



22nd Session of the ACMAD Board of Governors
Location: Physical in Abuja-Nigeria and online
tentative date: May 05, 2022

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REPORT BY THE DIRECTOR GENERAL

May 2022

Action required

The Board is invited to consider and approve the reports



ACMAD VISION 2030

An African continent where all nations are benefiting from a **world class operational continental meteorological centre** to become **resilient to extremes events** and **empowered to support their sustainable development** with better meteorological services



REPORT BY THE DIRECTOR GENERAL OF ACMAD

This report covers the period from January to December 2021. It contains **status of implementation of the last Board meeting recommendations** and **a summary on progress on implementation of activities** during the year.

2.1 Status of implementation of last Board meeting recommendations and resolutions

RECOMMENDATIONS	STATUS OF IMPLEMENTATION
1. ACMAD to send a memo to countries explaining the added value of the Burundi pilot effort on meteorological information system for disaster resilience and inviting to consider upscaling.	ACMAD sent a summary of 2021 achievements highlighting added value from Burundi pilot including country level products derived from up to five global deterministic and probabilistic NWP models. Some synoptic patterns are shown to be predictable up to five days ahead including associated mesoscale systems. More countries dedicated web based data and products as well as new diagnostics for nowcasting (e.g SAF Nowcasting), forecasting, advisories, watches, and warnings are progressively being set up. Similar Web based meteorological information system was developed to support the meteorological services for the African Cup of Nations in early 2022 . Discussions to support development of early warning system project in Guinea-Conakry supported by the local UNDP national office are being held. To further facilitate the use of these national web-based products targeted on the job trainings are organized for countries . Maintenance of country web-based products for use in the country after on the Job training is being experimented .
2. ACMAD to prepare for operating the RARS stations and supporting regional modelling.	ACMAD engaged partners and particularly EUMETSAT through its user forum and Webinars to include development of products and services using RARS data as part of the African Meteorological Satellites Applications Facility (AMSAF). Preparation



	<p>of Satellite data for assimilation in NWP is expected to be part of AMSAF. A RARS Africa coordination working group is set up to support exchanges and training on the maintenance of RARS stations, HPC systems and related products development.</p>
<p>3. ACMAD to develop south-south collaboration on modelling</p>	<p>In 2021, ACMAD completed procurement and installation of a HPC currently operational. A combination of five operational global and regional models (Arpege, GFS, ECMWF, ICON, UKMO) is being used for synoptic/mesoscale forecasting as well as nowcasting together with Satellite Applications Facility for Nowcasting (SAF NWC). Emphasis is being put on coordinated verification of operational models over Africa specifically those used for Severe Weather and Seasonal Climate forecasts. Based on model outputs, technical notes as guidance are provided twice a week to support forecast briefings at RSMCs and NMHSs. Outlooks, advisories/vigilance were provided up to five days ahead for heavy rains and cyclones of the southwest Indian Ocean.</p>
<p>4. ACMAD to further strengthen links with UNECA</p>	<p>ACMAD contributed to the implementation of the continental WISER programme with development of a concept and detailed design of a continental knowledge Management System for climate change adaptation. Both institutions organized and participated in side events at COP 26 at the Africa pavilion. The 2020 state of climate for Africa was an additional joint undertaking. A draft joint work plan for 2022 was proposed by ACMAD in December 2021 at COP 26, including review of the draft relationship agreement with AUC, production of the 2021 state of climate report for Africa, joint side events at COP 27, statement on climate trends</p>

	<p>and impacts for the UNECA Conference of Ministers and other high-level events and joint organization of events on climate and development for Africa.</p>
<p>5. ACMAD to implement the recommendations of the audit and report on progress to the upcoming board sessions</p>	<p>ACMAD administration and finance Services staff were trained on International Public Sector Accounting Standards (IPSAS), the International Financial Reporting Standards was experimented in 2020 providing a reference for accounting and financial statements preparation, the chart of account was updated, countries contributions is better accounted for as account receivable, better management of exchange rate gains or losses with dedicated accounts, provisions accounts are operational. Revaluation of assets and liabilities is expected this year using the additional accounts.</p>
<p>6. ACMAD to strengthen collaboration with EUMETSAT to support development and implementation of satellites related activities including the Abidjan declaration.</p>	<p>ACMAD contributed as session chair, presenter, and participant to the EUMETSAT user forum. The centre provides technical inputs toward development of the action plan for implementation of the Abidjan declaration on MTG and AMSAF. ACMAD is member of the working group set up to monitor and facilitate implementation of the Abidjan declaration.</p>
<p>7. ACMAD to strengthen collaboration with WMO RA I Office to better contribute to WMO programmes in Africa.</p>	<p>ACMAD participated at WMO RA I 18th session and committee on services session. Contributions to RA I committee for infrastructure is ongoing.</p>
<p>8. ACMAD to liaise with relevant AUC departments and UNECA division to strengthen NMHSs support to national environmental impact assessments.</p>	<p>ACMAD through the draft joint work plan with UNECA is exploring capacity building to use the socio-economic impact assessment tool to estimate climate services value for environmental sustainability. Climate impacts on environment is also being explored as part of the implementation of Agenda 2063 on sustainable environment ClimSA project is being implemented through a grant</p>

<p>9. Members to discuss with ministries of foreign affairs to facilitate payment of contributions needed to ensure the sustainability of operations of the Centre including increase on staff costs.</p>	<p>agreement with AUC. Members to share experiences and good practices in countries with high level of payment of contributions. ACMAD prepared summary of achievements for 2021 sent to NMHSs to support resource use justification, and additional mobilization of countries to contribute.</p>
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2.2 Highlights of 2021 activities and achievements

ACMAD implemented activities of 2021 in the process of further **bringing about its vision to become a world class operational continental weather and climate Centre** at the hearth of Africa **supporting** African countries to be well **resilient to extremes** and empowered **to better adapt to climate change impacts**.

This period saw progress on implementation of priorities in the 2021 operating plan on capacity building for NMHSs and stakeholders, quality continental weather and climate services delivery, better access to data, enhancement of forecasting research, improvement of governance and management of ACMAD.

