Current status of operations at RCC-Africa

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WEATHER CLIMATE WATER
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World Meteorological Organization
Organisation météorologique mondiale

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Background

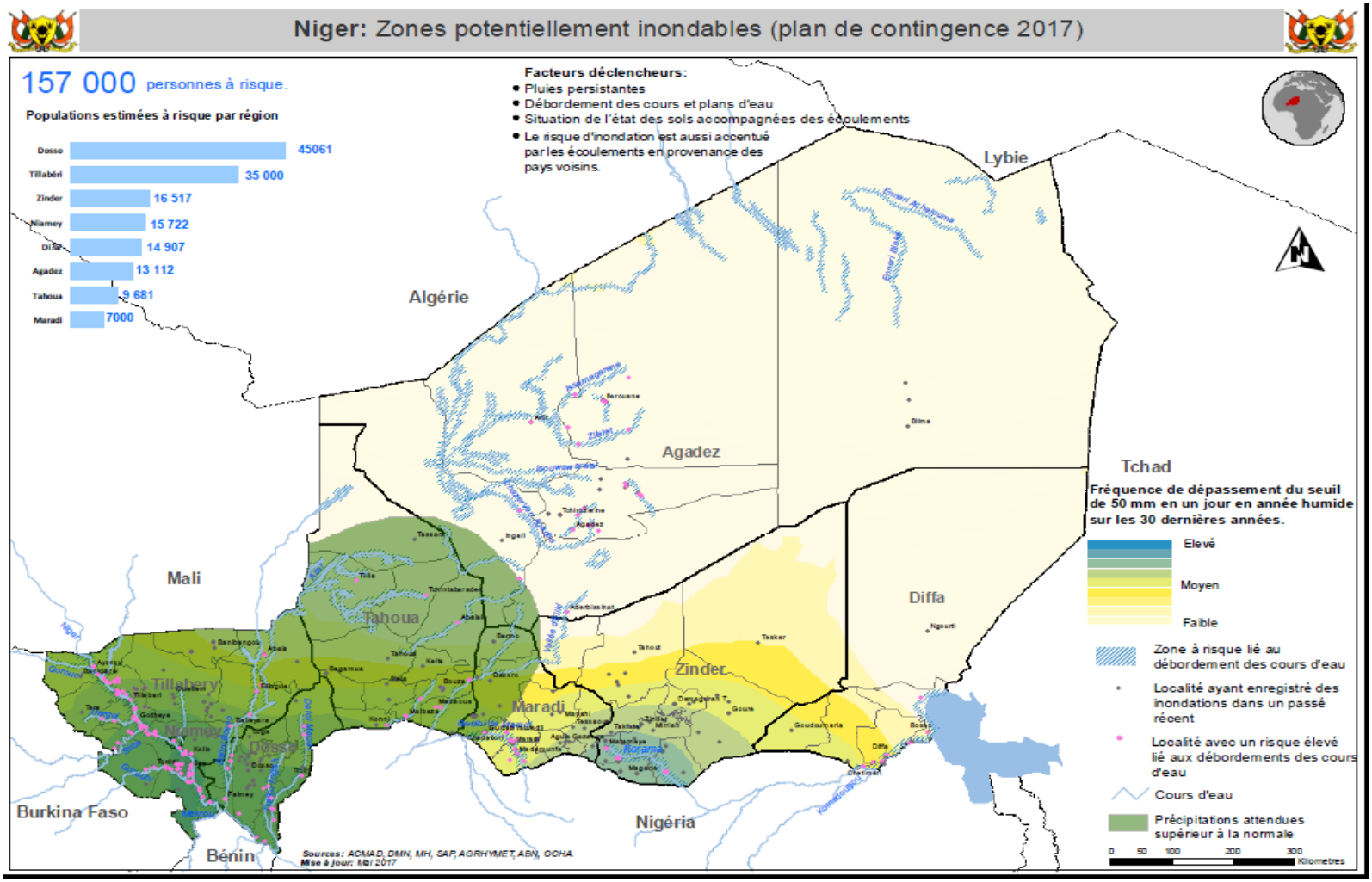
[Target Region : RA I - All Africa

Start date: 2013

Main Seasons; DJF, JAS, MAM, OND, JFM

Main forcings on Africa's climate:: ENSO, IOD, Atlantic Dipole, SIOD, NAO/AO/AAO, Benguela Nno, MJO, Kelvin and Rossby waves, AMO, Mediterranean SSTs and summer Temperatures over north Africa amd southern Europe …

potential applications of RCC products/services: update of contingency with areas of high flood potential



