DRAFT STRATEGIC PLAN 2024-2027

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EXECUTIVE SUMMARY

Vision: By 2030, we see a world-class continental operational Centre of excellence contributing to a prosperous Africa with its people well-resilient to extreme events and empowered to reduce climate change impacts

Mission: Our Mission is presented in decision#2 of the UNECA Conference of Ministers in 1996 to act as a weather and climate watch centre for Africa and a centre for excellence for the Applications of meteorology for sustainable development.

The functions include monitoring, forecasting and warnings for droughts, floods, cyclones and other extremes for a continental weather and climate watch centre, capacity building, methods, tools and products development, contribution to global programmes, databases development, research and innovation for a centre of excellence for applications of meteorology.

People across Africa face increasing extremes often attributed to human influence on climate. During the period of the previous strategic plan advances have been achieved on capacity development, quality of services, better access to data, research and innovation, governance and management modernization. A continental Multi Hazards Advisory Centre providing continental watches, situation reports post disasters, vigilance for heavy precipitation, high temperatures, dust storms, diseases outbreaks, impact forecasts, trainings, briefings and debriefings was established and operationalized. The World Meteorological Organization designated Regional Climate Centre for Africa at ACMAD continued its operations supporting the African Union Commission and regional economic Communities as well as Countries through National Meteorlogical and Hydrological Services.

Annual reports on the state of Climate for Africa and continental and regional climate outlook statements were regularly prepared and published supporting agriculture, disaster risk reduction, integrated water management and climate-related negotiation at international conferences and summits. On-the-job training, secondments, internships and fellowships involving more than twenty African countries contributed to competency development on monitoring and forecasting methods, tools and products, development of prototype products, and forecasts verification. Impacts forecasts providing a percentage of people expected to be affected by floods were co-designed and developed with UNOCHA and used for emergency preparation and response planning over sub-regions of Africa. Four Regional Advanced Retransmission stations for low earth orbiting satellite data were procured and installed providing data for assimilation in Numerical Weather prediction for early warning at global, continental, regional, national and local levels contribution to WMO and AU space programmes. Information platforms for disaster management (MyDWETRA), drought monitoring (MUKAU), climate resilient agriculture (CLIMTAG), urban resilient development planning (UCLIP) and Climate stations were developed and/or installed for operations and research.

Partnerships with MoUs and agreements supported projects implementation. International standards for accounting and financial reporting applications, completion of projects and overall ACMAD audits, preparation of administrative, accounting and financial procedure manual, update of ACMAD

organizational structure, and relationship agreement with AUC formulation contributed to modernization of governance and management of the centre.

Building on the guidance provided by the Board of Governors and member countries, Scientific Advisory Committee (SACOM), the WMO strategic plan 2024-27 with early warning for all as priority, the updated integrated African Strategy on meteorology, the priorities of WMO RA I, the African strategy on climate change and resilient development, the African Green recovery action plan other relevant strategies, programmes and agendas, ACMAD embraces a set of strategic objectives and areas of interventions under the following four long term outcomes:

1. Reduced capacity gaps in meteorology and its applications in Africa.
2. Improved quality of services at regional and national levels;
3. Strengthened data exchange, research and innovation on African weather and climate services;
4. Modernized governance and management of ACMAD

Capacity development will focus on impact forecasting, development of advisories, watches and warnings, support to preparation, anticipatory action and response to disasters, and provision of climate scenarios, statements and reports to mainstream climate adaptation and resilience in development plans. Specific capacity gaps identified in different project pilot countries will be a basis for training development and implementation.

With the operationalization of the continental Multi hazards Advisory Centre and the Regional Climate Centre with continental mandate, quality services will continue to be delivered or extended. These services include continental watches and vigilance, situation reports, annual state of climate reports, climate assessments and statements, impacts outlooks, informed decisions, declarations, policies and actions.

ACMAD stations (PUMA, ClimSA) and platforms (MyDEWETRA, CLIMTAG, MUKAU, UCliP) for data processing and exchange will be maintained and upgraded using emerging advanced and digital technologies (high performance and cloud computing and storage, mobile applications and social media, artificial intelligence and machine learning, experts' systems, big data …). A WMO /WIS Data Collection and Production Centre will be promoted at ACMAD facilitating data exchange and operationalization of WIS National Centres.

ACMAD efforts will focus on science for services with participation to Global Precipitation Experiments to understand precipitation extremes in Africa and support related processes representation in prediction systems, further develop methods, tools, platforms and products for services delivery and applications, promote predictability research with emphasis on extreme events, develop training materials and organize training for young scientists to address science questions for early warning, climate action and sustainable development.

On governance, efforts will accelerate more involvement of UNECA in completing its statutory role and supporting the new relationship agreement with AUC making ACMAD its technical arm on climate matters. ACMAD will engage WMO, AUC, UNECA and funding partners through partnerships and resource mobilization committee to support and sustain a stable resource base for the centre's investment and operations budget. Management modernization will continue with regular audits for projects and

the centre, continued application and upgrade of international accounting and financial reporting standards, and progress on quality management with more manuals and guides.

I- CONTEXT AND VISION

The current ACMAD strategy was approved by the Board of Governors in 2019 and is valid for 2020-2023. It ends in December 2023. This document presents an updated strategy for the 2024-2027 period.

ACMAD was established as a continental reference Centre for weather and climate watch and a Centre of excellence promoting the different applications of meteorology for sustainable development in Africa. The 2020-2023 strategic plan of ACMAD was implemented during the past four years. A new strategy for the 2024-2027 has been developed based on the review, analysis and assessment of the following key documents:

a) the achievements during the implementation of the 2020-2023 strategic plan and the priorities for 2024 and beyond at global, regional and national levels;
b) the WMO 2024-2027 strategy and WMO RA I priorities for the same period;
c) The African Union Climate Change and Resilient Development Strategy (2022-2032);
d) The Sendai Framework for DRR, the African regional strategy for Disaster Risk Reduction, its programme of Action and related African Multi-Hazard Early Warning and Early Action System (AMHEWAS) programme.
e) The Updated Integrated African Strategy for Meteorology (Weather and Climate Services);
f) The African Green recovery action plan (2021-2027);
g) The Africa Agenda 2063 and UN Sustainable Development Goals (SDGs);
h) The Early Warning for all: Executive Action Plan 2023-2027.

Given the AU Agenda 2063 and related Sustainable Development Goals still in place, the long-term goals of the ACMAD strategic plan 2020-2023 are reaffirmed for the next four periods.

Many African National Meteorological and Hydrological Services (NMHSs) still operate at or below the World Meteorological Organization's (WMO) basic **level of making capacity development the upmost priority**. Disasters have increased significantly on the African continent during the last four decades. More than 1000 disasters and 1 million deaths that have been recorded on the continent were caused by natural hazards between 1970 and 2019. An estimated 460 million people have been affected with losses increasing from US$ 2.8 billion in 2015-2016 to US$ 35.2 billion in 2018-2021 (Africa Biennial report on DRR, AU publication in 2019). Despite the shift in paradigm from reactive to proactive management of disaster risk since the adoption of the Africa Regional Strategy for Disaster Risk Reduction in 2004, the **frequency, intensity and impacts of disasters are increasing**. Early warning and early action are essential to significantly reduce losses and damages. Moreover, early warning is the top global priority for the next four years following the UN Secretary General's call for early warning for all by 2027. Therefore, ACMAD's strategy for the next four years will develop capacity in Africa with special emphasis on ensuring better early warning for early and anticipatory action

information generation and delivery by NMHSs and their stakeholders through co-design and co-production.