Efforts to lead, plan, organize, staff, direct, guide and control implementation of planned activities for 2021. Technical supervision was provided for new methods, tools and products development, standardization of ACMAD's administrative, financial. scientific and technical processes and systems.

2.2.1 To strengthen *capacity of NMHSs and other stakeholders*, ACMAD focuses on organization of training events.

Coordination, organization of and participation to **training events hands on, secondments, internships, workshops and fora**. Training **programmes, materials** and/or operating procedure manuals were prepared for S2S and seasonal forecasting, nowcasting, synoptic forecasting, climate scenarios, User Interface and feedback collection and analysis.

Online Regional Climate Outlooks were organized and coordinated including PRESASS/ECOWAS, PRESAC/ECCAS, SWIOCOF/IOC and PRESAGG for Gulf of Guinea countries. Lectures and mentoring activities during and after workshops and fora across the continent during the above mentioned RCOFs, GHACOF and SARCOF supported national level capacity building with special emphasis on operation of climate information on the start of agriculture season. A concept for a **Continental Climate Outlook forum** was prepared with implementation starting in January 2022.

On the job training, secondments, and internships for **15 experts from 11 African countries were organized during the year**. Training for NMHSs focused on climate data management, climate monitoring, Weather nowcasting and synoptic/mesoscale forecasting, sub seasonal and seasonal forecasting as well as analysis of climate change projections. Training workshops for experts in Ministries of agriculture on the start of the agriculture season was also organized. Training outputs included methods, tools, training materials, products prototypes, validation study reports, technical notes, bulletins, reports, advisories, outlooks, briefs, and statements.

1	Hubert Kabengela	RDC	Secondment	Climate monitoring and Seasonal forecasting
2	Nshimirimana Godefroid	Burundi	Secondment	Watch and Weather Prediction
3	Maoro Beavogui	Guinea	Secondment	Climate monitoring and Seasonal forecasting
4	Tchouanwo Augustin	Cameroun	secondment	Watch and Weather Prediction
5	Tarekegn Abera	Ethiopia	Secondment	Climate monitoring and Seasonal forecasting
6	Esther Verena Jansen	Botswana	secondment	Climate monitoring and Seasonal forecasting
7	RUSANGANWA Frank	Rwanda	secondment	Watch and Weather Prediction
8	BORNO Maimuna Usman	Nigeria	secondment	Climate monitoring and Seasonal forecasting
9	NGENDAKUMANA Donatien	Burundi	On Job Training	Watch and Weather Prediction
10	BONGKIYUNG EMMANUEL NYUYKI	Cameroun	On Job Training	Climate monitoring and Seasonal forecasting
11	Brenda MDZAGADA	Malawi	On Job Training	Climate monitoring and Seasonal forecasting
12	Nantenaina Randrianasolo	Madagascar	Internship	Watch and Weather Prediction
13	Esther Otieno	Kenya	Internship	Watch and Weather Prediction
14	MOTING MADEFO Minette Iris	Cameroun	Internship	Watch and Weather Prediction
15	Ibrahim Dan Dije	Niger	Internship	Climate monitoring and Seasonal forecasting

Table 1: Experts from 11 countries participated to on-the-job Training, Secondment or internships in 2021.

Events and particularly high-level events supported exchanges, awareness raising and training with stakeholders. The event table in annex indicates **EUMETSAT User forum, Africa platform for DRR, Dubai Expo** on Multi Hazards Early Warning System with AUC and UNDRR and **COP 26**.

2.2.2 As support to *quality weather and climate services delivery*, **ACMAD operated** the WMO **Regional Climate Centre for Africa** with continental products for climate data, monitoring, long range forecasting and training functions provided. Contributions with continental scale outlooks were provided for all RCOFs PRESASS/ECOWAS, PRESAC/ECCAS, PRESAGG for the Gulf of Guinea, SWIOCOF/IOC, GHACOF/IGAD, SARCOF/SADC and MEDCOF/PRESANORD/AMU.

As part of the technical coordination of Regional Climate Centres and the Climate outlook Forum under ClimSA, the first continental climate outlook was prepared in December 2021 and organized in early 2022 with participation of RCCs, developing RCCs, WMO



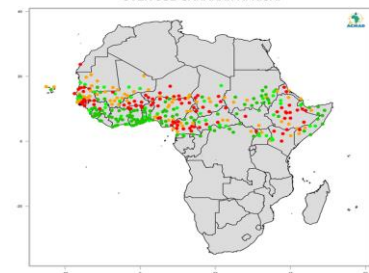
Secretariat and Regional Office for Africa, AUC as well as other partners. ACMAD contributed in the physical and impact sections of the state of climate report for 2020. Based on ERA 5 reanalyses, climate trends were assessed. Models projections will be used in 2022 to prepare scenarios for application in sectors of economy and society.

Nowcasting products (**Nowcasting SAF** in particular), global and regional analyses and Numerical Weather Prediction deterministic and probabilistic derived products, outlooks, advisories, and watches were generated and disseminated. Three levels of deliverables were provided:

- **technical notes to guide NMHSs on nowcasting and synoptic forecast briefings**, sub seasonal and seasonal forecasting, climate scenario development.
- **reports, vigilance, advisories, watches, and bulletins for awareness raising** on upcoming hazards for the general public and experts in agriculture, water, Disaster risk Management, health and other relevant sectors.
- **summaries and short statements and updates for planners and policy makers** on ENSO and other phenomena, processes, and related hazards.
- Special technical notes and bulletins for the meteorological assistance to the **African Cup of Nations matches** programming in January 2022.
- New **definition of the start of agriculture season indicators** applicable Africa wide was validated over countries in West, Central, East and southern Africa:
- Structure, organize and supervise weather and climate briefings, organize internal seminars to share knowledge, methods, tools, products and interpretation or analysis techniques



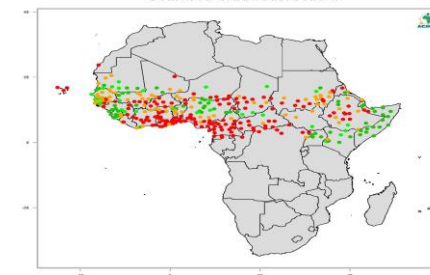
START OF THE AGRICULTURE SEASON FROM JANUARY TO JULY IN 2021
OVER SUB-SAHARAN AFRICA.



