

## **STATUS OF IMPLEMENTATION OF THE RECOMMENDATIONS RESULTING FROM THE 11<sup>TH</sup> EUMETSAT USER FORUM IN AFRICA**

### **1 INTRODUCTION**

The 11<sup>th</sup> EUMETSAT User Forum in Africa held South Africa from 8 to 12 September 2014 formulated thirty-four (34) recommendations. This document provides the status of implementation of these recommendations. Final status will be presented at the 12<sup>th</sup> EUMETSAT User Forum in Africa that takes place from 12 to 16 September 2016 in Rwanda. This document is based on the information available at EUMETSAT in February 2016.

### **2 OVERVIEW OF THE STATUS OF THE RECOMMENDATIONS**

The 34 recommendations were regrouped under six different themes:

1. EUMETSAT programme and RAIDEG – recommendations #1 to #3
2. Climate and GFCS – recommendations #4 and #5
3. RARS Africa project – recommendations #6 to #12
4. MESA project (inc. North Africa) – recommendations #13 to #19
5. Marine applications – recommendations #20 to #23
6. Training and Research activities – recommendations #24 to #30
7. Space and Earth Observation – recommendations #31 to #34

This paragraph presents a summary of the progress made under each theme.

#### ***1. EUMETSAT programmes and RAIDEG (recommendations # 1 - #3)***

Significant progresses have been towards the two first recommendations: (1) ensuring the continuation of the Indian Ocean Data Coverage, and (2) initiating preparation for Meteosat Third Generation (MTG) in Africa. The 12<sup>th</sup> EUMETSAT Forum will specifically focus on MTG for Africa. Regarding the third recommendation, RAIDEG is now fully recognised as technical advisory body of the WMO RA I, which recognised the good work performed since 2010.

#### ***2. Climate and GFCS (recommendations # 4 and #5)***

Following the Benoni statement, the GFCS ACP Task Team has prepared for the formulation of a project focusing on regional dimension of the GFCS Implementation Plan (including link with global and national dimensions). This included also fund mobilisation for this project. In the mean time, the ACMAD-AU MESA Climate Services became operational and EUMETSAT conducted first course on Climate gridded data in Africa.

#### ***3. RARS Africa project (recommendations # 6 - #12)***

All regional climate centres (including the newly created Central Africa RCC) have submitted their SAWIDRAS (Satellite and Weather Information for Disaster Resilience in Africa) proposal to the African Development Bank (AfDB). The AfDB conducted assessment of the proposals and contracts should be imminently signed. This will bring RARS Africa closer to becoming reality. SAWIDRA will also support NMHS in strengthening capacity to predict extreme weather event and cooperating with DRM agencies. Progress is still needed to ensure that African can benefit from International Charter “Space and Major Disaster”.

**4. MESA project (inc. North Africa) (recommendations # 13 - 19)**

All recommendations related to the MESA programme have been implemented. Lessons learned from AMESD regarding the PUMA station and associated training were addressed. This should lead to an improvement once the PUMA 2015 stations will be deployed and NMHS staff trained. This will be subject to a specific session during the 12<sup>th</sup> EUMETSAT User Forum in Africa.

**5. Marine applications (recommendations # 20 - 23)**

Several activities have been implemented based on these recommendations. For example, a dedicated training course and MOOC modules are being developed. This is only a start and activities in this area will intensify in the coming years, notably thanks to the Copernicus and Satellite Oceanography programmes, which recently put two new satellites in orbit: the Jason-3 and Sentinel-3. Ensuring data access and exploitation in Africa is a recognised objective.

**5. Training and Research activities (recommendations # 24 - 30)**

Training and research are two key aspects to ensure long-term sustainability in the use and exploitation of satellite data in Africa. Most of the recommendations raised during the last Forum are currently being addressed. A more details report will be provided at latest during the 12<sup>th</sup> EUMETSAT User Forum in Africa.

**6. Space and Earth Observation (recommendation #31 - #34)**

During the January 2016 African Union Summit, the African Head of States and Governments adopted the African Space Policy and the African Space Strategy. Earth observation and the consideration of user needs are important elements in these two documents. In parallel, discussion between the EC, AUC and EUMETSAT, within the framework of the Joint EU-Africa Strategy, led to positive decision for the dissemination of Sentinel-3 data over EUMETCast.

