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PRESS RELEASE

CLIMATE OUTLOOK FOR TANZANIA MARCH–MAY, 2016 RAINFALL SEASON (*MASIKA*)

A: Introduction

This statement gives a review of rainfall performance for October to December 2015 and outlook for March to May 2016 long rain season (Masika) in the country.

Highlights for March– May 2016

1. Outlook for March to May 2016 *Masika* rainfall season indicates that:

The Masika rains are expected to commence during the first to second week of March, 2016 over the Lake Victoria basin and spread to other bi-modal areas. The rains are expected to be normal to above normal over much of the bi-modal areas. However normal to below normal rains are likely over few areas. The ongoing seasonal rains in Uni-modal areas are also likely to be normal to below normal over most areas.

2. Expected Impacts

Pasture and water availability for livestock production is expected to be sufficient over regions around the Lake Victoria basin, north-eastern highlands, and extreme northern coast of the country.

Soil moisture is expected to be sufficient for crop production over most areas. However, above normal rainfall that is likely to occur could lead to excessive moisture resulting to water logging and destruction of crops.

The expected above normal rainfall are likely to trigger disease outbreak such as increase of malaria vectors immediately after the rain season.

Short periods of heavy rains could result into water accumulation and enhanced surface runoff thus elevating floods potential.

B: REVIEW OF RAINFALL PERFORMANCE

During the "Vuli" rainfall season of October to December 2015, most of the areas received normal to above normal rains except few areas of the northeastern highlands and the northern coast, mainly over Dar es Salaam, Pwani and Morogoro regions, which received below normal rains, and the rainfall distribution was not satisfactory over those areas during the period. However, due to the presence of El Niño the rainfall persisted over the bimodal areas during the months of January and February 2016 in some areas and elevated the rainfall amounts received.

The strong El Niño that evolved in 2015 and continued into 2016 has impacted temperatures during the October to December 2015 and the beginning of year 2016.Temperatures during that period reached up to 36 °C which was generally above monthly average by 1.7°C to 2.0 °C particularly in the coastal areas and Northern eastern highlands. This departure from average is the highest in the country historical records. According to World Meteorological Organization similar record of high temperatures has also been reported globally elsewhere.

Lake Victoria Basin: Mwanza, Geita, Mara regions received above normal rains over most areas while Kagera and Shinyanga regions received normal rains.

Northeastern highlands: Arusha and Manyara regions experienced mainly above normal rains, while over Kilimanjaro and southeastern part of Manyara regions received normal to below rains.

Northern coast together with Unguja and Pemba Isles: Above normal rains were received over Tanga, Handeni and Mlingano stations. Moreover areas of Pemba and Unguja received mainly normal rains while Morogoro, Pwani and Dar es Salaam regions experienced below normal rains.

Southwestern highlands: Normal to above normal rains were observed over Sumbawanga, Iringa, Njombe regions and southern parts of Mbeya region. Few areas received below normal rains.

Western areas: Normal with pockets of above normal rains were experienced over Kigoma, Katavi and Tabora regions.

Southern coast: Mtwara and Lindi regions recorded mainly below normal rains.

Central areas: Singida and Dodoma regions received normal to above normal rains while pockets of below normal rains were recorded over Hombolo.

Southern region: Normal rains with pockets of above normal rains were recorded at Songea station.

C: CLIMATE SYSTEMS OUTLOOK

Warming has continued to dominate over the Indian, South East Atlantic and Central Equatorial Pacific Oceans during the month of February 2016. The Central equatorial Pacific is likely to remain warm indicating persistence of moderate to weak El Niño condition during much of the MAM 2016 rain Season. The western Indian Ocean is expected to remain generally warm while the eastern Indian Ocean is likely to be much warmer during the season. Southeast Atlantic Ocean (Angola coast) is expected to continue to be warm mainly during the month of March, becoming cool in April and May 2016. The cooling over Angola Coast is likely to enhance westerly wind flow from Congo Basin across the country to the Indian Ocean. This configuration suggests enhanced moisture influx from Congo Basin while weakening easterlies from Indian Ocean.

Persistent warming across the South-western Indian Ocean basin during the month of March 2016 is likely to trigger some occurrence of tropical cyclones, thus influencing the *Masika* 2016 rain season.