ACMAD will continue and accelerate contributions the implementation of the African Strategy on Disaster Risk Reduction through its programme of Action including the African Multi Hazards Early Warning and Early Action System.

This strategy is prepared following the first global stocktake on the implementation of the Paris Agreement calling for accelerated transformation towards a green economy. The update and implementation of National Adaptation plans, Nationally Determined Contributions to the Paris Agreement, the Africa Adaptation Initiative, the African Climate Change and Resilience Development strategy and action plan contributing to the aspirations of Agenda 2063 and the SDGs can be accelerated with the delivery of climate services in key priority sectors. Agriculture, water, disaster risk reduction, health and infrastructure are the most needed sectors for bespoke climate services. ACMAD's coordination role for Regional Climate Centres will accelerate the continent's efforts in addressing the challenges and priorities contributing to the policies and strategies mentioned above.

With the current and emerging services needed, high-resolution observations (e.g. MeteoSat Third Generation) and products are becoming essential. Advanced NWP systems and better services require investments in earth system approach in modelling, probabilistic approach to forecasting, regional field campaign experiments and predictability studies focused on extremes and particularly precipitation extremes, high-speed internet, high performance, and cloud computing. The digital era is underway and will be accelerated facilitating access to big data, quick and remote data processing and exchange including with mobile applications. Complex platforms (e.g. MyDEWETRA) integrating multidisciplinary data and processing services using artificial intelligence and machine learning, products delivery with feedback collection and analysis services are becoming feasible leading to agile systems with quick improvement cycles responsive to evolving user needs.

Research and innovation to ensure quality services at high resolution for disaster risk and climate change impacts reduction as well as sustainable development, and quick communication through social media are opportunities for better services leading to effective planning and action.

ACMAD has improved its governance and management over the past years with regular Board Sessions involving member states, other members with observer status and invited experts from the Scientific Advisory Committee and partner institutions. Relationships with AUC and UNECA have been strengthened with participation to the UNECA conference of ministers and the AUC Permanent Representative Committee's sub-committee on sustainable Environment and blue economy raising awareness and attention to ACMAD's activities and achievements towards implementation of Africa's agenda on disaster risk reduction, climate action and sustainable development. As part of the implementation of the 4th AMCOMET declaration in Cairo (2019,) a relationship agreement formalizing the ACMAD's role as a technical arm of AUC on climate matters has been prepared, discussed between AUC, WMO and ACMAD and submitted to the UNECA Legal office for review and approval.

ACMAD governance for the next four years will pursue efforts toward formalization through the UNECA of the new role of ACMAD as the technical arm of AUC on Climate matters with a relationship

agreement and regular participation to relevant high-level statutory meetings and events of the UNECA and AUC. Efforts towards a resumption of activities forming parts of the UNECA statutory role will be accelerated including the presentation of ACMAD's programme and budget to the UNECA conference of ministers and participation in UNECA programmes and other high-level events.

ACMAD's participation as an observer to WMO governance bodies sessions will continue to ensure strategic and operational alignment between the two organizations. To further improve resource mobilization and partnerships, meetings and dialogues with partners and donors will be organized together with governing board sessions and side events at high-level events including DRR platforms and COPs to environmental agreements.

To further improve management of the Centre, quality assurance and control will be strengthened, continue joint planning and coordination meetings with UNECA, and further support administration and financial services with additional staff for accounting and financial reporting using International Accounting and Financial Reporting Standards. Strategic and operational planning will be supported by the contributions of partners. Partnerships and consortia will be mobilized to further improve visibility and raise awareness on the role of ACMAD as a reference Centre for weather and climate services and a Centre of excellence supporting research and innovation for sustainable development in Africa.

VISION:

By 2030, we see a world-class continental operational centre of excellence contributing to a prosperous Africa with its people well-resilient to extreme events and empowered to reduce climate change impacts.

II- MISSION STATEMENT

ACMAD's mission sharpened by the decision 2 (XXXI) of the UNECA Conference of Ministers in 1996 is to act as the weather and climate watch institution and the Centre of Excellence for meteorological applications for sustainable development for Africa.

As the weather and climate watch institution for Africa, the Centre shall:

1. provide African countries with regular continental medium to long-range meteorological and climate prediction;
2. support regional early warnings on drought, tropical cyclones and other extreme weather and climate events;

As the African Centre of Excellence for Meteorological Applications for Sustainable Development, ACMAD shall:

- build capacity for cross-sectoral activities for meteorological applications for sustainable social and economic development at the national level;
- develop methodologies and techniques for application at national and sub-regional levels;
- strengthen Africa's participation in global weather and climate programmes;
- provide specialized training to relevant professionals and development practitioners in Africa;
- maintain research facilities, networking capacities and regional data bank, make them available for research programmes in the region;
- produce products that will satisfy the requirements of Member States, complement those of national meteorological services and increase their effectiveness and impact.

III- GUIDING PRINCIPLES

The principles guiding the strategy include **relevance to the sustainable development of Africa**, **subsidiarity and complementarity** with NMHSs, Regional Centers and development actors**, stakeholders**, **advanced science and technology-driven, and good governance**.

IV- CORE VALUES

ACMAD is committed to **accountability and transparency**, **partnership and cooperation**, **inclusiveness**, **diversity** and **knowledge management**.

Transparency and Accountability

ACMAD is committed to building trust in meteorological services by enforcing transparency and accountability for service delivery.

Partnership and cooperation

ACMAD believes in cooperation and partnership to ensure complementarity, subsidiarity and delivery at speed and scale.

Inclusiveness and diversity

The faith and aspiration of Africa and its diversity are at the core of the governance and management of ACMAD. The rich Africa's heritage with women and youth is at the heart of all activities (e.g. training, recruitment, workshops and conferences). ACMAD is committed to filling capacity gaps among countries serving as a platform accelerating exposure of least-developed NMHSs to advanced methods, tools, products and services. ACMAD staff are expected to uphold international standards of behavior as enshrined in the Centre's constitution and other relevant basic documents.

Knowledge management

Informed and evidence-based decision-making processes are fundamental pillars of all the operations of ACMAD.

V- PRIORITIES

From the vision and mission above, the strategy articulates goals and strategic objectives addressing the weaknesses and taping into opportunities presented in the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis below.

TABLE 1: SWOT ANALYSIS

STRENGTHS
- ACMAD is the mandated continental meteorological service provider and excellence centre for the applications of meteorology for development advising continental bodies on matters relating to meteorology and its use to improve quality of life. - Evidence-based weather, climate, water and related environmental information are essential for the implementation of SDGs and AU Agenda 2063.

- ACMAD operates the African Regional Climate Centre and the Continental MultiHazards advisory Centre according to WMO international standards and guides with its expert members of WMO committees and working groups;

- Continental positioning for climate action and governance.

- 33 years of experience on weather, climate and related environmental services for planning and action;

- ACMAD provides special support to least least-developed countries in Africa;

- ACMAD operates with knowledgeable highly qualified personnel from all 54 African countries.

-ACMAD networks include staff of NMHSs involved in on-the-job training, visits and secondment.