**3 DETAILED STATUS OF THE RECOMMENDATIONS**

The present paragraph provides a detailed status of the recommendations, which is based on the information available at EUMETSAT in February 2016. For each recommendation the status is provided as follow:

- CLOSED: the recommendation has been implemented (17 recommendations)
- ON-GOING: activities are currently on going to implement the recommendation (12)
- OPEN: no activities undertaken or reported yet on the recommendation (5)

## **1. EUMETSAT Programme and RAIDEG**

### **Recommendation #1 IODC continuation**

Taking note of the on-going international discussions in the World Meteorological Organization (WMO) Coordination Group for Meteorological Satellites (CGMS) framework (in particular between EUMETSAT, China Meteorological Administration (CMA), Indian Space Research Organisation (ISRO), and ROSHYDROMET) to secure continuity of the Indian Ocean Data Coverage (IODC) beyond the end of Meteosat-7 decommissioning at end of 2016, the Forum recommended CGMS, via EUMETSAT:

- to come up with a timely solution in order to avoid any data gap over the region;
- to ensure that the new satellite(s) covering the IODC will provide at least similar coverage as the current IODC, in terms of imagery and Data Collection Service;
- to inform the African user community about the solution and the corresponding calendar, so that users can prepare themselves for the transition;
- to ensure dissemination of the IODC data, from whatever satellite, through EUMETCast-Africa for a seamless transition;

**Status: ON-GOING****Partners involved: CGMS, via EUMETSAT****Theme: EUMETSAT Programme and RAIDEG**

- At its 2015 annual meeting, CGMS adopted a Roadmap for the continuity of IODC<sup>1</sup>;
- This roadmap includes the provisions for a similar coverage as today for both imagery and DCS;
- The main elements of this roadmap were reported to WMO Congress, and during the “EUMETSAT and Africa” side-event organised at Congress on 29 May 2015. The current status is as follow: pending final decision of EUMETSAT Council in June 2016, Meteosat-8 will be moved at 40-degree East;
- Pending, positive decision by EUMETSAT Council in June 2016, IODC data will be disseminated via EUMETCast-Africa;

Completion of this recommendation is pending EUMETSAT’s Council decision in June 2016.

<sup>1</sup> See:

[http://www.eumetsat.int/website/wcm/idc/idcplg?IdcService=GET\\_FILE&RevisionSelectionMethod=LatestReleased&Rendition=Web&dDocName=CWPT\\_1341](http://www.eumetsat.int/website/wcm/idc/idcplg?IdcService=GET_FILE&RevisionSelectionMethod=LatestReleased&Rendition=Web&dDocName=CWPT_1341)

**Recommendation #2**  
**MTG preparedness**

The Forum took note of the capacities of the new Meteosat Third Generation (MTG) programme, whose first satellite is expected to be launched in 2019. The Forum recommended:

- EUMETSAT to initiate the MTG user preparedness activities, in particular through an initial study that would highlight the potential benefits of MTG for various applications in Africa;
- the African meteorological user community, through RA-I Dissemination Expert Group (RAIDEG), to come-up with their priorities in terms of MTG applications on the basis of the study;
- EUMETSAT to take into account these African priorities when designing MTG preparatory activities on various topics (training, data dissemination, etc)
- the African meteorological user community and EUMETSAT to initiate discussions related to the upgrade of the user infrastructure to MTG (inc. meteorological data display system, MTG data processing and assimilation), engaging with the African Union Commission (AUC), the Regional Economic Communities (RECs) and potential donors in their discussions;
- EUMETSAT and RAIDEG to report on the outcomes of these activities at the next EUMETSAT User Forum in Africa.

**Status: ON-GOING****Partners involved: EUMETSAT and RAIDEG****Theme: EUMETSAT Programme and RAIDEG**

- A “MTG Africa Preparatory Study” (MAPS) was started by EUMETSAT in 2015, based on this recommendation;
- A dedicated MAPS Workshop took place in August 2015 with RAIDEG and the MAPS team in order to discuss African priorities related to MTG;
- The Study is currently going-on taking into account the outcomes of the MAPS Workshop and addresses data access and training aspects;
- At this stage, the discussion related to upgrade of the use infrastructure for MTG has not yet started, but this element is taken into account in the MAPS study;
- A dedicated session is planned during the 12<sup>th</sup> EUMETSAT User Forum in Africa to report on and discuss the outcomes of the MAPS study.

This recommendation is planned to be completed through the session during the 12<sup>th</sup> EUMETSAT User Forum in Africa.

**Recommendation #3  
RAIDEG within WIGOS**

The Forum noted and supported the recommendations of the 5<sup>th</sup> RAIDEG meeting as presented during the Forum and call upon all relevant partners to respond to these recommendations before the next meeting of the RAIDEG planned in mid-2015.

In particular, the Forum recommended WMO RA-I to recognise RAIDEG in the Regional working structures of WMO Integrated Global Observing System (WIGOS), as further recommended by the Commission on Basic Systems (CBS), at its next conference, and to ask each country to nominate a focal point to interface with the representative of their region within the RAIDEG.

**Status: CLOSED****Partners involved: WMO RA-I****Theme: EUMETSAT Programme and RAIDEG**

During its sixteenth session, held from 3 to 9 February 2015 in Praia, Cap Verde, the WMO Regional Association I agreed to consider RAIDEG as a technical advisory body of the RA I Working Group on Observations and Infrastructure as elaborated in the RAIDEG Terms of Reference given in the Annex I to the RA-I report<sup>2</sup>. It encouraged all Members to nominate points of contact as an interface to the RAIDEG representative of their respective sub-region.