Observed start of the Agriculture
Season departure from Average:

- LATE
- NEAR AVERAGE TO LATE
- NEAR AVERAGE TO EARLY
- EARLY

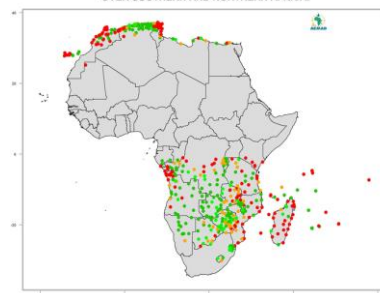
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Season departure from Average:

- LATE
- NEAR AVERAGE TO LATE
- NEAR AVERAGE TO EARLY
- EARLY

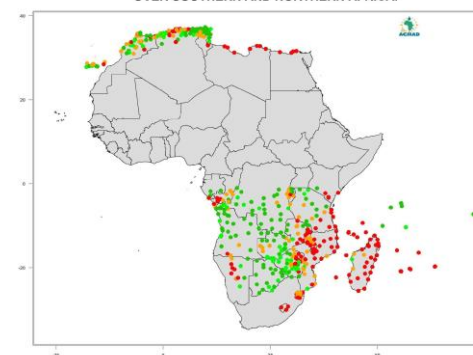
START OF THE AGRICULTURE SEASON FROM JULY TO DECEMBER IN 2021
OVER SOUTHERN AND NORTHERN AFRICA.



Observed start of the Agriculture
Season departure from Average:

- LATE
- NEAR AVERAGE TO LATE
- NEAR AVERAGE TO EARLY
- EARLY

START OF THE AGRICULTURE SEASON FROM JULY TO DECEMBER IN 2020
OVER SOUTHERN AND NORTHERN AFRICA.



Observed start of the Agriculture
Season departure from Average:

- LATE
- NEAR AVERAGE TO LATE
- NEAR AVERAGE TO EARLY
- EARLY

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African Institution under the aegis of UNECA and WMO

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The **State of climate of Africa for 2020**, the provisional state of Africa's climate for 2021, **RCOFs statements, outlooks, advisories and watches for high impact and severe weather events in 2021** (floods, disruptions on the African monsoon onset, high temperatures, droughts, southwest Indian ocean cyclones...) were published through emails, online fora and events and website. **Two synoptic briefings, three sub seasonal forecast and one seasonal forecast briefings are organized each month with RCCs, RSMCs and NMHSs.**

2.2.3 *To improve access to data*, ACMAD through the SAWIDRA project completed **procurement, installation, and test of 4 Regional Advanced Retransmission System** Stations completing the WMO Global Digital Broadcast Network for Low Earth Orbiting Satellite data. **Configuration of the WIS-DPCP-Niamey** (figure 2) was completed with ACMAD included. Efforts started to **build ACMAD products catalogue for WIS**. This effort contributes to WMO space programme as well as its Information System. ACMAD was reconnected to the WMO/GTS through the Niamey airport hub. Connection to WIS through the Global Information System Centre in Casablanca is planned for 2021. A plan is available to facilitate exchange of ACMAD products through WIS and prepare for MTG and SG EPS data access. Monitoring impacts of COVID 19 on the African synoptic observing network was presented during relevant meetings. The intra ACP GFCS and the emerging resource mobilization effort for implementation of the Abidjan declaration are being followed by ACMAD in the partnership with EUMETSAT under a Joint Working Group established by AUC.

The continental synoptic stations database on climsoft has been regularly updated, PUMA reception station for data disseminated via EUMETCAST is operational, international archives (Copernicus Climate Data Store, ECMWF data archive, NOAA/NOMAD data Server, IRI data Library ...) and the four RARS are providing additional data for ACMAD's activities. ACMAD participated to WMO/RA I RAIDEG group and contributed to discussions on products to be disseminated through EUMETCAST with the MTG and AMSAF.



Figure 1: High Performance Computing System installed at ACMAD with 344 cores and 600 Terabytes of storage capacity.

RARS station built at ICPAC's
Nairobi-Kenya



RARS station installed on the roof of
AGRHYMET's building (Niamey- Niger)

RARS station built at AGEOS's premises
(Nkok- Libreville, Gabon)



RARS station built at SANSA's premises
(Pretoria, South Africa)



RARS station installed on the roof of
AGRHYMET's building (Niamey-
Niger)

RARS station built at SANSA's premises (Pretoria, South Africa)