WEAKNESSES

- High staff turnover.

- Ambiguous framework at ACMAD and involving UNECA to mainstream meteorology in continental and regional development programmes.

- Limitation in perceived roles at continental, regional and national levels;

- Low capacity of ACMAD and NMHSs to modernize quickly given the rapid advances in science and technology.

- Limited collaboration with the private sector and civil society for value addition.

- Weak mechanisms for collaboration between public and private and academic sectors across disciplines and technical domains involved in meteorology and sustainable socio-economic development.

- Communication and outreach strategy limited to projects and therefore unsustainable.

- Suboptimal basic observing and data management infrastructure because up to 34 out of 54 African countries are LDCs with very limited capacity to deliver meteorological services.

- Low capacity at ACMAD to source for funds for infrastructure, technology and staff on the meteorological, hydrological and related environmental value chain.

- ACMAD limited engagement with non-French speaking African countries.

- Little visibility at country level;

- Lack of continental strategic leadership.

- unsustainable collaborative linkages

OPPORTUNITIES

- Increasing and high relevance of ACMAD product and services for implementation of Sendai, SDGs and AU agenda 2063, Paris Agreement and NEPAD;

- ACMAD have access to global data and products through international cooperation spearheaded by the World Meteorological Organization to help enhance continental, regional and national services;

- Growing awareness on impacts of climate change and demand for services from policy, decision makers and practitioners;

- Availability of development partners and funding agencies with resources to support the Centre;

- Links with Severe Weather Forecasts Demonstration Projects, Global and regional Climate Centres, Regional Training Centres in Africa as well as NMHS and the media;

- Leverage on existing facilities (e.g High-Performance Computing) and expertise within the continent;

- Existence of global institutions under WMO and other development players to support Africa on resilience and adaptation to climate change impacts;

- strong partnerships/ cooperation with UN agencies (e.g WMO, UNOCHA. UNHCR);

- New digital platforms (Uclip, CLIMTAG, MyDEWETRA, MUKAU) are available and ACMAD well well-positioned to support service delivery at NMHSs using these technologies

THREATS

- Limited visibility and inadequate core financial support from member states;

- Emergence of alternative sources of information distributed through other media (i.e social media) without consideration of scientific and technological advances in their production;

- Little attention to continental, regional and national requirements in the ongoing processes of global competition on meteorological services;

- Commercial meteorological services competing with and by-passing government meteorological services;

- Little awareness of member states on the value of ACMAD products for the economy and society leading to underutilization of meteorological services for resilience to extreme and adaptation to climate change impacts;

- Lack of recognition of socio-economic value in the service delivery chain.

Therefore, the strategy will focus on the following key priorities:

- contributing to early warning for anticipatory action in the context of Early Warning for All.
- supporting adaptation and mitigation to climate change in line with the Paris Agreement.
- enhancing applications and value of meteorological services to address agenda 2063 (Table 2) and sustainable development goals.

VI- LONG TERM OUTCOMES AND STRATEGIC OBJECTIVES

The following four outcomes have been identified:

- Reduced capacity gaps in meteorology and its applications in Africa
- Improved quality of services at regional and national levels
- Data exchange and Research on African weather and climate strengthened
- improved governance and management of ACMAD

Outcome 1: Reduced capacity gaps in meteorology and its applications in Africa

Significant gaps are identified for forecasting and warning in NMHSs of the most vulnerable African countries. ACMAD will pursue close collaboration with partners to further understand gaps at national and regional levels through capacity needs assessments for services generation, delivery and applications. Needs assessments over the past years highlighted governance, institutional, technical, operational and resources gaps. Improving access to and use of methods, tools and global prediction products in NMHSs and supporting services delivery and applications for DRR, climate action and sustainable development will be achieved through investments to close prioritized gaps taking into account gender mainstreaming and inclusion of the most vulnerable countries with ***emphasis on young professionals and women****. Training of trainers by ACMAD involving Regional Centres and advanced NMHSs will be opportunities for developing materials and training programmes and organizing on the job training, secondments, internships and fellowships. North-south and south-south technology transfer and exchanges through training, fora, conferences and other events, twining between NMHSs and user stakeholders to share experience and develop competencies will be considered.*

WMO Global centres and partner institutions in developed countries, WMO training centres, regional climate and specialized meteorological centres, Civil protection and disaster management agencies, UNDRR, UNOCHA, UNHCR, IFRC and other humanitarian agencies, RECs and AUC offer effective partnerships for capacity building for early warning, climate action and sustainable development.

Objective 1.1 Fill competency gaps to provide services for early warning, climate action and sustainable development

Disasters and climate change impacts are increasing, sustainable development is in need of emerging services (e.g Climate services for infrastructure, megacities resilience). Competencies to deliver services and ensure their applications in these sectors are in high demand. ACMAD in collaboration with the WMO, AUC, UNECA and partners have established the institutional infrastructure and platforms for Early warning at continental and regional levels. Situation rooms, continental multi-hazards advisory centres, and regional climate and meteorological centres are operational or under establishment across the continent. The Continental Multi-Hazard Advisory Centre and regional Climate Centre at ACMAD will prepare or update gaps analysis using joint forecasts briefings with countries, develop and run training programmes, support on the job and specific training, internships, fellowships, exchange visits and secondment of officers from NMHSs and regional centres, host experts from civil protection, environment and climate change, development planning, communication and disasters

management or humanitarian organizations for exchange of experience and strengthening coordination and collaboration.

Focus areas of intervention

- Capacity gaps analyses on high-impact weather and climate forecasting for early warning and anticipatory action in DRR and humanitarian organizations.

-Planning and organizing capacity-building events including twinning to improve IT and other digital technologies, hazards and risk knowledge, impact-based forecasting, advisories, watches and warnings, climate services for climate action and sustainable development, communication, anticipation and response to disaster risk.
- Development or strengthening of working arrangements (MoUs, platforms, consortium or other partnership agreements) for capacity building between meteorological institutions, DRR including humanitarian organizations and communication agencies

Objective 1.2 Support NMHSs, Regional Centres and Users with leadership, management, technology and new services capability

Gap analyses highlighted limitations on strategic/operational planning processes, agile organizational structure reforms to facilitate new strategy formulation and implementation, and slow transfer of advances in science, methods, tools and new products in operations (e.g. use of ensemble forecast products). Strategic skills to integrate competencies and achieve an optimal outcome.

Focus areas of intervention

- Organization of exchange events for senior-level staff of NMHSs and regional centres on leadership and management with emphasis on strategy for capacity development, quality control and supervisory skills development;
- Training of trainers with regional and other international centres on technology and new services
- Review and share advanced technology for nowcasting, forecasting, scenario generation and impact studies

Outcome 2: quality of services at national and regional levels for early warning, climate change adaptation and sustainable development

With the increase in disaster losses and damages, requests for better meteorlogical services by DRR, humanitarian agencies and other users are reported. Substantial investments are being made on observations, data exchange and capacity development with the ultimate effect expected on the quality and applications of services. Historical data analysis and assessments, monitoring, nowcasting, short to long range forecasting and medium to long term climate scenarios services are requirements for early warning, climate action and sustainable development. Services based on actionable indicators, thresholds for impacts are becoming available. ACMAD's services will continue to support continental and regional disaster risk reduction though the AU situation room. Platforms (UCLIP for resilience in

urban areas, MYDEWETRA for services to DRR, CLIMTAG for climate services for resilient agriculture, MUKAU to generate climate services for drought management, WIS/DCPC data server with cloud option for exchange of ACMAD products through the WMO Information system) identified or developed during the past four years will be further transferred and operationalized for better services.