D: SEASONAL RAINFALL OUTLOOK:

Based on current and expected climate systems described above, the March to May, 2016 rainfall season is likely to be as follows:

(i) ***Long Rainfall Season (Masika) over bimodal areas***

The March to May, 2016 long rainfall season (*Masika*) is more significant for the bimodal areas which includes areas of North-eastern highlands (Kilimanjaro, Arusha and Manyara regions), Northern coast areas (Dar es Salaam, Tanga, and Coast regions, Isles of Unguja and Pemba and northern Morogoro areas), Lake Victoria Basin (Kagera, Mara, Mwanza, Geita, Simiyu and Shinyanga regions) and Northern Kigoma. The rains are expected to be normal to above normal over most parts while few areas especially the southern parts of those regions are expected to feature normal to below normal rains. The detailed forecast of the long rain season (*Masika*) is expected to be as follows:

Lake Victoria Basin: (Kagera, Mara, Mwanza, Geita, Simiyu and Shinyanga regions):

The rains are expected to commence in the first week of March over Kagera and Mara regions and gradually spread to other regions of Geita, Mwanza, Shinyanga and Simiyu during the second week of March, 2016. The rains are expected to be normal to above normal over Kagera, Mwanza, Mara and northern parts of Geita and Simiyu regions while Northern Kigoma, Southern Geita, Shinyanga and southern Simiyu regions are expected to feature normal to below normal rains.

Northern coast areas and the hinterlands: (Dar es Salaam, Tanga, and Pwani regions, Isles of Unguja and Pemba and northern Morogoro areas):

Rains are expected to commence in the second to third week of March, 2016. The rains are expected to be normal to above normal over northern and eastern Tanga region; and Unguja and Pemba isles whereas over south-western Tanga, Dar-es-Salaam, Pwani and Morogoro regions the rains are expected to be normal to below normal.

North-eastern highlands: (Kilimanjaro, Arusha and Manyara regions):
Rains are expected to commence in the second to third week of March, 2016 and are expected to be normal to above normal over most parts of Arusha and Kilimanjaro regions as well as the north-eastern Manyara. Meanwhile, the extreme southern parts of Arusha and most parts of Manyara region is expected to feature normal to below normal rains.

(ii) **Seasonal Rainfall (November to April) over Unimodal areas**
Seasonal rains are more significant for unimodal areas (Western, Central, South-western highlands, southern region and southern coast). Rainfall over these areas began in November, 2015 and expected to end in April, 2016. During March to May, 2016 the seasonal rains over these areas are expected to be normal to below normal.

Western areas: (Tabora, Rukwa, Katavi and Kigoma regions):
During the remaining period of the season, the rains are expected to be normal to below normal over most areas. Rains are expected to cease during the fourth week of April 2016.

Central (Singida and Dodoma regions):
During the remaining period of the season, the rains are expected to be normal to below normal over most areas. The rains are expected to cease during the first week of April, 2016.

Southwestern highlands: (Mbeya, Songwe, Iringa, and Njombe regions and southern Morogoro areas):
During the remaining period of the season, the rains are expected to be normal to below normal. The rains are expected to cease during the third week of April over Mbeya and Njombe regions where as over Iringa region the rains are expected to cease during the first week of May, 2016.

Southern region and Southern Coast: (Ruvuma, Mtwara and Lindi regions):
The ongoing rains are expected to be normal to below normal for the remaining period over these regions. The rains are expected to cease during the second week of April 2016.

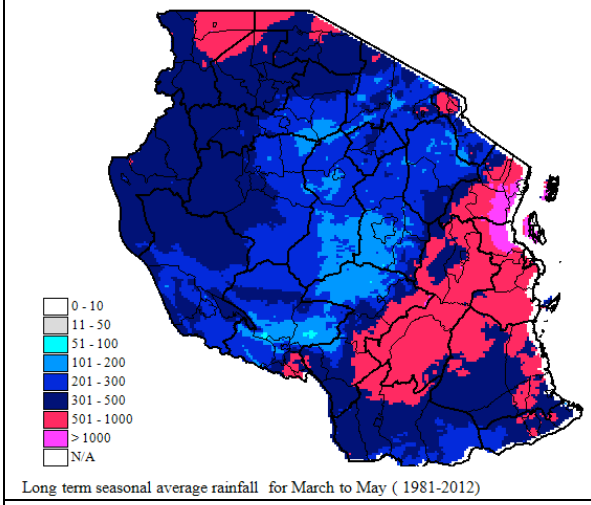

Figure 1a: Climatological long term average rainfall for March to May

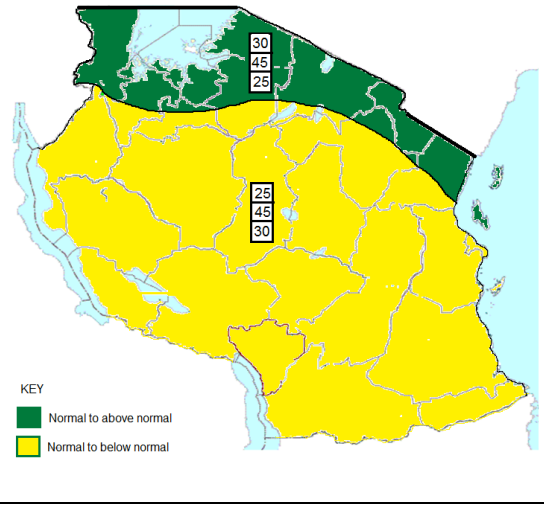

Figure 1b: Outlook for the March to May (*Masika*), 2016 rainfall season

It should be noted that although events of heavy and short duration rainfall are likely to be more frequent in areas with above normal rains they are also common even in areas of normal and below normal rainfall conditions.

