Early Warning Bulletin

July 4, 2024

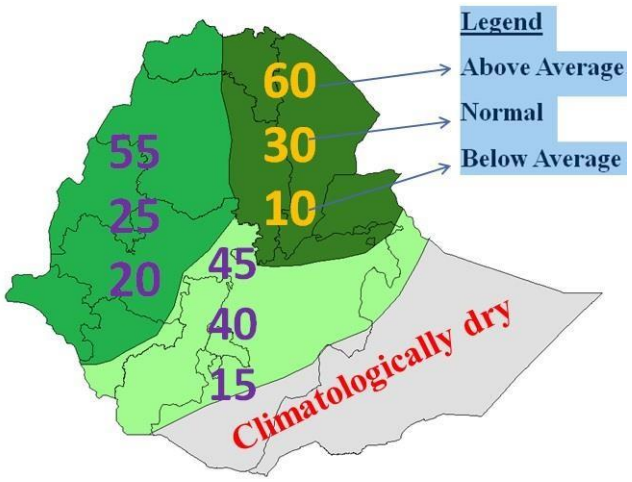
Early Warning Information and Operation Coordination Center, EDRMC www.edrmc.gov.et

CLIMTE OUTLOOK FOR *KIREMT*, 2024

Based on the global, Regional and local preseason indicators, as well as, their dynamical/statistical predictions, the following conclusions can be drawn for the *Kiremt* climate outlook 2024.

- Most of the recent and prognostic products depicts that the occurrence of Neutral to LA NINA episodes in the coming *Kiremt* 2024 and IOD tends to be positive phase.
- The seasonal rainfall onset will be early over Southwest portions and normal over much of the JJAS *(Kiremt*) rainfall benefiting areas.
- Occasional heavy rains will occur during July and August may cause of flood across flood prone areas including cities and landslide over isolated places.
- Early onset across south western portion of the country.
- Late cessation from western, central, eastern and north eastern portions of the country.
- Above normal rainfall is expected over Central and South Tigray, Afar, East Amhara northern Somali and eastern portions of the country.
- Moreover, western Tigray, west Amhara, Benishagul Gumuz, west Oromia, Gambella and South West Ethiopia Regions will dominantly receive above normal rainfall and they will get above normal rainfall over few portions.
- Additionally, Central and South-western portions of the country will dominantly receive normal to above normal rainfall.
- The expected LA NINA and positive IOD will benefit the south and southeastern portions of the country. They will get rainfall in the coming August and September months.

Rainfall Probabilistic forecast for Kiremt 2024



Source: EMI

1. Weather Outlook and Possible Impact for the Coming first and second dekade of July, 2024 Forecast.

Under normal circumstance, the first ten days of July is the time when rain-producing meteorological events affect all areas of the country that benefit from Kiremt rainfall. In related with this, thunderstorms and heavy amounts of rain will be observed over western, southwestern, central and northwestern parts of the country. In the next ten days, rain-producing meteorological aspects will intensify further over areas of the country that benefit from Kiremt rains.

Thus, statistical forecasts advocate that there will be heavy rainfall of more than 30 mm in 24 hours over areas of the southwest, west, northwest, north, central and northeastern areas of the country .Additionally eastern parts of the country will get light to medium amount of rainfall.

In general, in the next ten days, from Oromia Region (Buno Dele, Ilubabor, Jimma, East and West Wolga, Horo Guduru, Kelem Wolga, North Shewa (Salale), West, Southwest and East Shewa zones), Addis Ababa, from Amhara Region, (North, Central, South and West Gondar, East and West Gojjam, Wahgmra, Awi, North and South Wollo, North Shewa, Oromo Special Zone), from Tigray Region (West, Northwest, Central, East and Southeast zones), from Afar Region Kalbeti, Fenti, Aussie zones), from Benishangul-Gumuz Region Mekeke, Pawe, Assosa, Kamashi Zones and Mao Como Special woreda), from Central Ethiopia Region (Gurage, East Gurage, Hadiya, Halaba, Kembata, Silte, Yem Zones,Tembaro, Kebena and Mareko Special woreda, from Southwest Ethiopia Region (Dauro, Kefa, Sheka, Konta zones), from South Ethiopia region (Gofa, Gamo, Wolaita, Gedeo, Basketo, Amaro zones) and Sidama Region zones there will be moderate to heavy amounts of rain. In addition, based on the weather features that intensify day by day, from Oromia region East and West Hararge, Arsi and West Arsi, Bale and East Bale, Guji and West Guji zones, Harar and Dire Dawa, Nuwre, Agnewak, Mazhang and Itang Special zone of Gambella Region, from Somali Region City, Fafan, Jerar, Erer, Nogob, Liben and Dawa zones; Gabi and Hari zones of the Afar region, Konso, Ari, Derashe, Burreji and South Omo zones of the Southern Ethiopia Region, Bench Sheko and West Omo zones of the Southwest Ethiopia Region will get light to moderate amounts of rain .