Objective 2.1 Support advisories and watches to strengthen warnings at the national level for preparation and response to disasters.

The African continent is one of the most vulnerable to hydrometeorological hazards. Early warning for all by 2027 is a call and a global priority given the acceleration of disasters impacts in Africa and the world. In addition to other measures for disaster risk reduction, establishment of multi-hazard early warning systems at all levels in the continent is essential and urgent. ACMAD is a WMO designated Regional Climate Centre providing monitoring, long range forecasts and outlooks for Africa. It is a Continental Multi Hazards Advisory Centre supporting generation and delivery of situation reports and continental watches supporting warnings and action at national level.

In coordination with WMO Regional specialized Meteorological Centres for Numerical Weather Prediction and Severe Weather, Regional Climate Centres and NMHSs, ACMAD will accelerate implementation of the early warning for all initiative and the African Multi Hazards Early warning and Early Action System (AMEHWAS) with impact-based forecasts, advisories, watches supporting anticipatory action dialogue at continental, regional and national levels. This effort is a contribution to Target G of the Sendai Framework to increase availability and access to multi hazards early warning systems, disaster risk information and assessment to people by 2030.

Focus areas of intervention

- Development and regular provision of impact-based continental multi-hazards watches, vigilance and disaster situation reports for DRR including humanitarian stakeholders to manage individual and compounding and regional disaster risks;
- support NMHSs with ad hoc briefings and debriefings for better early warnings and action at the national level;
- Enhancement of interactions with DRR, humanitarian and communication communities for easy access to information.
-development of networks for the exchange of knowledge and innovation between policymakers, scientists and practitioners as part of strengthening operationalization of the four-tiered DRR user interface from continental to local levels;
- support interoperability between continental, regional and national early warning systems to ensure seamless availability and access to early warning and risk information.

Objective 2.2 Improve climate services to reduce climate change impacts and support sustainable development

The Global Framework for Climate Services rely on Climate Services Information System supported at continental level by ACMAD through the Regional Climate Centre. ACMAD will continue delivering and improving continental climate products for GFCS implementation at continental level and support countries and Regional Economic Communities based on the subsidiarity and complementarity principles to deliver national or sub-regional climate services to meet the needs for nationally determined contributions to the Paris agreement, national adaptation plans, national development plans and related sub-regional agenda.

Focus areas of intervention

- sustaining ACMAD/RCC operations as part of GFCS;
- development of products for strengthening participation in GFCS, UNFCCC and other climate processes;
- development of climate products for supporting SDGs and national development planning including infrastructure;
- supporting NMHSs and other RCCs to deliver products contributing to Climate monitoring, long range forecasting, data services, climate change attribution.

Objective 2.3 Support for new and emerging services

New demands are emerging and challenging for infrastructure, cities, urban and rural areas, resilient agriculture and sustainable water management, health. User Interface Platforms have been developed to address these challenges. Green economy brings transformation towards resilient infrastructure, cleaner air, and access to renewable energy and water challenged by heat waves, urban floods and other extremes. ACMAD will collaborate with partners to develop and deliver new services to support sustainable cities and villages.

Focus areas of intervention

- up/downscaling or upgrade products for agriculture, water, health and DRR sectors;
- upscale innovative products for the sustainability of cities and implementation of other SDGs;
- Collect user feedback and discuss prototype products.

Outcome 3: Better access to data, Research and innovation on African weather and climate

The in-situ observing network in Africa is sub-optimal but technological advances with space-based and other observing platforms offer options to increase observations and access to data across the continent. These options include MeteoSat Third Generation Geostationary satellite and related PUMA data reception stations, the Regional Advanced Retransmission System(RARS) for low earth orbiting satellites data access, ClimSA programme and related climate station for climate services generation and delivery, Copernicus and upcoming EU projects data and applications servers, the SOFF financing mechanism for rehabilitation of current in situ observing network, development of automatic observing stations, establishment or maintenance of data reception stations, rescue and digitization of old records of observations in Africa. Digital transformation at ACMAD will continue with the demonstration phase of WIS Data Collection and Production Centre, formulation and implementation of the African Meteorlogical Satellite Applications Facility. ACMAD will continue efforts to make available through partners and cloud platforms data for DRR, agriculture, city resilience, health and water management, Research at ACMAD will focus on administration and analysis of surveys on needs of sectors, identification and development of methods, tools and products, products prototype experimentation, participation to international observation, modeling and prediction experiments with emphasis on the global precipitation experiments, research to support climate policy discussions, predictability studies, impact based forecasting/warnings and forecast based financing over Africa.

Objective 3.1 Enable better access data

Technological advances offer opportunities to integrate observations currently made by many institutions, programmes, sensors and systems in African countries supporting current and emerging applications. Modern satellite systems are providing additional observations and advances on internet, remote storage and processing of big data technology is accelerating digitalized transformation in the meteorology sector.

ACMAD will continue efforts toward becoming a WIS Data Collection and Production Centre, operationalize the RARS stations, facilitate establishment, maintenance and upgrade of data reception and sharing stations or platforms (PUMA for MTG, ClimSA stations for climate services, MyDEWETRA, CLIMTAG, MUKAU, UCLIP, AMSAF. ACMAD Multimodal products exchange Web portal.). ACMAD will also develop high speed internet, cloud data processing and storage, management systems with online data servers and web capabilities.

Focus areas of intervention

- Development, configuration, and maintenance of stations and platforms for quick access to big data (e.g PUMA/MTG, Multimodal Ensemble Prediction Systems);
- Demonstration and operationalization of WIS/DCPC capabilities for data exchange;
- Cloud processing, storage, data and web servers;
- Develop and transfer new observations for specific sector applications (e.g. urban climate resilience) and data exchange technologies(e.g. mobile applications) to RECs and countries;

- Support data rescue and accelerate interoperability with climate sensitive sectors losses, damages and other impacts data servers for exposure, vulnerability and risks analysis for decision and policy making.

Objective 3.2 Enhance research and innovation.

Contributions from Africa on research supporting early warning and early action, climate assessments through IPCC and related negotiations as well as sustainable development goals are limited. The National Meteorological and Hydrological Services (NMHSs) in Africa should be able to utilize ***high-quality information*** *to support their capacity to issue forecast, outlooks, advisories, scenarios, watches and warnings. ACMAD's Research and innovation efforts will support advances in nowcasting (with AMSAF) and prediction systems to address growing impacts of weather events, impact-based forecasting, meteorological services for vulnerability, impacts and risk analysis and assessments leading to science based early warning and anticipatory action, resilience, adaptation and sustainable plans and practices.*

Scientific experiments to observe, understand, model and forecasts extremes with emphasis on precipitation, test beds and forecasts demonstrations will contribute to generate findings on understanding, predictability, forecasting techniques, practices and procedures, new products and services required by operational communities in Africa.

