



## **Regional Association I, North African RCC-Network**

### **Implementation Plan**

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#### **1. Introduction**

Regional Climate Centres (RCCs) are Centres of Excellence that assist WMO Members in a given region to deliver better climate services and products including regional long-range forecasts, and to strengthen their capacity to meet national climate information needs.

Regional Association I (Africa) has been pursuing the establishment of RCCs, as per recommendations of Executive Council and Commission for Climatology (Resolution 4 (EC-LXI) and Resolution 5 (CCI-XV) respectively) and as per the designation criteria established by WMO. RA I reiterated the North African Region's intent to implement a RCC network rather than one centre. This approach has been chosen to ensure incorporation of as much competence and know-how as possible of the RA I North African Members.

The meeting of the RA I TT on RCCs, convened during 31 January to 4 February 2011 at WMO Headquarters in Geneva, Switzerland, concluded that all five North African countries operationally perform a range of functions relevant to RCCs, but currently at the national scale. Further, all the five countries are considered to have the potential and intent to provide one or more of the RCC functions for the entire North African region. It has been agreed that the main focus of a North African RCC-Network should also include collaboration opportunities in order to provide as many as possible highly-recommended RCC functions as defined in the Manual on the GDPFS. The meeting unanimously agreed that these countries of the region will work together to implement a RCC-Network for North Africa. Each country will participate in this Network and will contribute or lead in the performance of the respective RCC functions for the entire North African region.

#### **2. The RA I North African RCC Network**

The RA I TT on RCCs Meeting, mentioned above, unanimously agreed that the NMHSs of Algeria, Egypt, Libya, Morocco and Tunisia will work together to implement a RCC-Network for North Africa. Each country will participate in this Network and will contribute or lead in the performance of one or more RCC functions for the entire North African region as per details in the table below.

The following distribution of functions for the North African RCC-Network, allowing each of the five countries to implement a Node of the RCC-Network has been proposed:

	<b>Mandatory functions</b>				<b>Highly recommended functions</b>
	<b>LRF</b>	<b>Climate Monitoring</b>	<b>Data Services</b>	<b>Training</b>	
<b>Lead</b>	Morocco	Algeria	Libya	Egypt and Tunisia	Morocco
<b>Co- Lead</b>	Egypt	Tunisia	Morocco	Algeria	Algeria, Egypt, Libya, Tunisia

The Co-Lead institution will provide similar and/or complementary products to those provided by the Lead institution. The RA I North African RCC structure is, in principle, flexible and open and shall be based on the respective Members' requirements.

### **3- Implementation plan**

This project proposal has as a goal the implementation of the RA I North African RCC network in order to gain official WMO designation as a RCC network, following the recommendations of the RA I TT on RCCs Meeting mentioned above and among which we recall:

- In order to demonstrate implementation of the North African RCC-Network, it is proposed to establish a suitable joint project amongst all the five countries under the overall co-ordination of Mr A. Mokssit (Morocco). The project will comprise preparations for, and conduct of, the demonstration phase as defined in the WMO RCC designation process.
- Mr A. Mokssit, Permanent Representative (PR) of Morocco with WMO has been appointed as the RA I RCC Network Focal Point: The Focal Point acts as the official and formal contact for the RA I RCC Network. Amongst its duties, this institution co-ordinates formally the RCC network and implements an overall RA I RCC WebSite as single entry point to the network.
- A RCC co-ordination mechanism needs to be implemented: It is proposed to task the successor of the RA I WG on Climate-related Matters

(WG CRM) to further develop the RCC concept incl. rolling requirements reviews. Furthermore, the North African RCC-Network coordinators need to meet twice a year during the implementation period and once a year to constantly improve the operational performance of the network. Ideally, it was proposed to consider using opportunities of the Regional Climate Outlook Forum (RCOF) mechanism as well as relevant projects being implemented already or to be implemented in the region.

This project plan outline a clear description of timelines, responsibilities, modes of collaboration and communication in order to implement all mandatory RCC functions for the north African region as well as highly-recommended functions.

The RA I North African RCC Network will consist of 5 nodes. Each node participates in at most 3 RCC functions and is lead for one function. Hence each of the RCCs function has at least a leading institution and one or more co-leading institutions. The nodes will be hosted by their respective institutions. The main webpage of the North African RCC network will be hosted by the coordinating institution and have links to the other nodes.

The following actions are proposed in order to fully implement the RA I North African RCC Network:

- Provision of the implementation plan to the RA I President with the proposal to send it to all RCC service providers in order to get a formal commitment from the NMHSs for the services described in the plan.
- Start of pre-operational production on 1st December 2011 with the main webpage of the RCC network.
- Start a demonstration phase on 1st March 2012.
- Mandate the RA I President to apply for official designation of the RA I North African RCC Network in the course of 2013.