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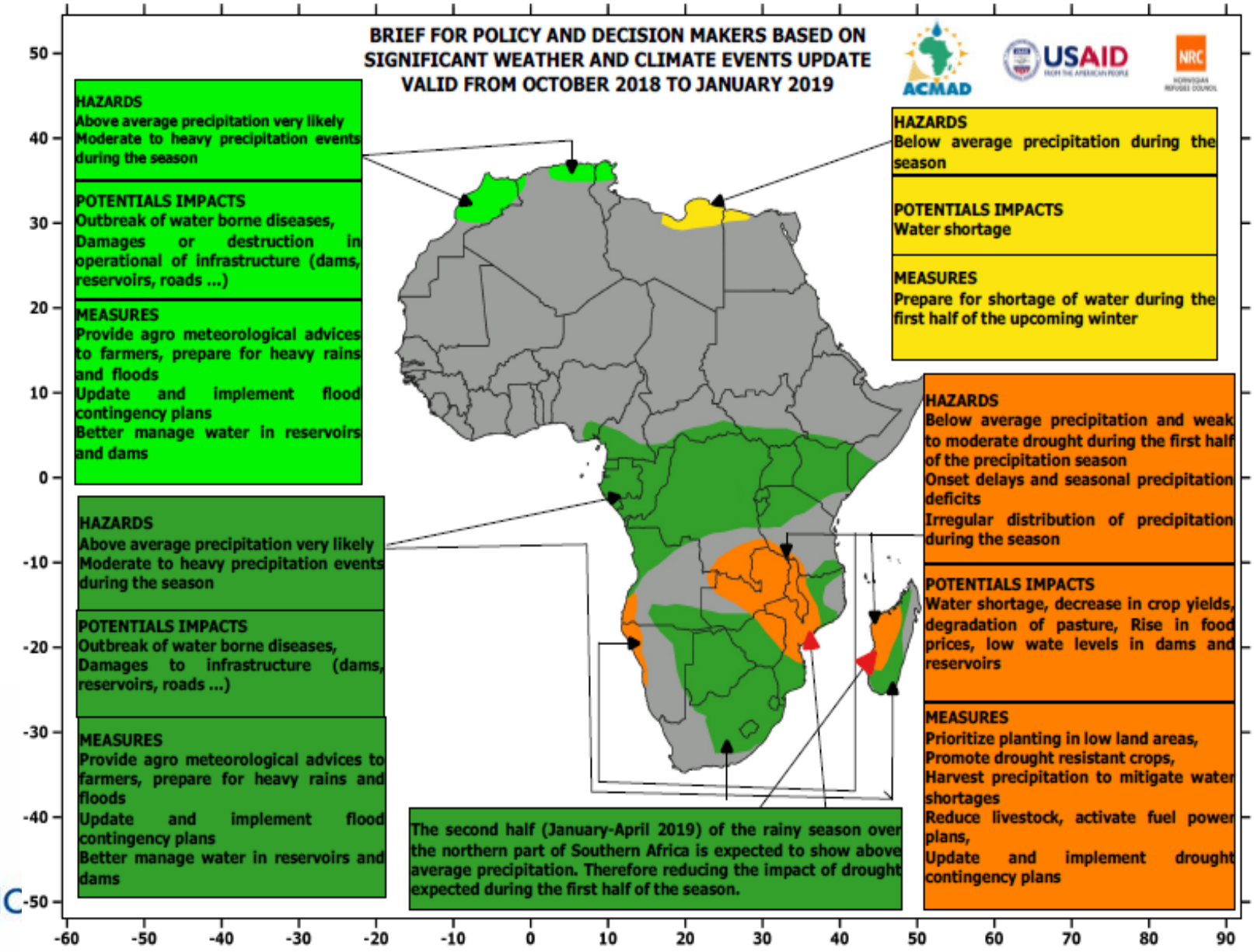