**2. Climate and GFCS****Recommendations #4  
Benoni statement on GFCS-ACP**

The Forum welcomed the Benoni Statement on the Implementation of the Global Framework for Climate Services in Africa, and its call for initiating a GFCS-ACP project targeting the regional level of the GFCS in Africa, under the understanding that a strong regional component will facilitate national level GFCS activities. The Forum noted that AUC and the Republic of South Africa will draw the Statement to the attention of the African Ministerial Conference on Meteorology (AMCOMET) or relevant Specialised Technical Committees (STC), WMO, Intergovernmental Board Climate Services (IBCS), RECs, ACP Secretariat and the European Union.

The Forum recommended the GFCS-ACP Task Team:

- to ensure that the strengthening of regional and national institutions focuses on creating links with the global and with the national components and aims at supporting the national level which is central to a successful and sustainable implementation of the framework;
- to continuously engage with their member states during the project preparation process, i.e. to inform and consult in order to ensure that the national needs are conveyed and integrated into the implementation of the framework, and in particular to ensure the

<sup>2</sup> See: <https://drive.google.com/file/d/0BwdvoC9AeWjUZkphOWF0d3g1QzA/view?usp=sharing>

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integration of all the priority application areas such as health, agriculture, disaster risk management and water resources, etc.;

- to ensure that training and building capacity is an integral part of the implementation of the framework at regional and national levels;

The Forum also recommended all Forum participants to draw the Benoni statement to the attention of their authorities and to encourage them to initiate the implementation of GFCS at national level, following the example from various countries.

**Status: CLOSED****Partners involved: GFCS ACP Task Team****Theme: Climate and GFCS**

Subsequent to the Benoni meeting, the GFCS Task Team met in Praia in February 2015 and in Brussels in November 2015. This led to the drafting of Terms of Reference of a Formulation Study for a GFCS ACP project. The elements of this recommendation were considered as follow in the ToR:

- The study will consider the links between global-regional and national dimension as per the GFCS Implementation Plan. Although the project will concentrate firstly on regional level, it will ensure appropriate links with the national level so that all countries can benefit;
- Some national institutions will be visited during the Formulation Study and RECs will indicate regional priorities;
- Building capacity should be at the heart of the GFCS ACP project;

The 12<sup>th</sup> EUMETSAT User Forum in Africa includes a session on GFCS, with a call for contribution. NMHS are invited to present paper to report on national implementation.

**Recommendation #5****Climate data sets applications**

The Forum recommended that the Regional and National climate institutions explore the application of gridded climate datasets derived from satellite sources in their product generation and further requests those with such data to support training in the Region.

**Status: ON-GOING****Partners involved: Regional and national climate institutions****Theme: Climate and GFCS**

EUMETSAT organised a training workshop on the application of the CM SAF gridded data for Africa was held June 2015. This course was hosted by the Centre of Excellence / RTC in Pretoria. The course shows the applicability of such gridded data and the high demand for future training. Regional and national climate institutions are invited to provide presentation for the Climate session of the 12<sup>th</sup> EUMETSAT User Forum in Africa.

### **3. RARS Africa for Disaster Risk Management (DRM)**

#### **Recommendation #6**

##### **Preparation of RARS-DRR projects**

The Forum recommended ACMAD, AGRHYMET, ICPAC, ECCAS and SADC-CSC to expedite the preparation of their “Application for funding” under the CDSF that would lead to one continental project (ACMAD) and four regional projects (Western, Central, Eastern and Southern Africa);

**Status: CLOSED****Partners involved: ACMAD, AGRHYMET, ICPAC, ECCAS and SADC-CSC****Theme: RARS Africa for DRM**

The five partners have submitted their applications for funding under the ClimDev Africa Special Fund (CDSF) in November 2014, in line with this recommendation from the Forum (one continental and four regional projects). The African Development Bank, who manages the CDSF, assessed the applications, and is currently proceeding with final approval process. This should lead to the launch in the coming months of five SAWIDRA (SAteellite and Weather Information for Disaster Resilience in Africa) projects. Status will be reported as part one of the session during the Forum.

#### **Recommendation #7**

##### **Use of EUMETCast for model boundary conditions**

Taking into account the existing infrastructure and capability of the network of EUMETCast stations within the African continent, the Forum recommended that EUMETSAT together with Regional centres explore the potential use of this network for the delivery of model boundary condition information (including data from ACMAD) to the wider NMHS community in Africa.