In order to achieve this goal:

- The RCC nodes coordinators (focal points) need to meet twice a year during the implementation phase to discuss RCCs products, 'highly recommended functions' and climate needs, training requirements and opportunities, how to support NMHSs in implementing of the RCC activities, issues of service delivery and of collaboration and develop interfaces to the other RA I RCCs etc.
- The RCC nodes coordinators will collaborate and communicate mainly through emails.

- The RCC nodes coordinators need to meet once a year, after the official designation, to constantly improve the operational performance of the network.

#### **4. Planning for RA I North African RCC network service provision**

The following table gives the proposed dates for the beginning of provision of the RCC products by each node.

Algeria	1 January 2012
Egypt	1 December 2011
Libya	1 January 2012
Morocco	1 December 2011
Tunisia	1 December 2011

The annexes A to E below show a description of RCC products that will be delivered by the North African RCC network. (as mentioned above the co-lead institution may provide similar and/or more products as those that the leading institution should provide) and the planning for this implementation plan.

#### **4. Conclusion**

This implementation plan provides a basis for a RA I North African RCC approach in mutual collaboration. In order to achieve the goal of this implementation plan, there is a real need for support for meetings and also for some aspects of the infrastructures. Exchange of experience with other RCCs is also highly valuable.

## Annex A:

### The RA I Pilot North African RCC-Network on Long-range Forecasting

#### 1. Leading and co-leading institutions

Leading institution	Focal Point
Direction de la Météorologie Nationale (DMN) BP: 8106 CASA-OASIS CASABLANCA, MOROCCO	Rachid SEBBARI Chef du Centre des Applications Climatologiques Casablanca Email : <a href="mailto:sebbari@gmail.com">sebbari@gmail.com</a> Fax : 212 5 22 65 Tel : 212 6 61 41 85 04

Co-Leading institution	Focal Point
Egyptian Meteorological Authority (EMA) Koubry El-Quobba P.O. Box 11784 CAIRO, EGYPT	Dr. Ashraf Saber Zakey General Director of the scientific research department Egyptian Meteorological Authority (EMA) Koubry El-Quobba P.O. Box 11784 CAIRO Fax +202 26849857 Email <a href="mailto:azakey@gmail.com">azakey@gmail.com</a>

#### 2. Service provision overview

Mandatory activity	Related Product/Service offered	Producer	Areal coverage of product/service	Time/frequency of issuance of product/service	How to access product/service (e.g. URL)	Remarks (date of start if different from above)
<b>Interpretation and assessment of relevant GPC products, distribution of relevant information to RCC users, (Temperature and Precipitation)</b>	Graphs and maps of model performances	DMN	North Africa	Update when model is upgraded	Website	In accordance with requirements of GDPFS/SVS for LRF
	Analysis and interpretation of GPC products	DMN / EMA	North Africa	End of month	Website	Bulletins containing textual and graphical information
<b>Tailored products/probabilities</b>	Seasonal outlook	DMN	North Africa	End of month	Website	
	Valid graphs and maps of model outputs for Tmean and RR for next 4	DMN	RA I	End of month	Website /ftp	From January 2012

	months					
<b>Performing verification of RCC quantitative LRF products</b>	Verification datasets	DMN	North Africa	available	ftp	
<b>Provision of on-line access to RCC products/services to RCC users</b>	ftp/Website	DMN	RA I	available		Using login and password
<b>Information and guidance on methodologies and products</b>		DMN	RA I		Website	Files in PDF format

### 3. Product description

<b>Product/Service</b>	<b>Product description</b>
<b>Valid graphs and maps of model performances</b>	Evaluation of model performances following WMO SVS specifications and using a hindcast experience of at least 15 years
<b>Valid graphs and maps of model outputs for Tmean and RR for next 4 months</b>	Statistical processing of numerical outputs of the ARPEGE Climat model running at the DMN. These seasonal forecasts have monthly resolution;
<b>Monthly bulletins analysis and interpretation of GPC products</b>	Compilation and expertise of global dynamical forecasts on regional (Northern Africa) scale.
<b>Seasonal outlook</b>	Interpretation of seasonal forecasts (seasonal outlook) over Northern Africa,
<b>Verification datasets</b>	Verification datasets provided and updated.
<b>Monthly bulletins (Seasonal outlooks : include textual and graphical information)</b>	Compilation and expertise of global dynamical forecasts over Northern Africa - on the basis of global model output
<b>Forecast maps for probabilistic and deterministic seasonal forecasts of basic meteorological parameters</b>	Statistical interpretation of global dynamical seasonal forecasts over RA-I and Northern Africa

NB: Products will be mainly in French and/or English language.