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Lesson learnt with DRR community on their needs

- **likelihood** of climate hazard (trend., disturbance, anomaly, change)

-direction (drier/wetter, colder/hotter, stronger/weaker, clearer/cloudier…)

-magnitude

- Location

-potential impacts

-Measures/action options for adaptation and risk management

The Challenging question is: **how does the Climate community more effectively let the public/User know what we know, and how it may impact them?**

Trust better forecasts and heed warnings

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RCC operational schedule and Resource base

- Continental Long Range Forecasting *every month*
- Regional Consensus Outlooks *up to 5 times a year (Feb, May, Aug, Sept, Nov)*
- Climate Monitoring *once a year, every month and dekad (10 days)*
- *Training of up to one week duration 1 to 3 times a year*
- Training hands on *for 4 to 6 months duration 2 to 4 per year* , development of training materials *all year long*
- Data rescue and Management with inventory of archives, scanning, digitization, development/operation *of CDMS, data and web servers all year long*
- *Coordination all yea long*

Challenge : Have 10 staffs for optimal operation and RCC visible in the organizational structure – optimal cost US$ ½ million

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Governance and Partnerships

- RCC-Africa hosted by ACMAD which was established by UNECA Conference of Ministers – alternative mechanism of oversight being sought with ECA, AUC and WMO through AMCOMET

- High level guidance/coordination by ACMAD board with **12 selected African PRs with WMO, UNECA, AU, WMO, UNDP, FAO, UNEP**

- *Technical Partnerships with WMO, GPCs, RCC-Network for North Africa, IGAD – RCC, AGRHYMET/CILSS, SADC/CSC, RCCs in America and Europe, and NMHSs in Africa*

- *Financial partnerships with UNDP, AfDB, EU/ EDF, EU/FP, AFD,DFID, USAID*

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RCC Operations: Mandatory Functions
1. Operational Data Services

- *Microfiches starting from the early 20th Century for up to 40 Africa countries archived and partly inventoried, scanned and digitized*
- *African SYNOP data archive from NOAA/NCDC*
- *Development (data rescue module, output formats...) and operation of Climsoft for data management*
- *Installation and operation of THREDDS as online data server handling station and gridded data*
- *Development of geoserver*
- *African and global datasets iin ARC, CHIRPS, CAMS datasets*
- *Precipitation dataset for all countries for Long Range forecasting*

RCC Operations: Mandatory Functions
2. Climate Monitoring

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- *Dekadal and monthly Climate diagnostics i;*
- *Precip, mslp, ... enso and other drivers, precip outlook a weak, two weeks and a season ahead;*
- *;Annual state of African climate*
- *Quarterly and Semester report on the state of African climate*
- *Historical reference climatology (10 and 30 years averages for SST, precip, 2m Temp));*
- *Regional climate watch advisories - Briefs or synthesis reports , highlights or statements*