**Status: CLOSED****Partners involved: EUMETSAT and RCCs****Theme: RARS Africa for DRM**

This recommendation was discussed during the last RAIDEG meeting with the representatives of Global Producing Centres of Long-Range Forecasts (GPCLRFs) (ECMWF, MF, UK Met) and DWD. It resulted in the dissemination of additional Model outputs through EUMETCast-Africa.

This recommendation was also taken into account by ACMAD in its applications for SAWIDRA project under CDSF. The dissemination of ACMAD NWP model output through EUMETCast will be subject of a dedicated discussion during the project.

**Recommendation #8****Building upon existing capabilities and exchanging knowledge and expertise**

Recalling the success of the Severe Weather Forecasting Demonstration Project (SWFDP), the Forum recommended that these RARS-DRR projects leverage on existing SWFDP national and regional structures, which are seen as best practice.

Noting the importance of model forecast data in the generation of Severe Weather Forecasts (SWF) and Extreme Forecast Indices (FMI), the Forum recommended that regional centres and national NMHSs request training support through the WMO Centres of Excellence in the use and interpretation of NWP data.

**Status: CLOSED****Partners involved: RCCs and national NMHS****Theme: RARS Africa for DRM**

This recommendation was taken into account by the RCC during the preparation of the SAWIDRA proposals. Training on use and interpretation of NWP data for the NMHS are included in all regional SAWIDRA projects.

**Recommendation #9****Engaging with DRM community and contributing to Disaster Risk Reduction (DRR) strategies**

Recognising the need for DRM authorities to understand the potential and limitations of the SWF they receive, the Forum recommended:

- to countries, with the support of AUC and RECs, to take into account these projects as a contribution to the implementation of the African regional strategy for disaster risk reduction and its programme of action (which is in line with the Hyogo Framework for Action), and support its alignment with other programmes and services.
- to the NMHS providers to recognise the critical role that the African Regional Strategy and its programme of action play in advancing DRR on the continent and support its implementation;
- to regional centres to develop a communication and awareness plan to promote the activities and benefits of the EU-AUC RARS-DRR projects for national government agencies and citizens alike;
- to regional centres and NMHSs to engage with DRMs to ensure cross-fertilisation of activities within and between regions, and to establish best practices

**Status: CLOSED****Partners involved: AUC, RECs, RCC and NMHS****Theme: RARS Africa for DRM**

This recommendation was fully taking into account while preparing the SAWIDRA proposals. The implementation of the SAWIDRA project in the coming years should ensure their full implementation. The detailed status is as follow:

- AUC and RECs were informed about the status of the SAWIDRA project during the 8<sup>th</sup> meeting of the African Working Group on Disaster, and are considering them;
- The NMHS will be informed in more details about the project through the RCCs, as part of the SAWIDRA activities;
- The RCC will develop such a plan as part of the SAWIDRA activities, with the support of the RECs;
- This is also planned as part of the SAWIDRA project.

### **Recommendation #10**

#### **Sustainability of the project activities**

Noting that the intra-ACP programme on Building disaster resilience project is of limited duration, the Forum recognised the importance of building for a sustainable future, and recommended that, through the projects, infrastructure, procedures and research expertise are developed and enhanced in such a way that allows for continuation beyond the boundaries of the project. Efforts should also be made to enhance synergy among institutions working within Africa, notably at continental level between ACMAD and AUC. Efforts should also be developed by the project to ensure the establishment of an appropriate framework at national level.

The Forum called upon the countries concerned to devote adequate human and financial resources at national level to ensure sustainability after the project lifetime.

**Status: ON-GOING**  
**Partners involved: SAWIDRA projects**  
**Theme: RARS Africa for DRM**

Sustainability is a key aspect at the heart of the various development projects. ACMAD and AUC are cooperating hand in hands within the intra-ACP Disaster Resilience programme, as well as within MESA-AU Thema (Climate service for disaster risk reduction). The SAWIDRA regional projects provide a clear focus in strengthening national capacities.

### **Recommendation #11**

#### **The International Charter**

The Forum recognised the importance of the Charter data and products in the event of a major disaster and welcomed EUMETSAT plans to disseminate the Charter Products on a routine basis via GEONETCast (EUMETCast-Africa). NMHSs are encouraged to promote the availability of the Disaster Charter service, and the Forum recommended NMHSs to engage with their national disaster management authorities on this aspect. EUMETSAT is invited to report on the use of the Charter data through EUMETCast in the African countries or region at the next EUMETSAT User Forum in Africa

**Status: ON-GOING****Partners involved: EUMETSAT and NMHS****Theme: RARS Africa for DRM**

Discussion took place between GEONETCast and the International Charter “Space and Major Disaster” and the possibility to disseminate Charter data via GEONETCast (i.e. EUMETCast Africa) is welcome. However, compliance to the Charter rules shall be respected. This means that in order to progress on this recommendation, there is a need for African countries to register as an Authorised User in the Disaster Charter (see <https://www.disasterscharter.org/web/guest/activating-the-charter>). Since last Forum, only Malawi did register as Authorised User, bringing the total number of African countries to three (Nigeria, Algeria and Malawi). Consequently, despite the number of natural disasters occurring in Africa, the Charter was activated only six times since September 2014: twice for Ebola, twice in Malawi (storm and floods), once in Madagascar (floods) and once in Egypt (airplane crash).