## Annex B

### The RA I Pilot North African RCC-Network on Climate monitoring

#### 1. Leading and co-leading institutions

Leading institution	Focal Point
National Meteorological Office (ONM) BP 153 Dar El Beida ALGER ALGERIA	Mr Djamel BOUCHERF Ministry of Transports National Meteorological Office BP 153 Dar El Beida ALGER Tel. +213 21 50 89 57 Fax +213 21 50 89 57 Email d.boucherf@meteo.dz

Co-Leading institution	Focal Point
Institut national de la météorologie (INM) B.P.156 2035 Aéroport Tunis-Carthage, Tunisie Tél. 00 216 71 773 400 Fax. 00 216 71 772 609	Mr Yadh LABANE Institut National de la Météorologie B.P.156 2035 Aéroport Tunis-Carthage, Tunisie Email <a href="mailto:yadh.labbene@gmail.com">yadh.labbene@gmail.com</a>

#### 2. Service provision overview

Mandatory activity	Related Product/Service offered	Producer	Areal coverage of product /service	Time/frequency of issuance of product/s ervice	How to access product/service (e.g. URL)	Remarks (date of start if different from above)
<b>Climate diagnostic bulletin</b>	Annual Bulletin on the Climate in RA I North Africa	ONM	North Africa	End of March of next year	Print version, Website	
	Monthly Climate Diagnostics bulletin	ONM	North Africa	Middle of next month	Website	
	Monthly maps and anomalies of temperature, precipitation, pressure,	ONM	North Africa	Middle of next month	Website	Other parameters will be included in the future such as pressure, wind ...
	Seasonal maps of temperature, precipitation, pressure, (model based) and anomalies	ONM	North Africa	Middle of next month	Website	
	Extremes indices, (based on station data)	ONM	North Africa	Once per month	Website	Gridded data to be also used in the future

	Monthly maps of temperature, precipitation	ONM	North Africa	End of month for previous month	Website	
<b>Reference climatology</b>	Reference climatologies for temperature, precipitation,	ONM	North Africa	Available	Website (/ftp/on demand)	Other parameters will be included in the future such as pressure, wind ...
<b>Climate Watch</b>	Climate anomalies and extremes indices	ONM	North Africa	Once per month	Website	
<b>Information and guidance on methodologies and products</b>		ONM	North Africa			Files in PDF format

### 3. Product description

<b>Product/Service</b>	<b>Product description</b>
<b>Annual Bulletin on the Climate in RA I Northern Africa</b>	Compilation of climate status in RA I Northern Africa Countries at regional/national/local levels for the time periods of year, seasons and months including significant events at all time scales
<b>Monthly Climate Diagnostics Bulletin</b>	Assessment of the status of the RA I Northern Africa Countries incl. significant events at regional/national/local levels using quality-checked input information
<b>Monthly maps of temperature</b>	Methodology: to be defined, using of quality controlled CLIMATs, manual QC of maps
<b>Monthly maps of precipitation</b>	Methodology: to be defined,
<b>Monthly maps of pressure</b>	Methodology: to be defined,
<b>Reference climatology temperature</b>	Methodology: to be defined, using monthly data and the reference period: 1961-90 (use of quality controlled CLIMATs, manual QC of maps )
<b>Reference climatology precipitation</b>	Methodology: to be defined, using monthly data and the reference period: 1961-90 (use of quality controlled CLIMATs, manual QC of maps )
<b>Reference climatology pressure</b>	Methodology: to be defined, using monthly data and the reference period: 1961-90 (use of quality controlled CLIMATs, manual QC of maps )
<b>Seasonal maps of temperature, precipitation, pressure,</b>	Computation of 3-month means and anomalies,
<b>Climate Watch</b>	Preparation of supporting material, co-ordination and advice to the NMHSs for their issuing climate watches in accordance with the WMO Guidelines on Climate Watches Reference: Guidelines on Climate Watches, WMO/TD No. 1269, 2005, WMO



## Annex C

### The RA I Pilot North African RCC-Network on Data Services

#### 1. Leading and co-leading institutions

Leading institution	Focal Point
Libyan National Meteorological Centre (LNMC) P.O. Box 81734 TRIPOLI Libyan Arab Jamahiriya	Mr Khalid Ibrahim ELFADLI Director of Climate & Agrometeorology Department Libyan National Meteorological Centre P.O. Box 81734 TRIPOLI Tel. +218 21 5623075-76 Fax +218 21 5623074 Email <a href="mailto:k_elfadli_met@mail.ltnet.net">k_elfadli_met@mail.ltnet.net</a> <a href="mailto:kelfadhi@yahoo.com">kelfadhi@yahoo.com</a>