RCC Operations: Long Range Forecasting

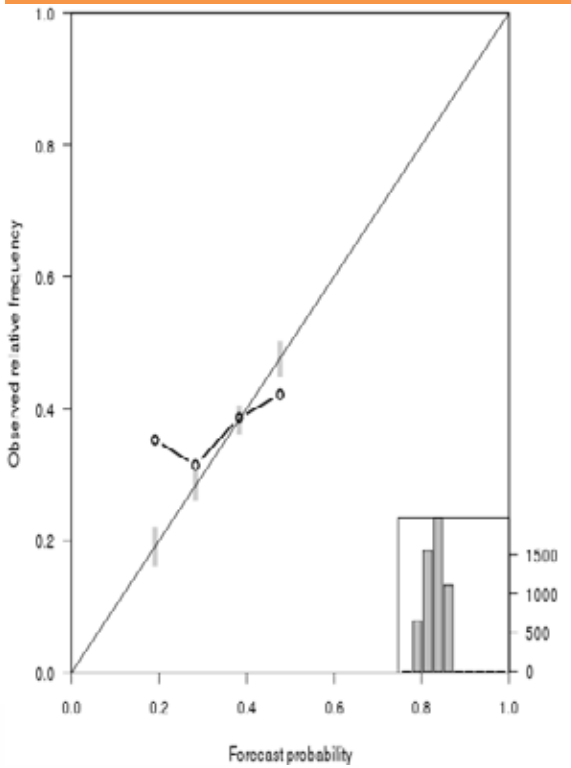
Methodology#Tools

- /Persistence analysis (IRI dl, excel, grads, qgis, surfer);
- Trends analysis (IRI dl, excel, grads, qgis, surfer;
- Analogue analysis (IRI dl, excel, grads, qgis, surfer);
- Composite analysis (IRI dl, grads, qgis, surfer)
- Daily cumulative precipitation analysis (R and excell)
- 10 and 30-days averaged and consecutive overlapping daily precipitation analysis (R and excell)
- Statistical modeling for long range forecasting (monthly, seasonal with CPT and GEOCOF)
- Single dynamical model ensemble (IRI dl, Copernicus python analysis and display scripts)
- Multimodel dynamical ensemble (IRI dl, Copernicus python analysis and display scripts)
- Combination of products derived from the application of methods above (QGIS).
- Verification/evaluation (excel, QGIS)

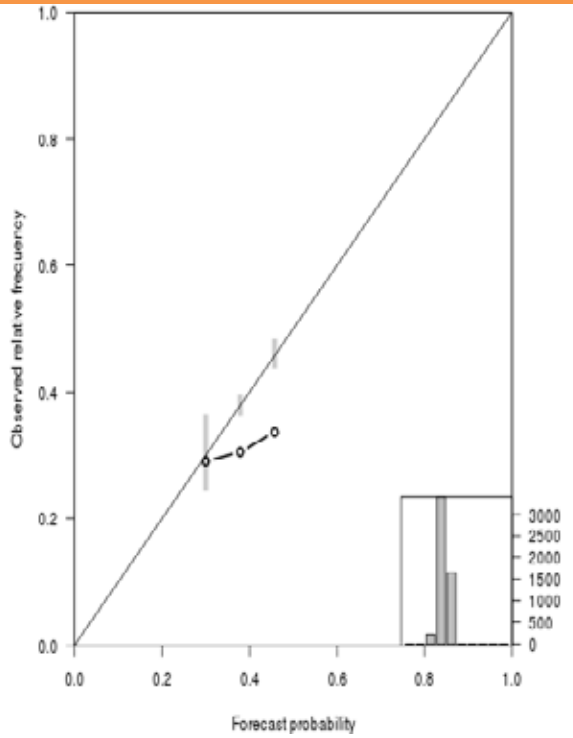
RCC Operations: Long Range Forecasting

Reliability of PRESASS seasonal rainfall forecasts: July-September
Need for better use of Dynamical models for more reliable forecasts