High resolution NWP are the most advanced and fundamental systems supporting early warnings and other meteorological services. However, developing and operating such high-resolution NWP systems require substantial resources (high performance computers, highly qualified and specialized scientists, engineers and technicians) available in few NHMSs. ACMAD as part of his mission to facilitate implementation of WMO global programmes in Africa will specifically support NMHSs with low level of resources to access, process and use high resolution NWP data derived products made available through WIS, and WIPPS. The few African NMHSs with high resolution NWP capabilities will contribute NWP products and related research for improvements with a continental coordination mechanism established over the past years with the Regional Climate Centres and Regional Specialized Meteorological Centers for NWP and severe weather.

Focus areas of intervention

- Participation to Global Precipitation Experiments;
- Analysis of user feedbacks, scientific literature review on new findings and available innovative products;
- Support development of platforms for services delivery for application sectors (e.g AMSAF for nowcasting and climate-sensitive sectors, MyDEWETRA for DRR, CLIMTAG for Agriculture, MUKAU for drought management, CLIMSA station for agriculture, DRR, water and health….);
- Development of methods, tools, prototype products, experimentation of prototypes with test beds and forecasts demonstrations.
- Development of knowledge and training materials including applications tools;

- Enhancement of predictability research on hazards and phenomena relevant for DRR, climate action and sustainable development;
- support Climate related socio-economic impacts and risk research with climate projections and scenarios

Outcome 4: Modernized Governance and Management of ACMAD

To better deliver advanced, bespoke and cost-effective services with relevance to sustainable development, disaster risk reduction and climate change adaptation needs of Africa, governance and management of centre are to be aligned with this strategy.

ACMAD was created in 1985 by UNECA through Resolution 540 of the Conference of Ministers of Economy, finance and planning of Africa with technical support of the WMO. The centre started operations in October 1992 in Niamey with a headquarters' agreement with the Government of Niger. Article 5 of ACMAD's constitution describes its Board of Governors including representatives of two member states of each ECA sub- region, the representative of the Niger Government, members representing WMO, UNECA and AUC, and other invited experts or institutions/donors described in the constitution.

Since the rationalization of institutions, the UNECA kept its statutory role including approval of ACMAD's planning documents and renewal of the board membership. During the past years, ACMAD leadership has engaged the UNECA to resume activities related to its statutory role in the governance of Centre. The Centre pursued implementation of the AMCOMET-4 session declaration with the preparation and submission to UNECA and AUC of a relationship agreement formalizing the ACMAD role as technical arm of AUC on climate matters in Africa.

ACMAD will continue efforts to follow up UNECA review and approval of the relationship agreement with AUC and its submission to AUC organs for adoption. ACMAD's status as technical arm of AUC on climate matters and reactivation of UNECA's statutory role on ACMAD Board renewal, ACMAD work plans adoption by UNECA and other relevant governance issues of the Centre. Partners and donors' meetings will be considered to improve resources mobilization.

On management improvements, the Centre has completed audits from 2015 to 2022 including most projects. The ISACIP project which started in 2011 and ended 2017 is under final AfDB"s audit facilitating regular closure of all projects undertaken by the Centre. A procedure manual, updates on staff and financial regulations have been proposed and adopted by the Board. ACMAD will continue modernization of management with review and upgrade on procedures, manuals and regulations based on gaps identified during the upcoming years, and good practices from International Public Sector Accounting and Financial Reporting Standards.

ACMAD will further expand partnerships and collaborations to optimally use human and financial resources of the Centre and partner organizations with common objectives.

Objective 4.1 Strengthen the governance and partnerships

UNECA organizes the annual Conferences of African finance, planning and Economic Development Ministers which is the structure which established ACMAD. The African Ministers in charge of Meteorology Conference made a declaration requesting ACMAD to operate as the technical arm of AUC on climate matters. WMO organizes annual executive council meetings and congress sessions every four years. ACMAD will continue participation to these high-level events to raise awareness on its governance issues and build support for the Centre's governance modernization.

ACMAD will continue following up with UNECA the finalization of the AUC-ACMAD relationship agreement. The agreement will then be submitted for approval to the AUC organs including the Specialized Technical Committee in charge of Environment.

ACMAD will further engage WMO, UNECA and AUC to reactivate activities part of the UNECA statutory role, finalize and get the relationship agreement between ACMAD and AUC signed therefore implementing the relevant AMCOMET-4 session declaration. To support resource mobilization, partners and donors' coordination meetings will be organized as a mechanism to enable information sharing and facilitate access to resources supporting operational activities of the Centre.

The requirements for investments along the meteorological value chain are huge. Public, Private sector and Civil society as well as academia provide a mix of stakeholders to be involved through formal partnerships to share the costs and enable sustainability.

Focus areas of intervention

- Formulation and implementation of decisions, resolutions and recommendations of ACMAD Board, AMCOMET, UNECA, WMO, AU and related organs and relevant collaborating partners;
- Finalization of the ACMAD governance modernization;
- Establishment of inclusive and diversified consortia, partnerships and collaboration mechanisms

Objective 4.2 Improve management of the organization

ACMAD experiences high staff turnover due to high reliance on fix duration projects funding, difficulties to attract, maintain and motivate skill labor and lack of regular revisions needed on its staff and financial regulations to respect international public sector organizations standards for accounting, finance, human resources management. ACMAD has developed collaboration with UNECA and other partners and improved management practices are being implemented based on lessons learnt from monitoring, evaluation of projects and programmes as well as guidance and technical support by UNECA and WMO. Revisions of staff and financial regulations with adoption of the International Accounting and Financial Reporting standards and procedures were made. Technical assistance and exchange with UNECA, WMO and partners will continue to be essential to make progress on quality management, development of knowledge and communication management, accounting, financial and resources management.

Focus areas of intervention

- further standardization of resources (i.e. staff, finance, infrastructure) management systems;
- strengthening quality, partnerships, knowledge and communication management;
- development of operational plan, budget, resources mobilization, monitoring and reporting;
- preparation, update and use of procedure and instruction manuals.

VII- ALIGNMENT WITH AU AGENDA, AMCOMET AND WMO STRATEGIES

ACMAD's continental mission on weather and climate supports implementation of the African Union agenda 2063 and SDGs trough mainstreaming meteorological information and knowledge for effective realization of aspirations in these agendas. As the centre of excellence in the applications of meteorology for sustainable development, ACMAD's functions include strengthening Africa's participation in global weather and climate programmes. To ensure effective application of meteorology for sustainable development including participation in global programmes, alignment of this strategy with the AU and WMO meteorology strategies is essential.