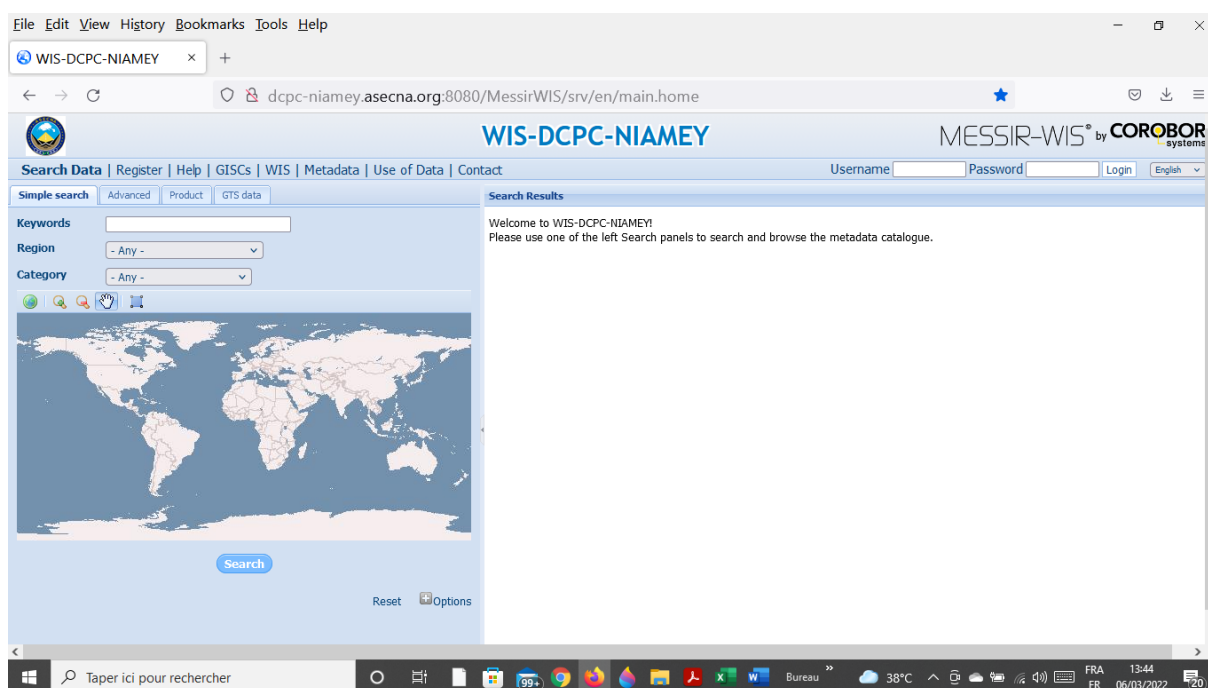
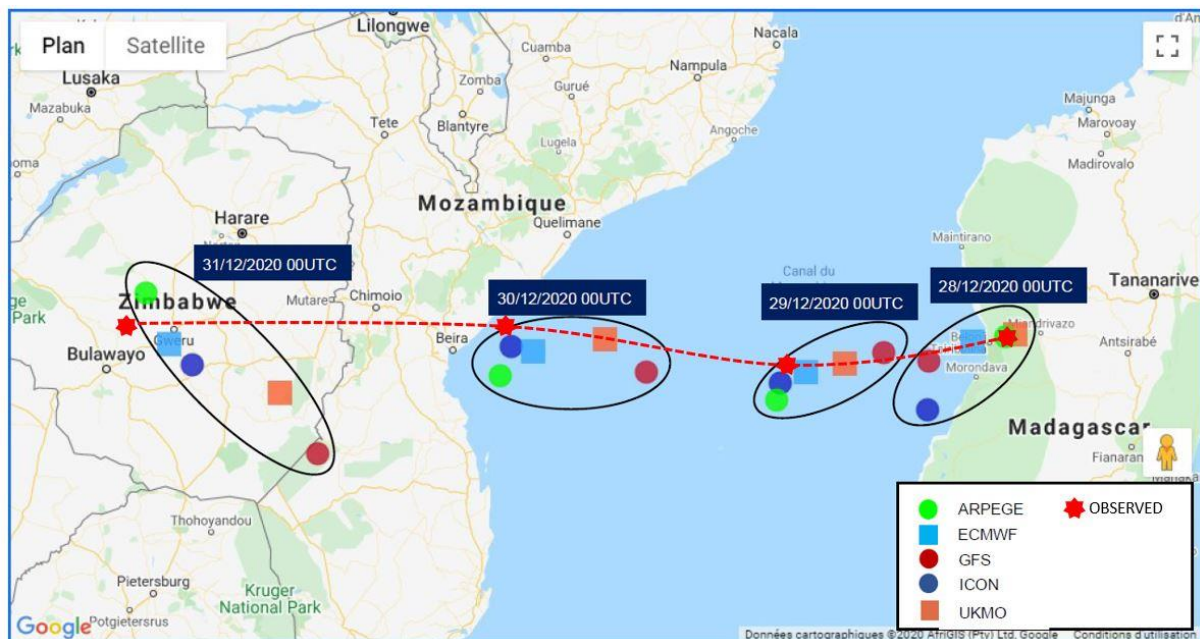


Figure 2 : WIS-DCPC – Niamey for regional data collection, production and exchange through WIS catalogue on the web platform. ACMAD's products catalogue is continuing to be develop for upload on the WIS system.

To enhance forecasting research networks in Africa, ACMAD is collaborating with the African Institute for Mathematical Studies (AIMS) climate resilience programme and implementing SWIFT and FOCUS Africa projects. Research on nowcasting, synoptic, sub seasonal and seasonal forecasting, operational procedure manuals preparation and update, new products development for technical notes and upgrade or extension of training materials using available advances in science and technology. ACMAD Forecast Demonstration and SWIFT testbeds have experimented the new products (figure 3 cyclone tracks) and their detailed design will support 2022 forecasts demonstrations and operations at the Continental Multi Hazard Advisory Centre established at ACMAD to support the situation room of the African Multi Hazards Early Warning System set up as part of the implementation of the Sendai Framework and its Programme of Action for Africa. ACMAD is collaborating with the Pennsylvania State University for continental pollution monitoring in selected cities (Figure



Moderate Tropical Storm CHALANE trajectory outlook by NWP models: ARPEGE, ECMWF, GFS, ICON and UKMO

Figure 3: Forecasts and observed track estimate for tropical cyclone Chalane. Arpege, ECMWF and ICON are three models with less track errors. Research is being carried out to verify cyclone and propagating Mesoscale Convective Systems tracks up to five days ahead during the season across Africa