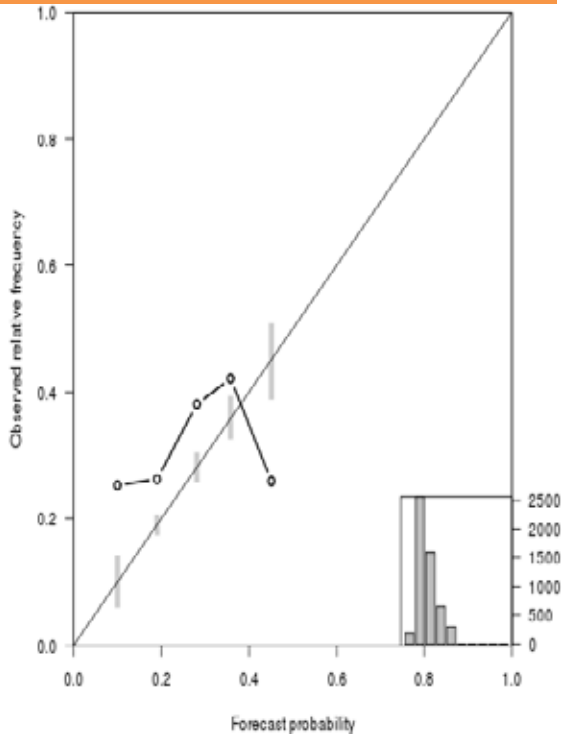
Perfect reliability = points all on diagonal line



Above Normal



Near Normal



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Collaboration between UK Met Office and ACMAD with Jenny Pirret, Joseph Daron, Issa Lele, Andrew Colman, Richard Graham, Andre Kamga

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RCC Operations: Mandatory Functions
4. Training/Guidance in the use of RCC products

- *Training material development and testing*
- *Operational procedures and instruction manuals for hands on training*
- *Continental training of trainers and coordination/support to regional trainings through fora, workshops, seminars, conferences, hands on events*
- *NFCS establishment and Climate service development training;*

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RCC Operations: Highly Recommended Functions

- Research on of hazards scenarios for the 2011-2040 period
- Server for CORDEX data and derived products
- *Training on climate change detection and assessment*
- *Assessment of consensus outlooks*
- *Assessment of climate variability and predictability*
- *Research on other climate extremes scenarios*

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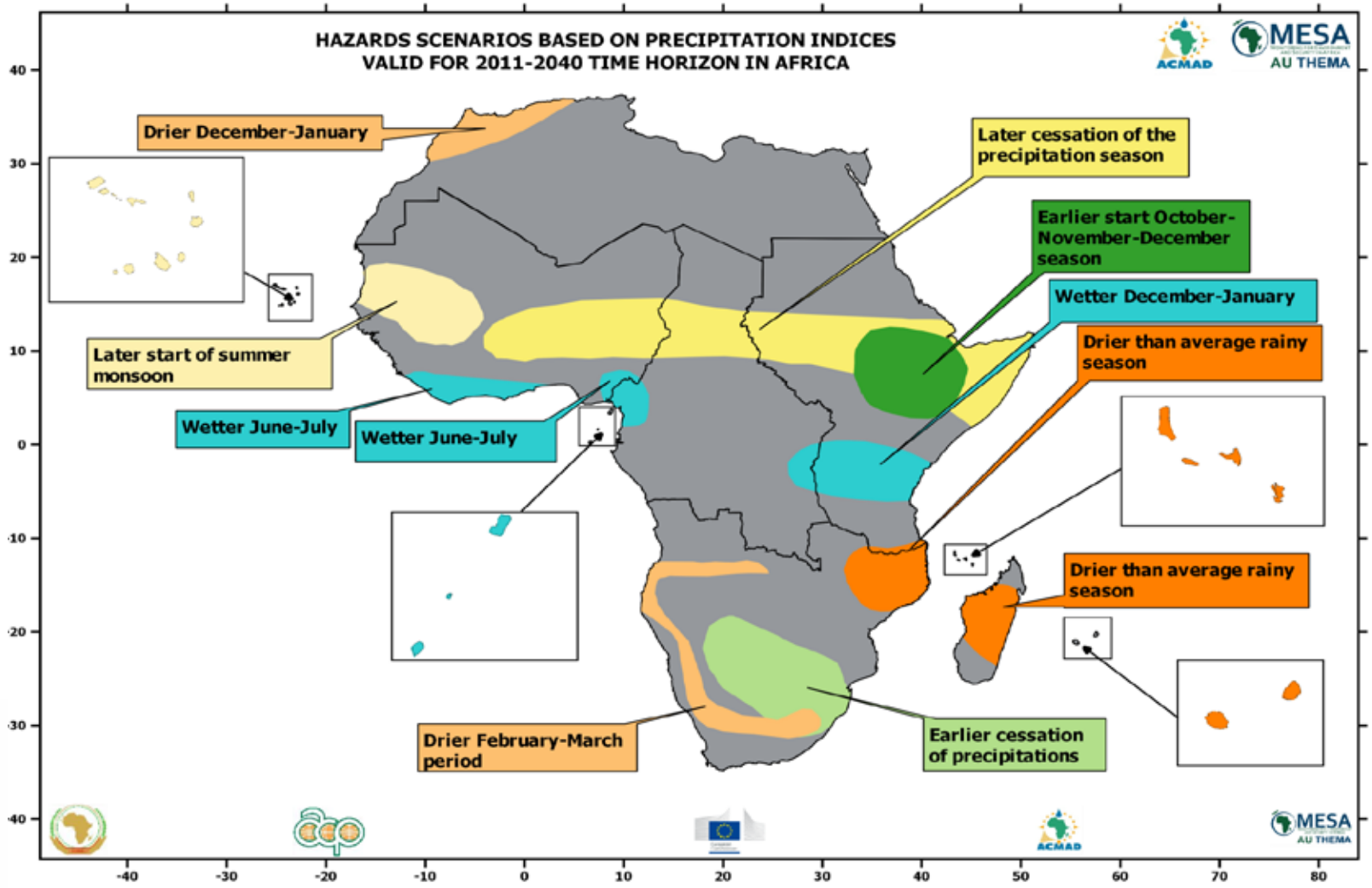
Example of Climate service for DRR strategic and operational planning. Hazards scenarios for 2011-2040 derived from analysis of CORDEX-Africa dataset .