**Recommendation #12**  
**CDSF fund for NMHS**

Further noting that the AfDB intends to issue a call for proposal under the CDSF before the end of 2014, the Forum recommended NMHSs to already initiate the preparation of “application for funding” taking into account the objective of the ClimDev programme, the CDSF Operation Procedures Manual and the template for the “application for funding” available under the website <http://www.climdev-africa.org>, as already done by Mali, Senegal and Ethiopia NMHSs.

**Status: CLOSED****Partners involved: NMHS****Theme: RARS Africa for DRM**

The AfDB issued a call for proposal under the CDSF in October 2014, one month after the 11<sup>th</sup> Forum. EUMETSAT informed all Forum participants about this call via email. At the deadline for applications, the AfDB received about 100 proposals. Some of them came from NMHS. The AfDB has analysed all proposals and started awarding contracts.

**4. MESA project****Recommendation #13**  
**Training Centres WMO and MESA RICs**

The Forum recommended AUC (i) to engage with the WMO on the use of the Regional Training Centres by the MESA RICs and (ii) to establish agreement with the Training Centres as necessary.

**Status: CLOSED****Partners involved: AUC****Theme: MESA projects**

The African Union Commission engaged with the WMO Regional Training Centres and exchanges of letters took place in order to formalise agreement for the use of the RTC for MESA training activities. The RTC will receive new equipments under MESA and several training courses are now planned to take place in the course of 2016 and 2017 in these RTCs.

#### **Recommendation #14** **Engaging the national level**

As reaching national level is at the core of MESA, the Forum recommended MESA, and in particular its regional THEMAs, to ensure the appropriate engagement of national institutions, starting with appropriate communication.

The Forum also recommended MESA programme to facilitate cross-fertilisation of services from one region to another.

**Status: CLOSED**  
**Partners involved: MESA (AUC and RICs)**  
**Theme: MESA projects**

Numerous contacts have been established between the MESA project and the national institutions. At least one National MESA workshop per sub-Saharan countries took place, and countries were encouraged to establish MESA national networks. Two to three representatives per country were also invited to attend the first MESA Forum, which took place in Kenya in September 2015. MESA newsletters are regularly sent out to national focal points and institutions.

Cross-fertilisation of services from one region to another is one of the Expected Results of MESA. Last reports (made by AUC at the Project Steering Committee) and the Mid-Term Evaluation have highlighted the actual progress made towards this Expected Result.

#### **Recommendation #15** **Sustainability at national level**

The Forum also recommended national institutions (Focal points and NMHSs) to work in close collaborations, with MESA's initial support, in order to ensure long term sustainability at national level.

**Status: ON-GOING**  
**Partners involved: MESA (AUC and RICs)**  
**Theme: MESA projects**

As indicated above, the MESA project encouraged the establishment of national network (NMHS are full members of these networks), where all countries in a region participate. Taking into account recommendation from the MESA Mid-Term Evaluation, a Result Oriented Monitoring (ROM) will take place in 2016 to assess in more details the impact of MESA at national level in six countries. The result of this ROM should be ready on-time for a presentation during the 12<sup>th</sup> EUMETSAT User Forum in Africa.

**Recommendation #16**  
**MEA and MESA to reach decision makers**

Furthermore, the Forum recommended MESA to ensure that products and information be made available to and reach the decision makers in order to gain their commitment for long term sustainability. In this respect, the Forum further recommended the AU hub of the ACP programme on Capacity Building on Multilateral Environment Agreement (MEA) to coordinate with MESA, particularly for disseminating information, coordinating between focal points and raising awareness of parliamentarians on the MESA and MEAs activities.

**Status: OPEN**  
**Partners involved: AUC (MEA and MESA)**  
**Theme: MESA projects**

Report about this recommendation will be provided at a later stage.

**Recommendation #17**  
**RAIDEG involvement in PUMA upgrade**

The Forum recommended MESA to invite RAIDEG experts for the evaluation of the offers for MESA infrastructure contract which will provide the new upgraded PUMA 2015 station, and of key implementation milestones such as the Factory Acceptance Test, to ensure that the new system will match current African meteorological user requirements for data processing and visualisation.

**Status: CLOSED**  
**Partners involved: MESA**  
**Theme: MESA projects**

RAIDEG representatives participated to the evaluation of the offers for the MESA infrastructure contract (held in January 2015), as well as to the Factory Acceptance Test (held in December 2015, at the contractor premises). This has allowed RAIDEG expert to provide their inputs in the process at the appropriate time.