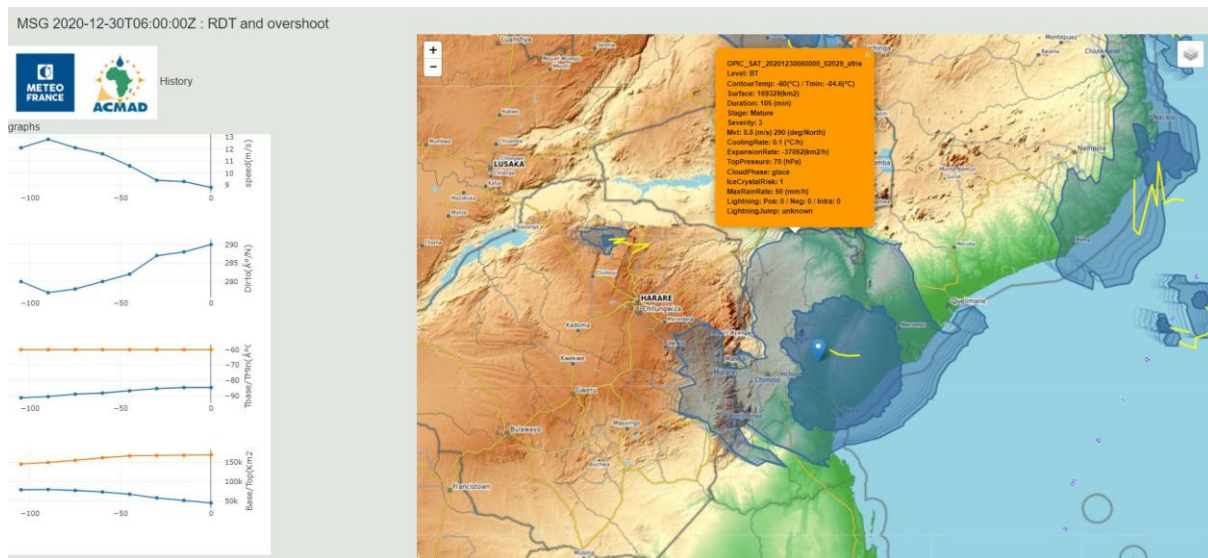


Figure 4: Tropical cyclone Chalane landfall over Mozambique detected with Rapid Developing Thunderstorm product of Nowcasting Satellite Applications Facility project. On the job trainings, secondments and continental nowcasting and synoptic briefings are being implemented to transfer this product in operational nowcasting and forecasting at national level.

FOCUS Africa project capacity gap analysis report was prepared during the year and collection/update of sub seasonal to seasonal forecast training materials on verification undertaken. Four interns from AIMS contributed to products development on weather and climate services. work plan is completed with training plan, material development and organization of training and stakeholder events for climate services delivery and use. Papers, abstracts and presentations were prepared for scientific and technical meetings and events including the American Meteorological Society Conference on hurricanes and tropical meteorology, the WMO Standing Committee on Earth System Modeling and Prediction and the WMO Climate Coordination panel reporting to its Technical Coordination Committee and Executive Council.

An online platform for generation of agro climate services and update or upgrade of agriculture calendars in Africa was developed with VITO (A Flemish Institute for technological research for a cleaner and sustainable world). Demonstration and training for the use of this platform have started with 2020 RCOFs and is expected to continue for the upcoming years involving the NMHSs, ministries of agriculture, Food and Agriculture organization.



An online information system with specific tailored weather, water and climate products for Burundi was developed, training material for its use prepared. A similar effort is expected for the upcoming years in other countries.

2.2.4 *The governance and management modernization of the centre aspect featured:*

Two (2) board sessions organized in March and June 2021. Contacts maintained with UNECA and a draft joint work plan including finalization of the relationship agreement between ACMAD and AUC implementing the AMCOMET Cairo Declaration, statements and side events at the UNECA Conference of ministers and other high-level events. Steering, executive, advisory and technical committee meetings, annual and quarterly reporting and planning for projects including CliMSA, SWIFT, FOCUS-Africa, KIMPALA, Uclip, MHEWS for Africa and pollution monitoring in Africa.

Short term projects formulation and/or implementation on climate resilience for Burundi, building climate change information for adaptation planning in African cities, assessment of tree planting impact in city climate change mitigation and adaptation, production of seasonal forecast operational guidance for the ECCAS region with WMO.

ACMAD continue implementation of WMO programmes in Africa with participation to WMO RA I Session, WMO/RA I committees, WWRP/TMRP Working Group, WWRP Nowcasting guidelines development, WMO standing Committee on Earth System modeling and Prediction meeting.

Update of the SAWIDRA financial report including last payments for procurement of HPC and RARS stations as well as external audit commissioned by EU prepared.

The budgeted resources execution rate for 2021 was **75%** and the budgeted expenditure execution rate was **59,4%**.



Table 1: **STATEMENT OF BUDGET AND EXECUTION (REVENUE)**

COD E	DESCRIPTION	BUDGET IN DOLLARS	BUDGET EXECUTION 2020	EXECUTION RATE
1	Regular Revenue	1 277 896	458 748 760	67%
11	Assessed contributions	50 000	26 730 000	100%
12	Voluntary contributions	-	-	0%
13	Grants	1 227 896	432 018 760	66%
				0%
2	Extraordinary Revenue	4 512 078	1 843 333 205	77%
21	donation, gifts	3 599 192	1 371 485 279	71%
22	Interest on financial investments		-	0%
23	Book sales and other services		38 020	0
24	Sales of amortized furniture		-	0%
25	Sales of tangible non-current assets		-	0%
26	rents (vehicles, rooms,,)	43 098	7 630 000	33%
27	Projects indirect costs	-	0	0%
28	Opening balance	869 788	464 179 906	100%
	TOTAL	5 789 975	2 302 081 965	75%

Table 2: **STATEMENT OF BUDGET AND EXECUTION (EXPENTITURES)**



Table 3: **STATEMENT OF BUDGET EXECUTION PER OBJECTIVE**

DESCRIPTION	2021 BUDGET	2021 EXPENDITURES
SUPPORT TO NMHSs AND STAKEHOLDERS FOR COMPETITIVE SERVICE DELIVERY	63 317 902	55 035 114
IDENTIFY AND IMPLEMENT INFRASTRUCTURE FOR IMPROVED SERVICE DELIVERY	2 548 729	3 418 400
SUPPORT TO NMHSs ON TECHNOLOGY, COMPETENCIES AND CAPABILITIES	60 769 173	51 616 714
BETTER QUALITY SERVICES	192 707 002	165 177 431
IMPROVE ADVISORIES AND WARNING SERVICES	93 382 519	80 042 160
PROVIDE BETTER CLIMATE SERVICES FOR CLIMATE CHANGE ADAPTATION	62 543 621	53 608 818
Démontrer davantage la valeur des services météorologiques	36 780 862	31 526 453
ACCESS TO DATA , RESEARCH AND INNOVATION	757 976 355	718 569 413
ENABLE QUALITY BASIC INFRASTRUCTURE	617 393 353	591 859 246
ENHANCE RESEARCH FOR VALUE ADDITION	140 583 002	126 710 167
GOVERNANCE PARTNERSHIPS AND MANAGEMENT MODERNIZATION	187 469 872	177 639 702
STRENGTHEN GOVERNANCE AND	7 200 000	13 758 000