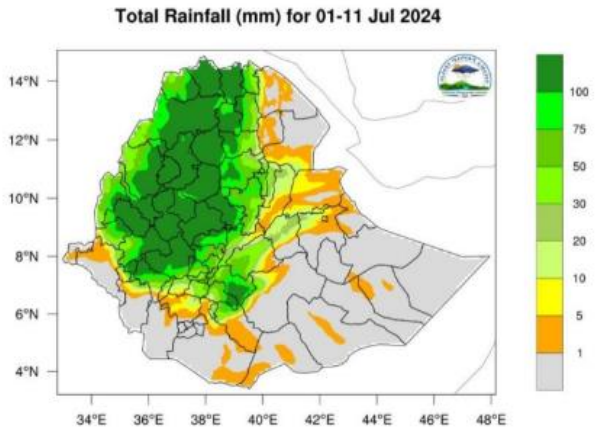


Fig1. Rainfall amount in mm. during July 1-10, 2024

Source, EMI

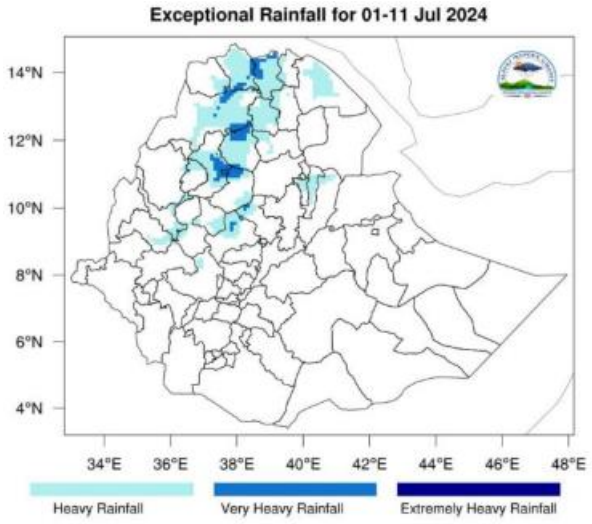


Fig2. Exceptional rainfall for 1_11 July, 2024

Source, EMI

In the second ten days of July rain bearing meteorological aspects will strengthen and there will be intensified rainfall in amount and distribution over Kiremt rain benefiting areas. Thus, in the southwest, west, northwest central parts of the country there will have strong and Widespread cloud accumulation. In related to this, there will be light to heavy amounts of rain that will cover many areas that are a beneficiaries of the Kiremt rainfall.

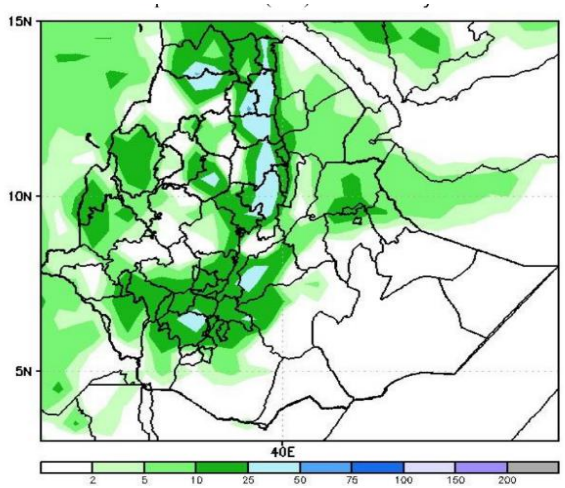


Fig 3. Rainfall amount in mm. during July 11-20, 2024, Source, EMI

2. Areas needing attention based on the above seasonal and dekedal weather forecast given by EMI.

The anticipated light to heavy amount of rainfall during the two dekades of July 2024 over most parts of Meher crop growing areas particularly western half of the country will favor seasonal agricultural activities. Besides the expected light to moderate amount of rainfall over the most parts of Ethiopia will contribute for early sown long cycle crop water requirement and land preparation for other crop sowing when the wet condition fulfill the requirement situation. Furthermore the expected wet situation favor the normal growth and development of perennial crops and the availability of pasture and water need of the country as well as late sowing Belg crops. Farmers in particular should be aware of this and take advantage of this beneficial circumstance as soon as possible. Cultivated land for the Meher season may be impacted by the anticipated sporadic occurrence of heavy fall over Kiremt rain benefits areas, particularly in the southwest, west, northwest, north, central, and northeast. Therefore the concerned personnel should take appropriate measure like maintenance of flood water protection, terracing techniques ahead of time in order to minimize the effect of the flood water. However, as noted in the first and second dekade forecasts above, the situation of light rainfall will help with the need for water for perennial crops, the availability of water and pasture for animals, and the reduction of high temperatures, especially over the lowlands of Kiremt rain, which will benefit the aforementioned parts of the country.

Consequently, in order to optimize the water potential for places, the concerned people should take the necessary steps ahead of time to take advantage of the anticipated rainfall through the use of various rainwater harvesting techniques.Areas which have high probability to receive heavy amount of rainfall might cause water born human diseases like AWD outbreak after flood occurrence due to much amount of rainfall. As a result to minimize the adverse impact of this situation, the concerned personnel should create awareness for community to avoid improper use of contaminated water for drinking and to improve poor sanitation experience.