Table 2: ACMAD's strategic objectives and relevance to AU agenda 2063

AU Agenda 2063 Aspirations	AU Agenda 2063/Goals	AU Agenda 2063/ Priority areas	Relevant ACMAD's Strategic Objectives
1) A Prosperous Africa, based on inclusive Growth and Sustainable Development	(1) A High Standard of Living, Quality of Life and Well Being for All Citizens (3) Healthy and well-nourished citizens (4) Transformed economies (5) Modern Agriculture for increased production	* Poverty, Inequality and Hunger *Social security and protection * Modern and Liveable habitats and basic quality of life * Sustainable and inclusive growth *Economic diversification and resilience * Agricultural productivity and production	2.1 Support outlooks, advisories and watches to strengthen warnings at national level for preparation and response to disasters 2.2 strengthen climate services to reduce climate change impacts and support sustainable development 2.3 Support for new and emerging services 3.2 Enhance research and innovation

AU Agenda 2063 Aspirations	AU Agenda 2063/Goals	AU Agenda 2063/ Priority areas	Relevant ACMAD's Strategic Objectives
	(2) Well Educated Citizens and Skills revolution underpinned by science, Technology and Innovation	*Education and Science Technology Innovation skills driven revolution	1.1 Address partnerships, competency gaps to provide services for early warning, climate action and sustainable development 1.2 Support NMHSs, Regional Centres and Users with leadership, management, technology and services capacity 3.1 Enable better access data 3.2 Enhance research and innovation
	(7) Environmentally sustainable climate and resilient economies and communities	*Sustainable natural resource management, biodiversity conservation, genetic resources and ecosystem/water security, climate resilience and natural disasters preparedness and prevention	2.1 Support outlooks, advisories and watches to strengthen warnings at national level for preparation and response to disasters 2.2 strengthen climate services to reduce climate change impacts and support sustainable development 2.3 Support for new and emerging services
2) An Integrated Continent Politically united	8) United Africa (Federal or Confederate	Framework and Institutions for a United Africa	4.1 Strengthen the governance and partnerships

AU Agenda 2063 Aspirations	AU Agenda 2063/Goals	AU Agenda 2063/ Priority areas	Relevant ACMAD's Strategic Objectives
and based on the ideals of Pan Africanism and the vision of African Renaissance			4.2 Improve management of the organization
3) An Africa of Good Governance, Democracy, Respect for Human Rights, Justice and the Rule of Law	(12) Capable institutions and transformative leadership in place	*Institutions and Leadership *Participatory Development and Local Governance	4.1 Strengthen the governance and partnerships 4.2 Improve management of the organization
4) A Peaceful and Secure Africa	(13) Peace Security and Stability is preserved	*Maintenance and Preservation of Peace and Security	2.3 Support for new and emerging services to address potential climate related insecurity
5) Africa with a Strong Cultural Identity Common Heritage, Values and Ethics	16) African Cultural Renaissance is preeminent	*Values and Ideals of Pan Africanism *Cultural Values and African Renaissance *Cultural Heritage, Creative Arts	4.1 Strengthen the governance and partnerships 4.2 Improve management of the organization
6) An Africa Whose Development is people driven, relying on the potential offered by African People, especially its Women and Youth	(17) Full Gender Equality in All Spheres of Life (18) Engaged and Empowered Youth and Children	*Women and Girls Empowerment *Violence & Discrimination against Women and Girls *Youth, and caring for Children * Youth Empowerment and Children	4.1 Strengthen the governance and partnerships 4.2 Improve management of the organization 1.2 Support NMHSs, Regional Centres and Users with leadership, management, technology and services capacity
7) An Africa as a Strong and Influential Global Player and Partner	(19) Africa as a major partner in global affairs and	*Africa's place in global affairs. * Partnership	4.1 Strengthen the governance and partnerships

AU Agenda 2063 Aspirations	AU Agenda 2063/Goals	AU Agenda 2063/ Priority areas	Relevant ACMAD's Strategic Objectives
	peaceful co-existence		2.1 Support outlooks, advisories and watches to strengthen warnings at national level for preparation and response to disasters 2.2 strengthen climate services to reduce climate change impacts and support sustainable development 2.3 Support for new and emerging services

Table 3: ACMAD's strategic objectives and relevance to WMO strategy

WMO Long-Term Goals	WMO Strategic Objectives	Relevant ACMAD's Strategic Objectives
1) Better serve societal needs: delivering, authoritative, accessible, user-oriented and fit-for-purpose information and services	(1) Strengthen national multi-hazard early warning/alert systems and extend reach to better enable an effective response to the associated risks (2) Broaden the provision of policy- and decision-supporting climate information and services (3) Enhance the value of and innovate in the provision of decision-supporting weather information and services	2.1 Support outlooks, advisories and watches to strengthen warnings at national level for preparation and response to disasters 2.2 strengthen climate services to reduce climate change impacts and support sustainable development 2.3 Support for new and emerging services 3.2 Enhance research and innovation
2) Enhance Earth system observations and predictions: Strengthening the	1) Optimize the acquisition of Earth system observation data through the WMO Integrated Global Observing System (WIGOS)	3.1 Enable better access data 1.2 Support NMHSs, Regional Centres and Users with leadership,

WMO Long-Term Goals	WMO Strategic Objectives	Relevant ACMAD's Strategic Objectives
technical foundation for the future	2) Improve and increase access to, exchange and management of current and past Earth system observation data and derived products through the WMO Information System 3) Enable access to and use of numerical analysis and Earth system prediction products at all temporal and spatial scales from the WMO seamless Global Data Processing and Forecasting System	management, technology and services capacity
3) Advance targeted research: Leveraging leadership in science to improve understanding of the Earth system for enhanced services	1) Advance scientific knowledge of the Earth system 2) Enhance the science-for-service value cycle ensuring scientific and technological advances improve predictive capabilities and analysis 3) Advance and contribute to policy-relevant science	3.1 Enable better access data 3.2 Enhance research and innovation
4) Close the capacity gap on weather, climate, hydrological and related environmental services: Enhancing service delivery capacity of developing countries to ensure availability of essential information and services needed by governments, economic sectors and citizens	1) Address the needs of developing countries to enable them to provide and utilize essential weather, climate, hydrological and related environmental services 2) Develop and sustain core competencies and expertise 3) Scale up effective partnerships for investment in sustainable and cost-efficient infrastructure and service delivery	1.1 Address partnerships and competency gaps to provide services for early warning, climate action and sustainable development 1.2 Support NMHSs, Regional Centres and Users with leadership, management, technology and services capacity 4.1 Strengthen the governance and partnerships 4.2 Improve management of the organization
5) Strategic realignment of WMO structure and programmes for effective policy- and	1) Optimize WMO constituent body structure for more effective decision-making 2) Nurture WMO strategic partnerships	4.1 Strengthen the governance and partnerships 4.2 Improve management of the organization

WMO Long-Term Goals	WMO Strategic Objectives	Relevant ACMAD's Strategic Objectives
decision-making and implementation	3) Advance equal, effective and inclusive participation in governance, scientific cooperation and decision-making	

Table 4: ACMAD's strategic objectives and relevance to the updated Integrated African Strategy on Meteorology

Updated African Integrated Strategy on meteorlogy pillars	AMCOMET Strategic Areas of Action	Relevant ACMAD's Strategic Objectives
1) Increased political support and recognition of NMHSs	1) Formulate policies and provide the necessary legislation to ensure that NMHSs acquire more autonomy in the longer term 2) Develop specific programmes and workshops to implement operationally the African Union Gender Policy 3) mobilize private sector of agriculture, insurance, transport and tourism who are sustainable customer base for NMHSs 4) Ensure that the necessary funding is provided to sustain and develop NMHSs and RCCs 5) Ensure that all subregions of Africa are equitably considered, including the establishment of RCCs and Regional Specialized Meteorological Centres (RSMCs) across the continent	1.2 Support NMHSs, Regional Centres and Users with leadership, management, technology and services capacity 4.1 Strengthen the governance and partnerships 4.2 Improve management of the organization
2) Improved observational networks, data access and processing	1) Facilitate access and use of globally available operational data 2) Facilitate the deployment of buoys 3) Facilitate the sustained provision of global and regional coverage of observational data, products and services t	1.2 Support NMHSs, Regional Centres and Users with leadership, management, technology and services capacity 2.1 Support outlooks, advisories and watches to strengthen warnings at national level for