PARTNERSHIPS		
IMPROVE MANAGEMENT	180 269 872	163 881 702
GRAND TOTAL	1 201 471 131	1 116 421 659
EXECUTION RATE		93%

- Memoranda of Understanding, partnerships, collaboration, commitment and networking letters and agreements discussed or/and formalized for projects mentioned above.

- Resource mobilization with proposals formulation and/or letters of intent, commitment or agreements signed providing financial support and technical partnership.

- Regular progress reports for projects have been provided to contracting authorities and donors;

- Staffs, interns, seconded experts, short- and long-term experts were recruited (ToRs, vacancies, recruitment reports, notification) to implement activities and projects including Intra ACP ClimSA, Uclip, KIMPALA, MHEWS, SWIFT, FOCUS-Africa preparation of financial report and audits. Progress reports, timesheets of staff were reviewed and approved. Senior staff supervised for implementation of activities.

- Communication, visibility and outreach efforts featured ACMAD organizing or attending COP 26, 14th EUMETSAT User forum RCOFs, WMO Standing Committee on Earth System Modeling and prediction meetings, WWRP Working Group on Tropical Meteorology research, steering, advisory, technical meetings of projects, online events for training, projects formulation and coordination meetings, High level events including the state of Africa Climate for 2020 launch, technical and scientific meetings for collaboration and climate briefings to Members of parliaments in Nigeria, Uganda and Zimbabwe.

- A review of the ACMAD

headquarter agreement has been finalized and is expected to include provisions extending customs duties, community integration levies exemptions.

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ANNEXES

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	Meeting/Forums/Workshop/Conference	Date	Venue
1.	PRESAGG	22 – 26 Feb	Online
2.	PRESASS	26 – 30 May	Online
3.	PRESASS DRR-ECOWA Humanitarian	04 May	Online
4.	GHACOF	26 Aug	Online
5.	SARCOF	30 – 31 Aug	Online
6.	PRESAC	27Sept – 01 Oct	Douala – Cameroun
7.	MEDECOF	21 – 25 May	Online
8.	EPR WG ECOWAS/ECCAS	23 March	Online
9.	KICK OFF CLIMSA	15 April	Online
10.	ClimSA Steering Committee	29-30 June	Online
11.	Direction de la Protection Civile	Ouverture des Assises de la 14 ^{ème} session (GECEAO	Hotel Bravia le 12 Juillet à 09h00
12.	Ministère du Plan	Lancement de la formulation du PDES2022 -2026	Salle Gandhi le 12 juillet 2021 à 9h
13.	Direction de la Météo du Niger	Invitation à la conférence finale du projet ANADIA2	Hotel Bravia du 14 au 15 Juillet 2021
14.	GECEAO	01 - 02 Jul	Niamey – Niger
15.	COORDINATION MEETING (u-CLIP, FOCUS, KLIMPALA, SWIFT, MHEWS for Africa)	April – June Sept	Online
16.	AMCOMET	16 – 17 March	Online
17.	SWIOCOF	23 Sept	Online
18.	WMO RAI Session	25 – 26 Jan	Online
19.	CLIMSA Forum	15 – 16 18 Nov	Online
20.	EUMETSAT user Forum Africa	6 – 7 Oct	Online
21.	Dubai World Expo (AUC and UNDRR)	13 Oct	Dubai
22.	COP26	01 – 12 Nov	Glasgow – UK
23.	MHEW/EA Conference	20 – 22 Oct	Hybrid (Online – Nairobi - Kenya)
24.	Africa DRR Platform Forum	19 Nov	Online
25.	ClimSA – ECCAS Steering Committee	23 – 24 Sept	Douala – Cameroun
26.	ClimSA-AUC Steering Committee	1-2 Dec	Hybrid (Online – Gaborone- Botswana)
27.	Technical Meeting with AfDB (SAWIDRA Achievement)	June	Online
28.	Workshop on climate services needs for resilient and sustainable development planning at city level (VITO-u/CLIP)	21/04/2021	Hôtel RADISSON BLU in Niamey – NIGER
29.	ATELIER DES ACTEURS CLES DU SYSTEME D'ALERTE PRECOCE AU BURUNDI	15 Janvier 2021	BUJUMBURA-BURUNDI
30.	ACMAD/SWIFT TESTBED3, ONELINE WORKSHOP SEPTEMBER 2021	13-28 Sept 2021	Online

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Table 3: Major events in 2021



