	Format	File Size	Frequency	Requesting Region	Responsible Member	EUMETCast Status	Status of Request
2011/06	Satellite Product	NWC SAF	Nowcasting Products derived from the MSG software package	Meteosat Full Disk	Selection of the NWC SAF products to be disseminated on EUMETCast - Cloud Mask, Cloud Top Temperature & Height, Cloud Type	HDF5	~	~	ACMAD	S. Wannop	EUMETCast-Europe/Africa	Pending implementation - expected by Q4 2013
2011/06	Satellite Product	EUMETSAT	IASI Sounding Products (5 products)	Global	Ozone, Trace Gases, Surface Emissivity, Cloud Parameters, Atmospheric Temperature Water Vapour	BUFR	~400 KB	480 / day	SADC / North Africa	S. Wannop	EUMETCast-Europe	Approved in Baseline - Pending implementation
2011/06	Satellite Product	EUMETSAT	IODC Meteorological Products	Meteosat Full Disk 57 deg E	5 Meteorological products: Clear Sky Radiances, Clear Sky Water Vapour Winds; Cloud Analysis, Expanded Low-resolution Cloud Motion Winds, Upper Tropospheric Humidity.	BURF	~1.0MB	24 / day	IOC	S. Wannop	New	Approved in Baseline - Pending implementation
2012/10	Satellite Product	tbc	Microwave instrument data	Africa/Regional	Microwave instrument data to support precipitation monitoring. Potential sources could be SSMIS, TRMM, Megha-Tropiques.	~	~	~	IOC	R. Dhurmea	New	Pending further analysis by RAIDEG

APPENDIX IV

Date of Entry	Data Type	Data Provider	Product Name	Coverage	Product Description	Format	File Size	Frequency	Requesting Region	Responsible Member	EUMETCast Status	Status of Request
2012/10	Satellite Product	tbc	Ocean current and significant wave height	Africa coastal regions	Ocean current and significant wave height information from missions like Cryosat-2, SARAL, HY-2 & Oceansat-2.	~	~	~	IOC / CEMEC	R. Dhurmea	New	Pending further analysis by RAIDEG
2011/06	Model Output	ECMWF	Vertical vorticity; Theta Prime W; Dew Point Temperature;	Global/Africa	Vertical vorticity; Theta Prime W; Dew Point Temperature for standard pressure levels (925 down to 200) - Every 6-hours. Temperature, Wind & RH products for standard pressure levels (925 down to 200). Every 6-hours. Surface cyclone tracks. Model outputs for Significant Wave Height, wave mean period, wave mean direction. Seasonal SST. (See request sent by ACMAD worksheet)	~	~	every 6-hrs	ECOWAS /EAMAC / ACMAD /IOC	L. Razafindrako to	New	Pending agreement by ECMWF Council and available EUMETCast bandwidth.
2011/06	Model Output	DWD	Global Model	Global/Africa	GME oupt - contents tbc	~	~	every 6-hrs	ECOWAS /EAMAC / ACMAD	J. Kongoti	New	Pending analysis by Data Provider

APPENDIX IV

Date of Entry	Data Type	Data Provider	Product Name	Coverage	Product Description	Format	File Size	Frequency	Requesting Region	Responsible Member	EUMETCast Status	Status of Request
2011/06	Model Output	NOAA NCEP	GFS for Africa	Africa	GFS model output with regional African coverage including the Indian Ocean	GRIB2 / Web structure	~	~	ECOWAS / EAMAC / ACMAD / IGAD / CEMAC / IOC	S. Wannop	New	Approved in Baseline - Pending implementation Web structure to be implemented
2013/06	Model Output	Met Office	LAM	Global/Africa	Enhancement to the current LAM covering East Africa; improved time interval 3hrs for the first 48hrs and 6hrs after that	~	~	every 6-hrs	ECOWAS /EAMAC / ACMAD /IOC	M. Diop	New	Pending analysis by Data Provider
2013/06	Model Output	ECMWF	ACMAD additional data - Vertical vorticity; Theta Prime W; Dew Point Temperature;	Africa	Inclusion of missing 300 & 400 hPa	~	~	~	ECOWAS / EAMAC / ACMAD	L. Razafindrakoto	New	Pending analysis by Data Provider