Co-Leading institution	Focal Point
Direction de la Météorologie Nationale (DMN) BP: 8106 CASA-OASIS CASABLANCA, MOROCCO	Rachid SEBBARI Chef du Centre des Applications Climatologiques Casablanca, Morocco Email : <a href="mailto:sebbari@gmail.com">sebbari@gmail.com</a> Fax : 212 5 22 65 Tel : 212 6 61 41 85 04

#### 2. Service provision overview

Mandatory activity	Related Product/Service offered	Producer	Areal coverage of product/service	Time/frequency of issuance of product/service	How to access product/service (e.g. URL)	Remarks (date of start if different from above)
<b>Regional datasets</b>	Dataset updates from GTS-SYNOP	LNMC	North Africa	monthly	Website	GTS-SYNOP daily quality controlled data of temperature, precipitation, pressure available for Northern Africa and all RA I (in the future).
	Standardized set of extremes indices series	LNMC	North Africa	monthly	Website	Indices following WMO-CCI/CLIVAR/JCOMM ETCCDI definitions.
	Dataset of station metadata	LNMC	North Africa		Website	Following WMO guidelines.
	Monthly dataset for temperature and precipitation	LNMC	North Africa		Website	Monthly aggregations of the temperature and precipitation

	Gridded Dataset	LNMC	North Africa	available	Website	Parameter
<b>Provision of database and archiving services</b>	Safe, recoverable storage of all RCC-related datasets : Upload and data management toolkit	LNMC	North Africa		Website /ftp	Service available for all partners. Data rescue support.
<b>Information and guidance on methodologies and products</b>		LNMC	North Africa			All RCC-services to be described by the related producer.

### 3. Product description

<b>Product/Service</b>	<b>Product description</b>
<b>Updates from GTS-SYNOP</b>	Daily data from GTS with Quality control (hourly in the future)
<b>Standardized set of extremes indices series</b>	The indices follow the definitions recommended by the CCI/CLIVAR/JCOMM Expert Team on Climate Change Detection and Indices (ETCCDI) at monthly, sub-annual and annual time scales
<b>Dataset of station meta data</b>	Identification of all North Africa stations metadata following WIS recommendations
<b>Gridded dataset</b>	Monthly from global production centres such as GPCC, CRU

## Annex D

### The RA I Pilot North African RCC-Network on Training in the use of operational RCC products and services

#### 1. Leading and co-leading institutions

Leading institution	Focal Point
Institut national de la météorologie (INM) B.P.156 2035 Aéroport Tunis-Carthage, Tunisie Tél. 00 216 71 773 400 Fax. 00 216 71 772 609	Mr Yadh LABANE Institut National de la Météorologie B.P.156 2035 Aéroport Tunis-Carthage, Tunisie Email <a href="mailto:yadh.labbene@gmail.com">yadh.labbene@gmail.com</a>
Egyptian Meteorological Authority (EMA) Koubry El-Quobba P.O. Box 11784 CAIRO, EGYPT	Dr. Ashraf Saber Zakey General Director of the scientific research department Egyptian Meteorological Authority (EMA) Koubry El-Quobba P.O. Box 11784 CAIRO Fax +202 26849857 Email <a href="mailto:azakey@gmail.com">azakey@gmail.com</a>

Co-Leading institution	Focal Point
National Meteorological Office (ONM) BP 153 Dar El Beida ALGER ALGERIA	Mr Djamel BOUCHERF Ministry of Transports National Meteorological Office BP 153 Dar El Beida ALGER Tel. +213 21 50 89 57 Fax +213 21 50 89 57 Email <a href="mailto:d.boucherf@meteo.dz">d.boucherf@meteo.dz</a>

#### 2. Service provision overview

Mandatory activity	Related Product/Service offered	Producer	Areal coverage of product/service	Time/frequency of issuance of product/service	How to access product/service (e.g. URL)	Remarks (date of start if different from above)
Co-ordination of training	Co-ordination of training for RCC users in interpretation and use of mandatory RCC products	ONM / EMA / INM	North Africa and beyond	One event per year	workshop	
	Training and capacity building	ONM / EMA / INM	North Africa and beyond	available	On request	Seminars, software, documentation

<b>Information and guidance on methodologies and products</b>	Provision of information on methodologies and product specifications for mandatory RCC products, and provision of guidance on their use	ONM / EMA / INM	North Africa and beyond	One event per year	(on request)	Seminars, software, documentation
	Guidance on homogenization	ONM / EMA / INM	North Africa and beyond	Available	workshop	Seminars, software, documentation
	QC-procedures	ONM / EMA / INM	North Africa and beyond	Available	workshop	Seminars, software, documentation

To support these training actions, an update and dissemination of available training relevant for LRF and other RCCs products will be issued and posted on the North African RCC web portal.

**Annex E:**

**The RA I Pilot North African RCC-Network implementation plan project timeline.**