Project Title& FA Decision	Description & Objective	Results/Activities	Implementation status
<p>Intra-ACP Climate Service and Related Applications Programme (ClimSA)</p> <p>Start Date: April 2021</p> <p>Budget: 4 508 051. €</p> <p>Implementation modality: Indirect management with the AUC</p>	<p>The main objective of the programme is to improve wide access and use of climate information and enable and encourage the generation and use of climate services and applications for decision making processes at all levels. As a specific objective, the project aims to strengthen the entire climate services value chain from access to information, generation and provision of climate services, stakeholder engagement, and strengthened capacity of users to ensure effective utilization of the services.</p> <p>The project is also contributing to the agenda 2063 in field of meteorology by coordinating interactive frameworks for climate services at national and regional levels by building and ensuring operations of a well-structured user interface platform for GFCS in Africa.</p>	<p>Five outputs are expected to be achieved:</p> <p>(1) structured interaction between the users, researchers and climate services providers in Africa through User Interface Platforms (UIPs);</p> <p>(2) provision of climate services at continental, regional and national levels is effectively secured, and Climate Service Information Systems (CSIS) are strengthened;</p> <p>(3) improved access to climate information through strengthening observation and monitoring systems, as well as Research, Modelling and prediction;</p> <p>(4) capacity of African regions is enhanced to generate and apply climate information and products relevant to their particular concerns;</p> <p>(5) climate-informed decision-making in Africa is enhanced and climate services are mainstreamed into policy processes at regional and national levels</p>	<p>The project is ongoing and is expected to end March 2025.</p>
<p>African SWIFT</p> <p>Implementation modality: Consortium management with the NCAS and University of Leeds</p> <p>Start Date: October 2017</p> <p>Budget: 350 000 €</p>	<p>African SWIFT's overarching goal is to deliver a step change in African weather forecasting capability from hourly to seasonal timescales, and build research capability to continue forecasting improvements in Africa for the foreseeable future.</p> <p>The Objective of the African SWIFT aim to:</p> <p>Build capacity within African forecasting agencies and improve communication links to forecast users</p> <p>Improve tropical forecasting ability on hourly and seasonal timescales</p> <p>Assist African partners to develop capacity for sustained training of weather forecasters</p> <p>Translate results to the wider developing world</p>	<p>African SWIFT is divided into three strands consisting of several work packages (WPs), which are typically managed by two co-leads (Africa/UK):</p> <p>Strand 1: Users and evaluation is responsible for the interdisciplinary engagement needed to link forecast users' requirements with the provision of quantitative measures of forecast accuracy.</p> <p>Strand 2: Science coordination coordinates the scientific research required to deliver quality-controlled weather predictions.</p> <p>Strand 3: Cross-cutting activities delivers cross-cutting</p>	<p>The project is on his final stage and expected to end March 2022.</p>



	Benefit African populations, public and private sector organisations	activities needed to increase research capability and provide a legacy to the project outcomes.	
<p>FOCUS Africa</p> <p>Implementation modality: Consortium management with research institutions international organizations involved in implementing the Climate Services Information System pillar of GFCS, service providers, industry end-users and social scientists to address the full-value chain of climate services delivery.</p> <p>Start Date: Sept 2020 Budget: 207 500 Euros</p>	<p>FOCUS-Africa was inspired by the environmental commitment of world leader Nelson Mandela, who in 2013 said:</p> <p><i>“Our people are bound up with the future of our land. Our national renewal depends upon the way we treat our land, our water, our sources of energy, and the air we breathe. ... Let us restore our country in a way that satisfies our descendants as well as ourselves.”</i></p> <p>The central objective of FOCUS-Africa is to develop sustainable tailored climate services in the Southern African Development Community (SADC) region for four sectors: agriculture and food security, water, energy and infrastructure.</p> <p>The proposed co-production amongst end-users, climate scientists and sectoral service providers will ensure that the full value chain for the delivery of the climate services is effectively realised.</p> <p>FOCUS-AFRICA will become a repository for knowledge and tools necessary in the development of practical and useful climate services to better tackle the risks of climate change.</p> <p>Through the work of our project partners and strategic partnerships between European and SADC organisations, FOCUS-Africa build upon past and ongoing related projects and advance the way climate services are developed and used throughout the supply chain of end-users.</p>	<p>The following results are expected at the end of the project:</p> <ul style="list-style-type: none"> - Introductory session on responsible research and innovation; - Description of regional climate extremes; - Description of climate risk assessment on food security, water and energy nexus; - Characterization of climate-ready rice and cowpea varieties - Selection and analysis of high-resolution climate projections of the region; - Analysis of the predictability of seasonal and decadal forecasts for the region and sectors of interest; - Identification of the regional extreme events and variability - Verification of seasonal forecasts and the characterization of climate projections and decadal predictions; - Analysis on the multimodel and downscaling for seasonal forecasts, climate projections and decadal predictions 	<p>The project is ongoing and is expected to end August 2024</p>
KLIMPALA	The KLIMPALA project has the ambition to develop a Climate Platform for	The following results are expected at the end of the	The project is ongoing and



<p>Start Date: January 2020</p> <p>Budget: 258 000 €</p> <p>Implementation modality: Consortium management with VITO, KENTER, OVO and KPMG</p>	<p>Adaptation in the Agricultural sector in Africa (KLIMPALA) to empower stakeholders in the African agro-sector against climate change with tools, capacity building and coaching.</p> <p>The aim of project is to implement the agro-climate platform in 20-25 countries in Sub-Saharan Africa, including training, and</p> <p>(1) demonstrate how the platform can be used to underpin adaptation plans, with an emphasis on long-term plans to increase the resilience of the agricultural sector, with the aim of creating a strategic framework within which efficient and science-based climate action can be put in place turn into; ~ link International Climate Funds</p> <p>(2) to effectively implement some of these measures in the field, where local African entrepreneurs will be selected for this implementation through a competitive call.</p>	<p>project:</p> <ul style="list-style-type: none"> - Upscaling of the AgroClim service to 20-25 sub-Saharan African countries (a.o. training) - Establishment of adaptation options - Seasonal forecasts - evaluation and implementation - Strategic guidance: ensuring the demand-driven character of the project - Development Climate Information Platform - Support in dissemination process 	<p>is expected to end December 2023</p>
<p>MHEWS for Africa</p> <p>Implementation modality: Indirect management with the CIMA and UNDRR</p> <p>Start Date : January 2021</p> <p>Budget : 140 000 €</p>	<p>The establishment of effective MHEW systems has been a goal of the African Union since the adoption of the Programme of Action for the Implementation of the Africa Regional Strategy for Disaster Risk Reduction (2006-2015). Home to half of the world's most risk-prone countries, Africa is in urgent need to establish effective agile and interactive MHEWS at all levels to facilitate mitigation, response, and recovery to increasing frequency and intensity of natural hazards. Proactive actions are needed to enhance African countries' resilience capacity against various hazards and the systemic and cascading impact of potential disasters.</p> <p>This project aim to establish a continental coordination in Early Warning and Early Action System in Africa in which CIMA, UNDRR and ACMAD will cooperate in establishing situation rooms at continental level for improving the exchange of information among continental, regional and national; equip a situation room at ACMAD; strengthening impact-based monitoring and forecasting capabilities; Training of operational personnel -i.e. information</p>	<p>The project achieved following results:</p> <ul style="list-style-type: none"> - Continental Multi-Hazard Advisory Centre established and operational at ACMAD; - Coordination mechanism established for improving the exchange of information among continental, regional and national authorities and development of a harmonized system for warnings at continental level for informing decision makers and international communities on ongoing and up-coming hazards. - Setup and equip ACMAD Sit Room to facilitate exchange, monitoring and analysis of DRR data and information through the free open-source platform: 	<p>The project ended in November 2021.</p>