**Recommendation #18**  
**PUMA 2010 license keys**

The Forum recommended MESA to speak with the contractor of the PUMA 2010 stations to seek replacement of broken licences keys at no cost, especially at the Training Centres, and to ensure that measures are taken for the PUMA 2015 to avoid such problems.

**Status: CLOSED**  
**Partners involved: MESA**  
**Theme: MESA projects**

Discussion took place between MESA (AUC) and the PUMA 2010 contractor, and concluded that the price requested for replacement of broken licences keys corresponded to

the replacement costs. For the PUMA 2015, the licenses keys are considered as “hardware” (HW) and will be covered by the three years guarantee period.

However, loss of license key is not covered by the HW guarantee. A lost key will be replaced at full cost (including license cost). Measures have been implemented to protect the key, and NMHS are encouraged to adequately protect access to PUMA stations.

### **Recommendation #19**

#### **Activities in North Africa**

Noting the status of discussion in North Africa for a MESA-like project, initiated following the 10<sup>th</sup> EUMETSAT User Forum in Africa, the Forum recommended the NMHS of Tunisia to pursue the discussion with EU towards the inclusion of some MESA-like activities in the framework of the Regional environmental programme on water management.

The Forum also noted that a first project under the GMES&Africa initiative, which is currently being formulated by EU and AUC, covers the full continent (inc. North Africa) and recommended EU and AUC to take into account the activities formulated in the MESA-North Africa and Maghreb concept for the formulation of this first GMES&Africa project.

**Status: CLOSED**

**Partners involved: North Africa NMHS, EU and AUC**

**Theme: MESA project**

North Africa is fully part of the GMES&Africa initiative led by the African Union Commission. Following the call for “concept note” issued by AUC, several Northern African institutions provided concept notes for activities in the region.

## **5. Marines applications**

### **Recommendation #20**

#### **Marine Data and Capacity Development needs**

The Forum notes the critical satellite data/products and capacity development needs of the marine user community across several application areas. These needs are exacerbated by the lack of real time observation equipment in the region. The Forum recommended the WMO RAIDEG group to include a JCOMM representation or a Monitoring of Environment and Security in Africa (MESA) Marine RIC representation, so that dissemination and capacity development needs of the marine meteorological and oceanographic community are properly captured.

**Status: CLOSED**

**Partners involved: WMO RAIDEG**

**Theme: Marine applications**

The RAIDEG Terms of Reference approved by the sixteenth session of the WMO Regional Association I includes a JCOMM representative as full member of the RAIDEG. The JCOMM representative is currently Georges Wiafe from the ECOWAS Coastal and Marine Resources Management Centre, hosted by the University of Ghana.

**Recommendation #21****MESA Thema on marine (cross fertilisation between regional centres and beyond)**

Noting the cooperation established between the two MESA Regional Implementation Centres for marine applications (University of Ghana and Mauritius Oceanographic Institute) within MESA, the Forum recommended that these MESA RICs engage with the CSIR South Africa and other African institution to explore how knowledge sharing (cross-fertilisation) can be achieved and formalised in order to cover the entire African continent, possibly through the first GMES&Africa project under formulation.

**Status: CLOSED****Partners involved: MESA Marine RICs****Theme: Marine applications**

The MESA marine RICs and the CSIR South Africa met and discussed at several instances (e.g. during the 4<sup>th</sup> MESA PSC meeting in Mauritius) during the GMES&Africa process with the objective to implement this recommendation. They have included all necessary elements in their response to the call for concept note issued by the African Union Commission. EU and AUC also took into account this recommendation by planning that GMES&Africa marine services will cover the entire African continent (inc. North Africa).

**Recommendation #22****Maritime institution and NMHS coordination on real time data and products**

The Forum noted the applicability of near real time meteorological data across maritime application areas and also the potential to develop real time maritime safety and surveillance products from these data. The Forum therefore recommended NMHSs of coastal countries to engage with their national and regional maritime organisations to discuss this potential in order to meet the needs of the maritime community.

The Forum encouraged South Africa Marine Safety Agency (SAMSA) to support the other countries within the region and the continent, through capacity building activities possibly under on-going project (such as MESA) and recommended JCOMM to report on this at the next Forum.

**Status: ON-GOING****Partners involved: NMHS, SAMSA****Theme: Marine applications**

On EUMETSAT side, a training course on marine forecasting is currently being developed and training is planned to take place in Pretoria, South Africa in 2016. Furthermore, EUMETSAT is developing a MOOC on operational monitoring of marine environment from Space, and could fund short term mobility support. EUMETSAT hosted a visiting research from the University of Ghana (MESA Regional Implementation Centre) during 2016.

The parallel session on Marine and Great Lakes forecasting during the 12<sup>th</sup> EUMETSAT User Forum will allow reconsidering this recommendation.