Updated African Integrated Strategy on meteorlogy pillars	AMCOMET Strategic Areas of Action	Relevant ACMAD's Strategic Objectives
	4) Ensure that all NMHSs align with WMO standards and put in place a QMS	preparation and response to disasters 2.2 strengthen climate services to reduce climate change impacts and support sustainable development 2.3 Support for new and emerging services 3.1 Enable better access data
3) Enhanced capacities for the production and delivery of tailored weather, water, climate and climate change services for sustainable development	1) Develop and implement a QMS for meteorological services 2) Facilitate QMS training to staff from various NMHSs 3) Ensure that the competency of personnel meets international standards established by WMO 4) Ensure regular maintenance and calibration of equipment in line with WMO standards 5) Ensure optimal use of existing products supplied by regional and global centres 6) Facilitate access, use and development of satellitebased meteorological products	1.1 Address partnerships and competency gaps to provide services for early warning, climate action and sustainable development 1.2 Support NMHSs, Regional Centres and Users with leadership, management, technology and services capacity 3.1 Enable better access data
4)Research, Innovation, Development and Training	1) Ensure that at least 5% of budgets allocated to NMHSs and associated research institutions, at the national level, is for research, innovation development 2) Encourage NMHSs and RCCs to collaborate with the Climate Research for Development in Africa initiative (CR4D 3) Collaborate with local communities to unravel and understand the scientific basis of indigenous knowledge	3.2 Enhance research and innovation 1.1 Address partnerships and competency gaps to provide services for early warning, climate action and sustainable development 1.2 Support NMHSs and Users with technology, competencies and capabilities for competitive service delivery 2.1 Support outlooks, advisories and watches to strengthen

Updated African Integrated Strategy on meteorlogy pillars	AMCOMET Strategic Areas of Action	Relevant ACMAD's Strategic Objectives
	4) Strengthen cooperation and collaboration with international scientific and technical partners 5) Collaborate with existing initiatives and relevant African institutions on training and research 6) Work with academic institutions, including WMO Regional Training Centres 7) Increase African capacities to develop African-tailored products based on satellite data 8) Stimulate national and regional research activities on DRR and climate change	warnings at national level for preparation and response to disasters 2.2 strengthen climate services to reduce climate change impacts and support sustainable development 2.3 Support for new and emerging services
5) Strengthened partnerships with relevant institutions and the private sector	Cultivate long-term partnerships with traditional financing institutions Identify funding streams established to support African countries in their development Liaise with the UNECA and the private sector for the development Develop policy and legal framework for Public-Private Engagement (PPE) in a mutually beneficial collaboration Involve the Climate Financing institutions	1.1 Address partnerships and competency gaps to provide services for early warning, climate action and sustainable development 4.1 Strengthen the governance and partnerships

VIII- TARGET GROUPS

The main target groups include NMHSs, national officials and regional centres, RECs, AUC, UNECA, NEPAD, regional offices of UN and international organizations (WMO, UNECA, UNOCHA, UNHCR, FAO, WHO, UNDRR…), civil society and charity organizations, farmers, architects federations (PAFO), health networks (CLIMHEALTH- Africa), River basins networks, water associations, IFRC, public and private sector institutions (CIMA foundation, Universities, Research institutes…) and media. ACMAD will work with NMHSs, Regional Centres and other national public officials to co-produce information and services, undertake training, transfer tools and methods in support of regulations,

policies and actions. ACMAD will provide weather, climate and related environmental services innovations in support of AUC, NEPAD and other UN bodies agenda in Africa.

ACMAD will engage the private sector (i.e infrastructure design, building and operations, insurance industries, manufacturing, processing and services industries,) in the continent to support entrepreneurship, economy growth and job creation at the interface of climate, environment and development with emphasis on water, food, energy and health security.

ACMAD will provide climate information to civil society (i.e PACJA) and charity organizations for climate governance and advocacy for improved quality of life. ACMAD will work closely with the media to co-generate and communicate information on weather, climate and environment.

IX- FINAL BENEFICIARIES

African population with special emphasis on those with weak resilience and adaptive capacity to high impact weather, climate and environmental events. ACMAD will support the African citizen with clear and comprehensive complementarity analysis and national/regional scale products to meet households needs for food, water, energy, health and leisure.

X- IMPLEMENTATION OF THE STRATEGIC PLAN

The strategy will be implemented with main focus on advocacy and mobilization of countries, sub-regions, partners and resources during the first year, implementation of priorities from the first to the fourth year and assessment of progress towards meeting strategic outcomes during the fourth year.

A result review after two years of implementation be made to advice and guide the second half of the implementation period. Complementarity and subsidiarity will be essential after assessment of countries and sub-regional capacities. Dialogue days, platforms and forums will be organized with users to better define and co-generate services based on identified needs.

XI- RESOURCE AND PARTNERSHIPS MOBILIZATION

The revenue model of the Centre will continue to rely on countries contributions, grants and other contributions from funding partners of development cooperation, research and innovation communities, implementation, collaboration and consortium agreements and revenue from services provided. ClimDev special fund, global climate finance (Green Climate and adaptation funds), EU Development Fund, USAID and other national cooperation for development agencies (ENABEL, NORAD, UKAID…) and public-private partnerships are essential resources mobilization mechanisms. Conferences and events for partnerships enhancement and resources mobilization will be organized preferably following Board of Governors sessions. Countries will be supported to adapt NMHSs strategies and programmes to countries development strategy papers, Nationally Determined Contributions (NDCs) to the Paris Agreement and regional/countries adaptation plans to mobilize public

and private financing. Technical, scientific and financial cooperation with partners will be enhanced to exchange experiences and best practices on the priorities mentioned above. ACMAD will accelerate and expand collaborations with African and other continents universities and institutes for climate resilience and adaptation to train young workforce, develop methods tools, prototype products and applications using artificial intelligence, expert systems and machine learning.

XII- MONITORING THE STRATEGIC PLAN

The progress of the strategy implementation should be monitored regularly using reports, assessments, publications and citations; the amount of funds mobilized, deliverables and outputs, as well as measurement of impact through surveys to stakeholders, and feedback in focus groups.