E: LIKELY IMPACTS AND ADVISORY

The Masika rainfall season 2016 is expected to be normal to above normal rainfall over the Lake Victoria basin, north-eastern highlands and extreme northern coast. The south-western highlands, western parts, central, southern areas to northern–coast rainfall are expected to feature normal to below normal conditions. The associated impacts on social-economic sectors and their respective advisories as prepared by TMA in collaboration with stakeholders are highlighted as follows:

Agriculture and food Security:

Soil moisture is expected to be sufficient for crop production over most areas. However, above normal rainfall that is likely to occur could lead to excessive moisture resulting to water logging and destruction of crops. Farmers are advised to continue with normal agricultural farming practices to maximise food production by planting high yielding crops and varieties, increasing acreages of food crop production, planting of plantation crops as well as growing agro-forestry trees. However, in areas where below normal rainfall is expected inadequate soil moisture may occur leading to crop failure particularly during long dry spells. Therefore soil and water conservation technology and post-harvest management of harvested produce are highly encouraged. Famers are highly encouraged to seek and follow the advice from agricultural extension officers in carrying out their Activities.

Pasture and Water for Livestock and wildlife

Pasture and water availability for livestock production will be sufficient over regions around the

Lake Victoria, north-eastern highlands, and extreme northern coast of the country where rainfall is expected to be normal to above normal. However, in below normal rainfall areas shortage of pasture and water for livestock may result to low livestock and fish productivity. Livestock keepers and fisher folks should follow the advice from extension officers and adhere to all weather forecast updates.

Natural Resources and Tourism
In areas where above normal rains are expected, the natural resource management and tourism authorities are encouraged to secure various infrastructure within the Forest and Game Reserves, National Parks and Game controlled areas. The Authorities are encouraged to undertake afforestation programmes within private and public forest reserves because trees survival rate is expected to be high. Moreover, in the Northeastern highlands, and Lake Victoria Basin small-scale miners are encouraged to take all precautions while carrying their operations in order to avoid accidents that may be caused by flooding of mining pits.

Energy and water
In areas where normal to below normal rains are expected water harvesting and storage practices are highly recommended. For hydroelectric power generation, other alternative sources of electric power should be secured for sustainable energy provision.

Local Authorities
Anticipation of short periods of heavy rains and water accumulation due to surface runoff and floods that may be associated with the forecasted *Masika* rains may cause destruction of infrastructures, loss of lives and property. Responsible Authorities are advised to open up drainage systems in urban areas to lessen the impacts of Floods. Local Government Authorities (LGAs) urged to undertake life support infrastructure assessment, prepositioning for relief assistance near areas that are likely to be affected by the expected impacts.

Health sector
The expected above normal rainfall are likely to trigger diseases outbreaks such as malaria vectors usually increases immediately after rain season. Therefore, the responsible authorities concerned with public health and individuals are advised to take appropriate health measures needed to minimize the expected negative impacts on health.

Disaster Management
Disaster management authorities and other stakeholders are advised to take necessary measures such as good practice of environmental conservations and ensure preparedness, response, and mitigation plan to reduce any negative impacts that may result from the expected above and below normal rainfall in the country.

Media
In order to overcome junk information from rumors mongers and unverified information sources the media is advised to obtain, make regular follow-ups and disseminate weather and climate information and warning including the updates as provided by the Tanzania Meteorological

Agency. Moreover, the media is encouraged to seek and obtain inputs from relevant sectors when preparing and relaying cross cutting issues on Weather and Climate to the Public. The media is also encouraged to prepare programs to educate the public on subjects relevant to the anticipated impacts during and after the rain season.

Tanzania Meteorological Agency advises all users of weather information including farmers, livestock keepers, wildlife conservation authorities, hydrological and health sectors to continue making follow-up in case of any update. Furthermore, to make use of advice provided by the TMA and experts from their relevant sectors.

NB: The current status of seasonal forecasting allows for prediction of spatial and temporal averages and may not fully account for all physical and dynamical factors that influence short term climate variability. Users of this outlook are, therefore urged to make good use of daily, ten day and monthly updates issued by the Tanzania Meteorological Agency.

Tanzania Meteorological Agency will continue to monitor developments of the weather systems and issue updates.

Signed by :

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DIRECTOR GENERAL