

# Digital Advisory Services for Agriculture: Perspectives from WMO



**WMO OMM**

World Meteorological Organization  
Organisation météorologique mondiale

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# **World Meteorological Organization**

- **United Nations agency for weather, climate, hydrology and water resources and related environmental issues.**
- **193 Members from National Meteorological and Hydrological Services (NMHS) – Newest Member Nauru (May 2019)**
- **10 major scientific & technical programmes (Secretariat)**
- **2 Technical Commissions advise & guide activities of programmes (Experts)**
- **6 Regional Associations involved in implementation**

# WMO Technical Areas

- **Aeronautical Meteorology**
- **Agricultural Meteorology**
- **Atmospheric Research**
- **Basic Systems / Infrastructure / Measurements**
- **Climatology**
- **Hydrology**
- **Oceanography and Marine Meteorology**
- **Energy and Health Applications**

# WMO Digital Advisory Services for Agriculture

## Draft Guiding principles

- **Secure data and information flow**
- **Leverage digital technological innovations**
- **Need bottom-up approach involving target communities**
- **Ensure equitable access to digital services for women and youth**
- **Build on WMO projects and activities (previous and current)**

# Draft Concept – Data and Information I

- Using the existing WMO World Weather Information Service (WWIS - <https://worldweather.wmo.int>) for basic weather and climate information. This can be used global and was tested (used) in FAO-WMO project in Senegal and Rwanda. The data in the WWIS server can be accessed globally.

The screenshot displays the WWIS website interface. At the top, the WMO logo and 'World Weather Information Service Official Forecasts' are visible. The page is set to English. A navigation bar includes links for Home, Personalize, What's New, Links, Severe Weather, Cloud Atlas, About, Apps, and Support. Below this, the breadcrumb trail reads 'Home > Africa > Rwanda'. A search bar prompts the user to 'Add Your Own City' or 'Please enter city / country / territory name'. The main content area is titled 'Rwanda' and features the Rwanda Meteorology Agency logo. The weather forecast is for Kigali (capital city) and covers the period from Friday, 19 Mar to Tuesday, 23 Mar. The forecast shows a mix of clouds and rain with temperatures ranging from 16°C to 26°C. A map of Rwanda is shown on the right, with a red dot indicating the location of Kigali. The page footer indicates the forecast was issued at 11:15 AM (Local Time) on 18 Mar 2021.

WORLD METEOROLOGICAL ORGANIZATION  
Weather - Climate - Water

World Weather Information Service  
Official Forecasts

English

Home | Personalize | What's New | Links | Severe Weather | Cloud Atlas | About | Apps | Support

Home > Africa > Rwanda

Add Your Own City + Please enter city / country / territory name

Rwanda Share

Rwanda Meteorology Agency

Weather forecast of Kigali (capital city)

FRI	SAT	SUN	MON	TUE
19 Mar	20 Mar	21 Mar	22 Mar	23 Mar
17°C   26°C	16°C   26°C	16°C   25°C	16°C   25°C	16°C   25°C

WMO disclaimer Powered by Esri

Click a city on the map to see forecast and/or climatological information.

Issued at 11:15 AM (Local Time) 18 Mar 2021

# Draft Concept – Data and Information II

- WMO has a network of Global and Regional Centers that provide seasonal forecasts (1 to 3 months)