**Recommendation #23**  
**STCW training content review**

The Forum noted the meteorological requirements of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), and kindly requested EUMETSAT and the training centres to review the content of the STCW training courses, within the scope of the competencies described in the STCW Convention (1995) Chapter II, Section A-II/2, and propose additions to the STCW training providers based on satellite related systems, data and products available through national and regional institutions, EUMETSAT and other providers.

**Status: ON-GOING****Partners involved: EUMETSAT and the Training centre****Theme: Marine applications**

This recommendation is taken into consideration when preparing the training course on Marine mentioned above. An analysis of compliance with STCW Convention (1995) Chapter II, Section A-II/2 is still pending.

**6. Training and research activities****Recommendation #24**  
**Training needs**

The Forum requested Training Centres (WMO RTC and the Centre of Excellence in Morocco) to address the training needs identified at the Forum, which includes training of trainers. The Forum requested centres to report progress at the next Forum. Furthermore, the Forum encouraged PRs and institutional directors to directly communicate their needs to the Training Centres.

**Status: ON-GOING****Partners involved: AUC, EUMETSAT****Theme: Training and research activities**

Progress will be reported during the training session (session 5) of the 12<sup>th</sup> EUMETSAT User Forum in Africa.

**Recommendation #25**  
**Internet for training**

The Forum recommended that NMHSs ensure adequate internet bandwidth and staff time to allow their staff to appropriately follow and complete online training courses.

This will enable the Service to make full use of the available capacity building initiatives.

**Status: UNKOWN****Partners involved: NMHS****Theme: Training and research activities**

The status of this recommendation is unknown.

**Recommendation #26****Training Centre Cooperation and Coordination across regions**

The Forum noted the cooperation established between the Training Centres and recommended WMO CGMS Vlab to further enhance cooperation across regional economic groupings in Africa.

**Status: OPEN****Partners involved: WMO CGMS Lab****Theme: Training and research activities**

This recommendation is being addressed through the virtual laboratory management where the Centres of Excellence in Pretoria, Nairobi, Casablanca and Niamey meet.

**Recommendation #27****Training in French**

The Forum noted the very strong need for training provided in French in certain countries to BIP-M and BIP-MT levels and recommended relevant PRs and francophone training centres, with guidance from the WMO secretariat, to explore ways forward.

**Status: UNKNONWN****Partners involved: Francophone training centres****Theme: Training and research activities**

The status of this recommendation is unknown.

**Recommendation #28****Information on training opportunities**

The Forum noted the range of available training opportunities. The Forum recommended Training Centres (WMO RTC and the Centre of excellence in Morocco), with the support of the MESA programme, to better make available information (e.g. on AUC website) on what training is available from them, RICs and other partners, in a coordinated manner, and to propagate this information to NMHSs and other potential participants.

**Status: CLOSED****Partners involved: MESA, WMO RTC****Theme: Training and research activities**

MESA, through its training contract, established a Learning Management System (LMS) as well as a MESA training website (<http://training4mesa.org/>), which provide access to numerous on-line training courses and materials, and inform all stakeholders about available training courses and calendar.

**Recommendation #29**  
**Develop research capacities**

The Forum, noting the research skills gaps in the region, invited AUC to make accessible information on the support available to develop the capacity of researchers in meteorology and wider environmental field.

**Status: OPEN**  
**Partners involved: AUC/HRST**  
**Theme: Training and research activities**

The status of this recommendation is unknown.

**Recommendation #30**  
**Cooperation with research projects**

Noting the presentations of the various projects from European institutions in Africa (e.g., TAMSAT, AGRICAB, SAFs, etc), the Forum encouraged them to strengthen collaboration and coordination among themselves and recommended NMHSs, RAIDEG and other relevant regional and national institutions to engage with these projects to establish partnerships and exploit the various data and information they provide.

The Forum recommended NMHSs and other users to respond to the next call for contributions that will be issued for the next EUMETSAT User Forum in Africa in order to present their collaborations with these projects.

**Status: ON-GOING**  
**Partners involved: NMHS, European projects**  
**Theme: Training and research activities**

A call for contribution is available to allow project, NMHS and other actors to present during the next Forum results of collaboration established through various projects, and a full session is dedicated to this. This session will constitute the report about the implementation of this recommendation.

**7. Space and Earth observation****Recommendation #31**  
**Coordination and collaboration**

The Forum welcomed the coordination at AU level of policies and initiatives related to Space initiated by various African ministerial conferences (Conference for Ministers in charge of Communication and Information Technologies – CITMC, AMCOMET, African Ministerial Conference on Science and Technology – AMCOST). In particular, the Forum recommended AMCOMET Task Force on the African Regional Space Programme to continue collaborating with the AU Space Working Group in the development of the African Space Strategy, and to ensure consistency with the Integrated African Strategy on Meteorology (Weather and Climate Services).