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Role in RCOF Activities

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- *Continental Technical notes for all RCOF in Africa;*
- *Regional Technical notes for PRESANORD, PRESASS, PRESAGG, SWIOCOF, PRESAC*
- *Organization of Training activities at PRESASS, PRESAC and PRESAGG;*
- *Inter-session updates of PRESAC and PRESASS products/outlooks;*
- *Resources from USAID, AfDB, EU, AFD to sustain PRESASS. PRESAGG. PRESAC, SWIOCOF;*
- *Organization or co-organization of PRESASS, PRESAGG, PRESAC*

User Engagement

- Users are NMHSs, AGRHYMET, ICPAS, SADC/CSC, CAPC, North Africa RCC, AWGDDRR,, GECEAO, AGN. AUC

- Feedback collection from countries during RCOFs, steering meetings of projects, policy dialogue days, side events and exhibitions at COPs and Global /Regional DRR platform for a

-DRR and/or, water agriculture sectors focused sessions are organized at PRESASS, PRESAGG and PRESAC

- Actions taken to tailor products for DRR sector (e.g formulation/implementation of ECOWAS humanitarian policy and action plan, contingency planning, Implementation of African DRR programme of action)

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RCC Web Portal

http://acmad.net/rcc/ with links to mandatory and recommended functions leading to products

One web expert part time for updates

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SWOT analysis

[Summarize SWOT analysis, listing only major (1-2) Strengths, Weaknesses, Opportunities and Threats]

- Strong experience on climate services provision and establishment of NFCS across Africa
- Weak Infrastructure (power, computing, storage system and internet) capacity leading to interruptions of operations
- Partnerships with GPCs and RCCs: and NMHSs;
- Use of RCC-Africa products by the private sector, NGOs and other stakeholders without win-win partnerships established with NMHSs

Way Forward

1. rationalization of RCOFs in Africa encouraging joint RCOFs or e-RCOFs

2. partnerships with private sector, the African Union and Regional Economic Communities to deliver climate services for development sectors

3. Partnerships with Universities and research programes on processes and predictability studies

4. reforms positioning RCC-Africa at the core of the organizational structure of host institution making it possible to rely more on operating budgets

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Thank you
Merci
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-Andre Kamga

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