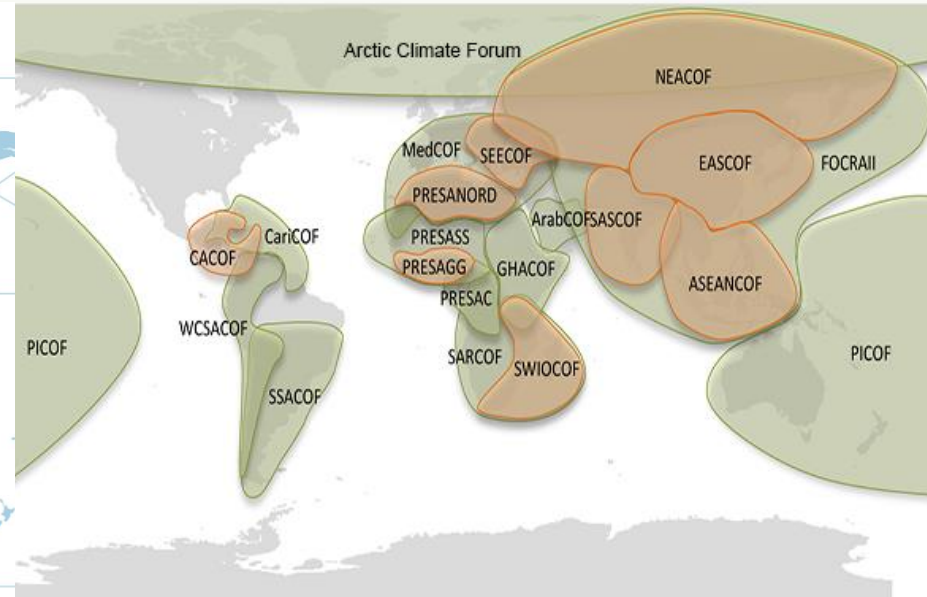
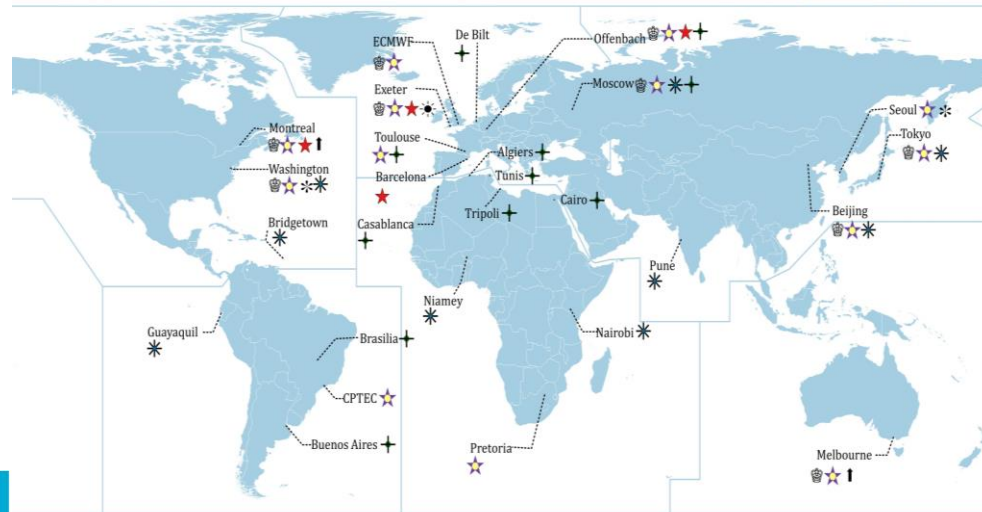
**These are Certified by WMO and are mostly National Weather Services. Examples products from these Centers are on the following slide.**

**WMO Certified Regional Climate Outlook Forums Provision of monthly and seasonal climate forecasts**

## WMO Designated Global Data-processing and Forecasting System Centres

- Long-range and Climate Forecasting (over 30 days)