	management expert, Early warning system, etc.- for the use and maintenance of the systems. The project purchased equipment for ACMAD Situation room.	myDEWETRA, - ACMAD Personnel trained for the operation of the Systems and in Impact based forecasting - myDEWETRA web platform installed and operational at ACMAD - SOP for exchanging risk information among RCC and national authorities established	
<p>Urban Climate Information Platform (u-CLIP) in Niger (u-CLIP)</p> <p>Start Date: April 2021</p> <p>Budget: 284 239 €</p> <p>Implementation modality: Consortium management with VITO,</p>	<p>Through the provision of actionable urban climate change information, involving public and private stakeholders and connecting to climate finance schemes, the aim is to trigger climate action that leads to an enhanced climate resilience in the city of Niamey.</p> <p>The main expected outcome is that urban stakeholders, by exploration of the u-CLIP platform's data and scenarios, will be in a position to take better informed decisions with respect to urban adaptation policy and the development of suitable and effective climate resilience measures. Moreover, u-CLIP will be designed as an instrument to raise awareness and support local authorities in gaining access to international climate funds, thus allowing to actually implement resilience measures. The project aim for as broad and inclusive as possible an involvement of stakeholders (Health sector, Urban designers, Energy sector, Industry, Authorities, Youth & Education, Civil Society, etc ...)</p>	<p>The following results/activities are expected at the end of the project:</p> <ul style="list-style-type: none"> - User requirements collection involving a range of sectors and user communities, as a part of the digital platform's co-design process; - Participatory collection of wet bulb globe temperature data (WBGT, a thermal stress indicator) within Niamey, involving citizens in the process; - Analysis and selection of regional climate model output (CORDEX Africa and others sources), considering historic periods and future scenarios (IPCC medium & high scenarios, time horizons 2030-2050-2100); - Mapping Niamey's land cover using satellite imagery (Proba-V) and participatory mapping (WUDAPT methodology, involving local citizens); - Urban growth modelling to produce future (projected) land cover and urban growth scenarios for Niamey in 2050; - Urban climate simulations with the UrbClim model to produce input for the digital platform, using 	<p>The project is ongoing and is expected to end March 2023</p>



		regional climate model output and present/future Niamey urban land cover maps as input (see above); and conducting a validation using results from the participatory measurement campaign (see above).	
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Table 4: List of projects in 2021

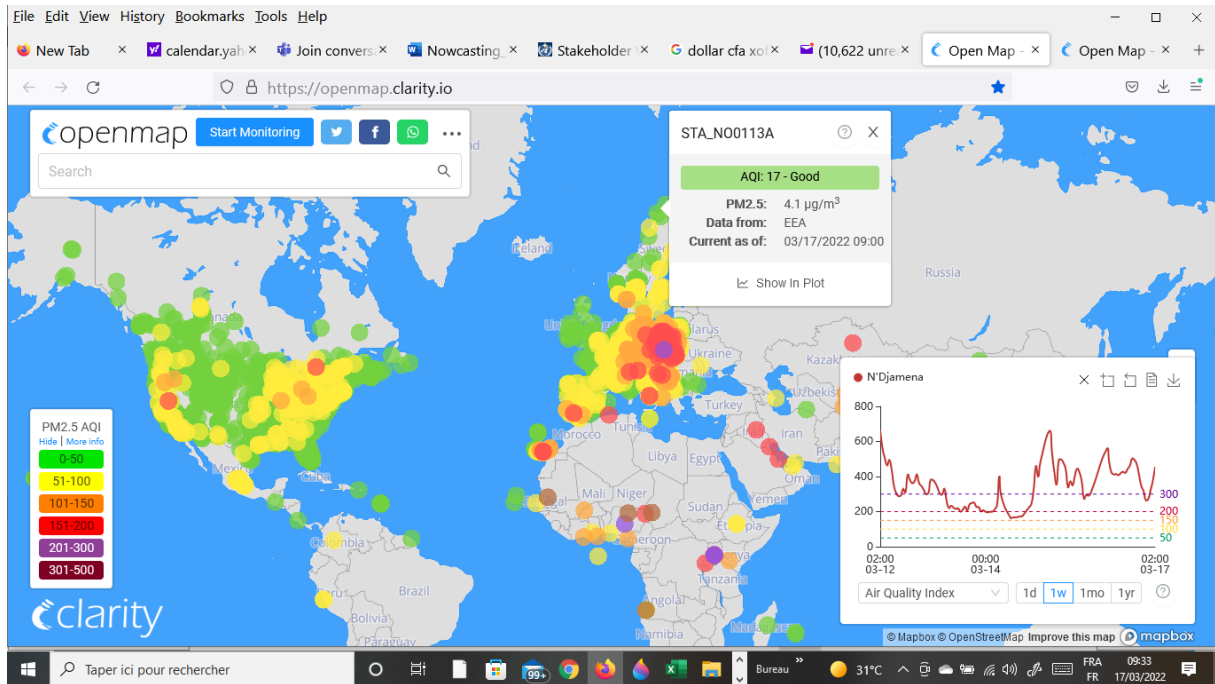


Figure xx : Pollution monitoring in cities. High pollution in red.

Source: <https://openmap.clarity.io/>