Implementation of the strategic objectives will be monitored using indicators in the table below

Strategic objective	Objectively Verifiable indicators	Means of verification	Assumptions (Risks)
1.1 Fill competency gaps to provide services for early warning, climate action and sustainable development	NMHSs, Regional Centres and applications stakeholders supported with competent technicians, engineers and scientists Partnership Agreements available	1.1.1 Number of agreements or collaborations for capacity development 1.1.2 Number of capacity gaps reports and training events organized 1.1.3 Number of staff trained	Supportive political environment Conducive governance of NMHSs Adequate capacity by NMHSs

Strategic objective	Objectively Verifiable indicators	Means of verification	Assumptions (Risks)
1.2 Support NMHSs, Regional Centres and Users with leadership, management, technology and new services capability	curricula and training materials development supported NMHSs and Regional Centres management improved User organizations trained	1.2.1 Number of curriculum/training materials 1.2.2 Number NMHSs and Regional Centres with leadership/management staff trained 1.2.3 number of user organizations trained 1.2.4 Volume of capacity building expenditure	NMHSs and Regional Centre committed to quality management improvement
2.1 Support advisories and watches to strengthen warnings at national level for preparation and response to disasters	Countries/regions helped with watches and advisories for planning/implementation of Disaster management strategies and contingency plans NMHSs publishing warnings, Regional Centres delivering advisories and watches NMHSs supported to provide advisories and reports including high impact weather and climate	2..1.1 Number of countries/regions implementing disaster management strategies, contingency plans, anticipatory action dialogue using watches, warnings and advisories 2..1.2 Number of countries delivering better warnings	Cooperation from Disaster Risk Management sector

Strategic objective	Objectively Verifiable indicators	Means of verification	Assumptions (Risks)
	events and related socio-economic impacts Countries with NMHSs providing services to humanitarian communities Regional humanitarian and disaster management structures using regional centres products and services Continental MultiHazards Advisory centre operational supporting RSMCs on severe weather	2.13 Number of regional bodies delivering watches 2.1.4: Number of countries with NMHSs and RSMCs with Severe weather information available 2.1.5: Number of countries and regions with humanitarian and disaster management organizations integrating advisories, watches in their operations and plans 2.1.6: technical notes, situation reports and continental watches provided	Cooperation from Humanitarian sector Supportive regional humanitarian and DRM institutional frameworks Supportive governance by NMHSs

Strategic objective	Objectively Verifiable indicators	Means of verification	Assumptions (Risks)
2.2 Improve climate services to reduce climate change impacts and support sustainable development	Countries/Regions with regular annual state of climate reports published WMO designated RCCs in Africa sustained and more involved in UNFCCC processes NMHSs and RCCs supported and coordinated for active Climate Service Information System of the GFCS countries with NMHSs capacitated to participate to UNFCCC COPs and active in NAPs and NDCs development and implementation	2.2.1 Number of countries/regions delivering technical notes with regular briefings 2.2.2 Number of countries with NMHSs and RCCs providing climate information services, attending CoPs and supporting NAPs, NDCs and national sustainable development plans	Supportive Governance of NMHSs Supportive Governance at regional level Supportive collaboration with Implementing entities

Strategic objective	Objectively Verifiable indicators	Means of verification	Assumptions (Risks)
2.3 Support for new and emerging services	NMHSs/RCCs supported to be active on social media with products and services on digital platforms.	2.3.1 Number of countries with NMHSs/RCCs active on social media with advanced digital platforms	Conducive social media infrastructure
	NMHSs and regional centres supported to provide new services available	2.3.2 Number countries/regions with NMHSs/RCCs with new bespoke products and services	Innovative environments available in NMHSs and Regional Centres
3.1 Enable better access data	Countries NMHSs with observing stations rehabilitation plans identified	3.1.1 Number of NMHSs supported	Supportive governance environment and strategic planning offices
	NMHSs/RCCs with advanced data access and exchange systems (PUMA, CLIMSA, MyDEWETRA, CLIMTAG…)	3.1.2 Number of NMHSs and regional centres supported with better reception stations for satellite data (e.g MTG)	Supportive governance environment
		3.1.3 Number of NMHSs and RCCs with operational access and exchange of data trough platforms developed by ACMAD on	Supportive governance environment

Strategic objective	Objectively Verifiable indicators	Means of verification	Assumptions (Risks)
	NMHSs supported for data collection and management NMHSs supported for data rescue	its portal, on cloud as well as WIS capability 3.1.4 Number of NMHSs supported for data rescue	 Supportive governance environment

Strategic objective	Objectively Verifiable indicators	Means of verification	Assumptions (Risks)
3.2 Enhance research and innovation	Operational research projects and consortium available research and development projects and consortia involving ACMAD proposed NMHSs and Regional Centres verifying and assessing performance of global models outputs and their products over their country or regions identified UNECA, AUC and other international bodies reports on the economic status of Africa including socio economic impacts of weather and climate events identified	3.2.1 Number and value of projects and consortia 3.2.2 Number of NMHSs, Universities, and regional centres undertaking processes and predictability studies, developing new diagnostics to improve forecasting 3.2.3 Number of NMHSs and Regional Centres supported to contribute to socio economic benefit assessment of meteorological services 3.2.4 Number of reports, publications, citations	Cooperation among research consortium members Supportive collaboration and partnerships

Strategic objective	Objectively Verifiable indicators	Means of verification	Assumptions (Risks)
4.1 Strengthen the governance and partnerships	Compliance with the regulatory requirement demonstrated	4.1.1 Regulatory requirements by ACMAD Board, AMCOMET, SACOM, UNECA and AU relevant organs recommendations, decisions or resolutions implemented	Capacity at ACMAD for implementation of resolutions, recommendations, decisions and regulations
	Frameworks or high-level agreements negotiated and implemented	4.1.2 number of frameworks or relationship agreements	Supportive cooperation from member countries under the leadership of the host country development cooperation office, AUC and UNECA
	NMHSs collaboration with private sector and academia established and/or implemented	4.1.3 number of arrangements for collaboration	Supportive cooperation environment and national projects providing resources
	MoUs or broad collaboration arrangements with technical and scientific partners signed or implemented	4.1.4 Number of MoUs or framework agreements arrangements	Supportive cooperation among stakeholders, political stability facilitating attraction of partners

Strategic objective	Objectively Verifiable indicators	Means of verification	Assumptions (Risks)
	projects with partners and collaborators	4.1.5 Number of projects collaboration agreements and value of projects	
4.2. Improve management of the organization	Policy, regulations and procedure manuals updated and used	4.2.1 Policy and procedures updates available and	Sufficient resources for implementation
	Centre well managed	4.2.2 Operating plans and budgets , annual and 4 years reports, audit reports	

Strategic objective	Objectively Verifiable indicators	Means of verification	Assumptions (Risks)
	Resources utilization monitored and controlled	4.2.3 Performance contracts with staff 4.2. 4 Upgrades in financial and human resources management systems 4.2.5 Section in reports on human resources strategy review 4.2.6 Section in report on status of infrastructure 4.2.7 Number of staff recruited 4.2.8 Number of Technical and financial Audits	Supportive governance mechanism with higher technical support of UNECA, EAMAC/ASECNA and other partners for staff recruitment
	Resources (staff, funds, infrastructure) mobilized	4.2.10 Number of staff recruited 4.2.11 Amount of funds mobilized 4.2.12 Type and Value of infrastructure constructed	

XIII- REFERENCES

Inputs to this strategy were sourced from a variety of documents some of which are presented below.

1 - AU (2019) Africa Biennial Report on Disaster Risk Reduction 2015-2018. The report can be found at https://au.int/en/documents/20200805/first-africa-biennial-report-disaster-risk-reduction-synopsisreport.

2- Africa's Climate Change and Resilient Development Strategy and Action Plan (2022-2032).

3- African Strategy on meteorlogy (revised version)

4- World Meteorological Organization (WMO) strategic plan 2024-2027

5- African Union (AU) Agenda 2063

6- United Nations (UN) Sustainable Development Goals (SDGs) 20230

7- Sendai framework for Disaster Risk Reduction

8- Paris Agreement on accelerating implementation of UNFCCC 2015

9- African strategy on Disaster Risk reduction and programme of action