Updated on 04 July 2019

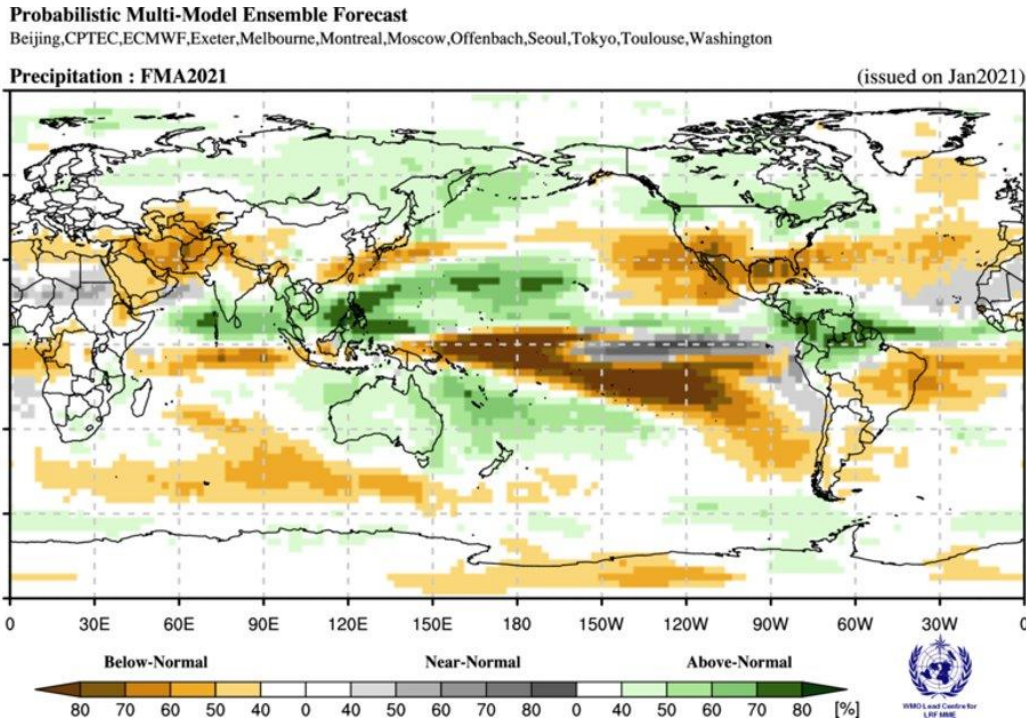




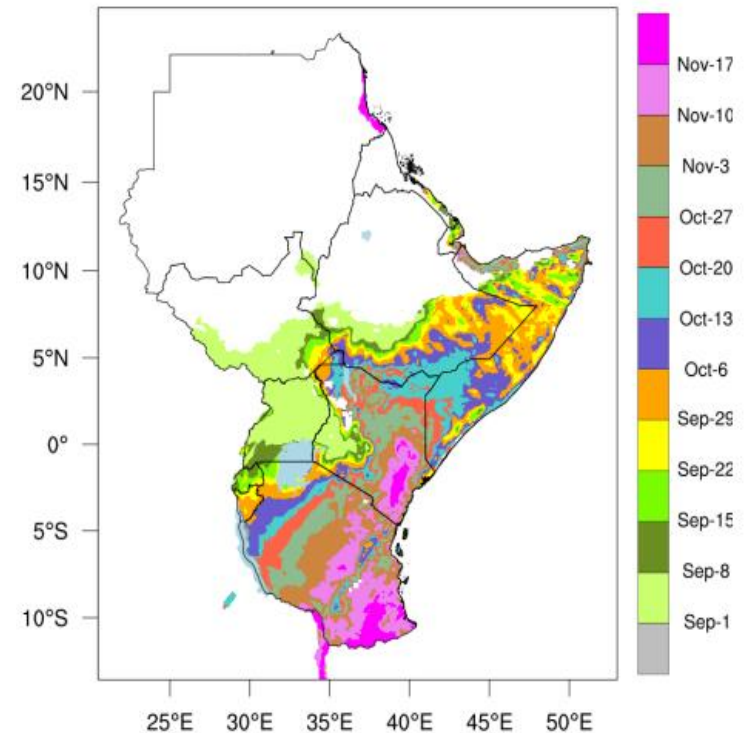
# Draft Concept – Data and Information II

- Examples of global and regional climate products

## Three month Seasonal Climate Forecasts for rainfall averaged across 12 WMO centers for Feb, Mar and Apr 2021



## Forecast Onset of Rainy Season (Oct 2019) based on sub-seasonal forecast information



# Draft Concept – Information Communciation Technologies

- Link data and forecast to mobile phones applications. Examples from WMO Lake Victoria and WMO-FAO projects.