**Status: CLOSED**  
**Partners involved: AUC, AMCOMET**  
**Theme: Space and Earth observation**

Coordination between AMCOMET, the African Regional Space Programme, and the AU Space Working Group was subject to various meeting and coordination, notably during the 3<sup>rd</sup> session of AMCOMET and during the WMO Congress.

In January 2016, African Head of States adopted the African Space Policy and Strategy, which integrates all space-related aspects across Africa and should serve now as a reference for all space related activities in Africa.

### **Recommendation #32**

#### **User needs assessment**

The Forum highlighted the importance of conducting regular user needs assessments and dialogues with data providers, and welcomed the process established under RAIDEG for meteorological applications, as a potential example for other user communities. In this respect, the Forum recommended RAIDEG to continue to assess and evaluate requirements for meteorological satellite data sets and products, and to report these requirements to the AMCOMET Task Force on the African Regional Space Programme.

**Status: ON-GOING**  
**Partners involved: RAIDEG and AMCOMET**  
**Theme: Space and Earth observation**

The RAIDEG continue to meet regularly (meeting in August 2015) to assess and evaluate requirements for meteorological satellite data sets and products. RAIDEG reports are published under the WMO website, for further use.

The Task Force on the African Regional Space Programme met once in Geneva in June 2015. Next meeting is planned to take place at latest during the 12<sup>th</sup> EUMETSAT User Forum in Africa.

### **Recommendation #33**

#### **Data from EO initiatives in Africa**

Welcoming the various on-going projects and initiatives (e.g., AfriGEOSS, MESA GMES&Africa) aiming at promoting the use of Earth Observation in Africa for several socio-economic sectors, the Forum recommended the main stakeholders of these initiatives, in particular the African GEO members and participating organisations, the GEO Secretariat and AUC departments (Rural Economy and Agriculture – REA and Human Resources Science and Technology – HRST):

- to promote, through these initiatives and projects, an open and free access to all relevant EO datasets;

**Status of recommendations from the 11th EUMETSAT User Forum in Africa**

- to coordinate data access and sharing at continental level, including harmonization of data format and protocol for data exchange, as well as exploring technical means for access and sharing;
- to focus capacity building effort on datasets available openly and freely to Africa;
- to coordinate their efforts in order to come-up with a unique African EO portal, which would, at least, catalogue all EO data available from and to Africa, planning also interoperability with other existing EO portal available across the globe.

**Status: CLOSED****Partners involved: GEO secretariat, AUC****Theme: Space and Earth observation**

The long-term effort of AfriGEOSS and the recent adoption of the AU Space Policy and Strategy provide a framework that encompasses many elements of this recommendation:

- AfriGEOSS reaffirmed their commitment to support open and free access to EO data sets during the last Ministerial Summit in Mexico in November 2015;

The African Space Policy promotes “equitable access and data democracy that is cost-effective and acceptable to all member states”;

- The African Space Policy also underline the need for “data-sharing protocols [...] to be developed, adopted and implemented”, as AfriGEOSS also do;
- Open and freely available data sets are more likely to be used for capacity building efforts, as this ease sustainability;
- The MESA project, through the infrastructure contract Lot#2, is paving the way for an African EO portal. The efforts might be continued through the GMES&Africa initiative. The AU Space Policy also encourage such coordination.

**Recommendation #34****Near real time Copernicus data for Africa**

The Forum noted that the issue of near-real time physical access to Copernicus data and products (core services and Sentinel satellite data) was often raised in the presentations (marine and land applications). The Forum recommended AUC to coordinate and federate (possibly through the MESA project and GMES&Africa initiatives) specific African users requirements (by applications and with list of priorities), and to pursue its engagement with the EU to come up with concrete solutions for the near-real time access to some prioritised sets of Copernicus data and products.

**Status: ON-GOING****Partners involved: AUC****Theme: Space and Earth observation**

The African Union Commission, with the support of the MESA project, coordinated and federated African user requirements, starting with Sentinel-3 marine data. Similar process is on-going for Sentinel-3 land data. On the basis, the AUC and the European Commission agreed on the dissemination of Sentinel-3 data via EUMETCast-Africa, in order to ensure operational and real-time access to these data. Discussions are on-going for a more generic agreement on all Copernicus data.

#### **4 SYNTHESIS**

The various partners are kindly invited to provide additional information to EUMETSAT (email to [vincent.gabaglio@eumetsat.int](mailto:vincent.gabaglio@eumetsat.int)) on the status of the recommendations, to which they contribute. The detailed status of the recommendations will be regularly updated before the 12<sup>th</sup> EUMETSAT User Forum in Africa in Africa.

The current status shows that numerous recommendation have been taken into account by the various partners:

- 17 recommendations are flagged as CLOSED
- 12 recommendation are flagged as ON-GOING
- 5 recommendation are flagged as OPEN