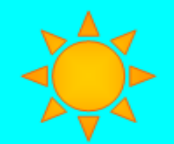
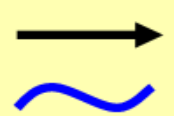

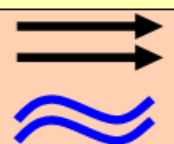
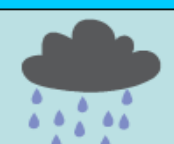


**WMO-World Bank  
Lake Victoria Project  
(Uganda)**

**KYENVU Kulabula  
Atusa Uganda Met Kalangala  
02:19 AM 17:02:12  
Ekisera: 6am – 6pm  
Okulabula: BEERA NGOMANYI  
Omuyaga: GW'AMAANYI ENNYO  
Embera y?obudde  
ENKUBA N'OKUBWATUKA  
KW'EGULU WANO  
N'AWALI  
Wokoma kulaba: WAKIGERO**

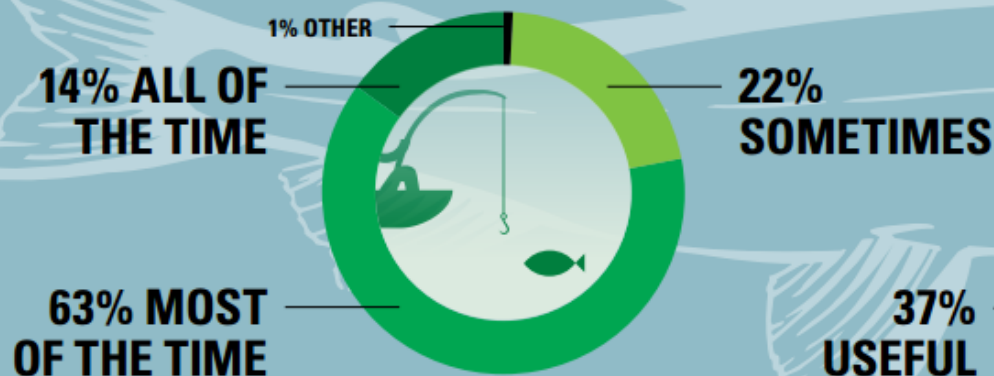
## Crop calendar – Dry beans in Rwanda (FAO)

Month	Sowing Period	Harvesting Period
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

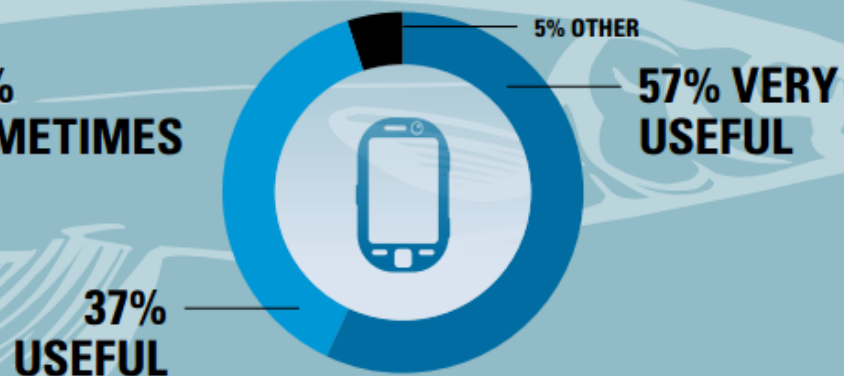


<b>Green alert</b>	<b>No alert:</b> No hazardous weather expected. Take normal precautions.		
<b>Yellow alert</b>	<b>Be aware:</b> There might be changes in the weather. Be watchful and look out for signs of storm such as clouds, wind gusts, higher waves.		
<b>Orange alert</b>	<b>Be prepared:</b> The weather is likely to change. Consider moving to safer areas and be prepared to take necessary actions.		
<b>Red alert</b>	<b>Take action:</b> The weather will change soon. Take the necessary actions to get to a safe area.		

## FISHERMEN TRUSTING WEATHER INFORMATION



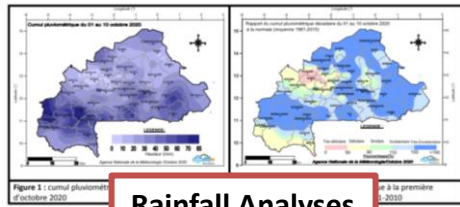
## USEFULNESS OF WEATHER FORECASTS



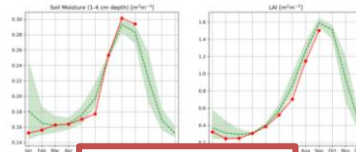
# Draft Concept – Information Communciation Technologies II

- Many WMO members have agrometeological bulletins. Proposal to make XML compatiabile content from existing products for use in mobile applications

## Products from Agromet Bulletins (PDF)



Rainfall Analyses



Soil Moisture

### SITUATION PASTORALE (suite)

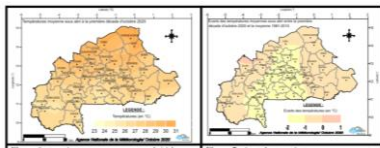
Tableau 1 - situation des foyers de suspicion de maladie

Communes	Maladies	Nbre de cas	Et-état de sus- pices	Nbre de trou- peaux	Nbre de porcs	Nbre de vaches priées
Birsaoua	Pasteu- rielles PG	2	432	85	02	11
Taharata- zine	Clavelles	1	92	93	0	11
Taharata- zine	Pasteu- rielles	1	94	0	0	83

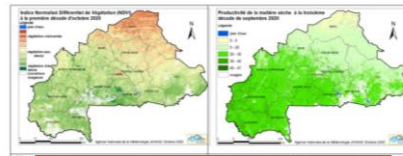
Pastoral / Livestock Status

Situation des culture  
s Situation phénologique Le mil est à dominance épisaison ( 27%) au plan national, Quant à la maturité, elle a atteint un taux de 9% et ce stade est observé dans les régions de Desso, Maradi, Tahoua, Tillabéri et Zinder. Le

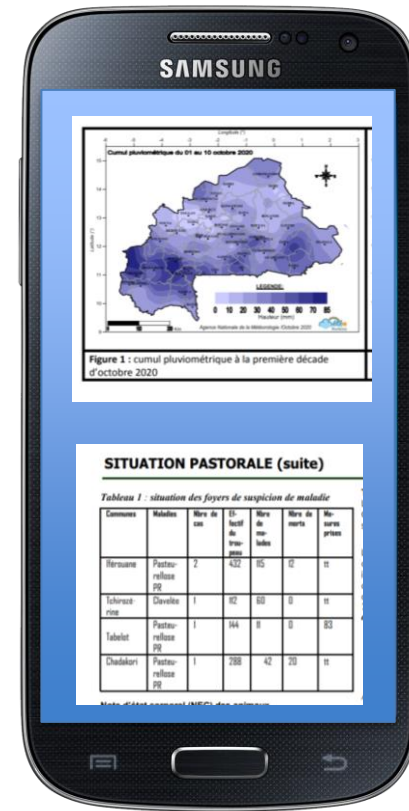
Crop Situation / Status / Stage



Temperature Analyses



Crop Status (Satellite)



Products can be grouped by region, country or products

# Thank you



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