3. Crop and livestock condition based on the weekly Regional Situation update report

3.1 Crop condition

Sidama Region: For 2016 *Belg season* production, 68,229 hectares of land are planned to be cultivated with various crops (64,197 hectares of maize, 89 hectares of sorghum, 3,865 hectares of haricot bean solo, 16,123 hectares of haricot bean intercropping, and 78 hectares of ground nut) were planned in the region. As a result, 67,390 hectares (98.77%) have been sown with various crops. Growing crops are found at the mid-development and flowering stages in most areas of the region. According to the regional Agricultural Bureau report, sufficient inputs have been supplied and used to cultivate the above-mentioned area including, 65,639 quintals of NPS, 39,501 quintals of UREA, and 36,341 quintals of improved seed. In this agricultural operation, 207,834 male and 20,894 female farmers have participated

Southwest Ethiopia People's Region: According to a regional report, for the 2016 *Belg season* production, 350,404.5 hectares of land were planned for cultivation. As a result, 348,422 were plowed and 329,120.875 hectares (93.93%) have been sown with various crops. Regarding input utilization, 62,439.5 quintals of NPS, 26,706.375 quintals of UREA, and 12,461 quintals of improved seed were supplied and used to cultivate the above-mentioned areas in the region.

SNNPR: In 2016/17 *Meher season* production, 660,529 hectares were planned to be cultivated with various crops. As a result, 73,653 hectares of land have been plowed and 245 hectares were sown in the region.

Central Ethiopia: For 2016 Belg season and Bega irrigation production 269,049.6 ha and 86,121.8 ha of land were planned in 7 zones and 3 special woredas respectively. As a result, 302,467.85 (112.42%) hectares and 83,542.63 (97%) hectares have been covered with various crops in Belg and Bega irrigation production schemes respectively.

Table 1: 2016 *Belg season* and *Bega irrigation* crop production performance by zone in Central Ethiopia region.

Zone/ S/woreda	Planned Area in hectares			Sown Area in hectares			% of sown area from the plan
	Belg season	Bega Irrigation	Total	Belg season	Bega Irrigation	Total	
Kembata	29,583.40	0	29,583.4	29,583.4	0	29,583.40	100
Halaba	39,316.00	260	39,576	35,428.25		35,428.25	89.52
Hadiya	51,956.00	34,694.2	86,650.2	52,854.	33,950	86,804.00	100.18
Silte	50,663.20	12,656	63,319.2	58,675	13188	71,863	113.49
Gurage	39,069	27,304.0	66,373	53,355	25,743	79,098	119.17
East Gurage	26,876.50	1,722.00	28,598.5	45,289.8	990.2	46,280.00	161.82
Yemi s/woreda	5,339.00	1,769.00	7,108	5,383	1,792.43	7,175.43	100.95
Tembaro s/woreda	4,416.50	4,655.60	9,072.1	931.4	5,014.00	5,945.40	65.53
Kebena s/woreda	9,060.00	2,953.00	12,013	10,037	2,821	12,858	107.03
Mareko s/woreda	12,770.00	108	12,878	11,460	44	11,504	89.33
Total	269,049.60	86121.8	355,171.40	302,997	83542.6	386,539	108.83

Oromia Region: In 2016 *Belg season production*, 1,482,931 hectares of land have been planned in the region. As a result, 1,482,931 hectares were plowed and 1,509.060 (102 %) hectares were sown with various crops, and growing crops are found at the mid-development to harvesting stages in Bale, Arsi, E/Hararghe, W/Hararghe, Borena, E/Borena, S/W/Shewa, Ilubabor, and Guji zones. In addition, for the 2016/17 *Meher season*, 10,558,093 hectares of land have been planned to be cultivated with various crops in the region. As a result, 7,855,751 hectares of land were plowed, and 3,187,153 (30.19%) hectares have been sown in different areas of the region.

Amhara Region: For 2016/17 *Meher season* production, 5,116,068 hectares were planned to be cultivated with various crops. As a result, 3,455,579 (67.54%) hectares were plowed, and 623,016 (12.18%) hectares have been sown in the region. Regarding Belg season production, 229,526 hectares of land were planned for cultivation in Belg-benefiting areas of the region. As a result, 232,238 (101.2%) hectares were plowed, and 227,686 (99.2%) hectares have been sown in the region. According to the regional report, only 19% of crops grown in Belg season are harvested and the rest are found from the first to last development stages. On the other hand, Meher season production status is found at land preparation, sowing, and germination stages.

Benishangul Gumz Region: According to the regional report, for the 2016/17 *Meher season* production field cleaning, land preparation, input distribution, and planting of long-cycle crops are being conducted and continued in the region.

Harari Region: The regional crop production report states that in the Erer, Sofi, and Dire Teyara woredas of the region, 95.52% of the planned areas for *Meher season* production were covered with groundnut, maize, and sorghum crops. In terms of input accessibility and utilization, most parts of the region have reported shortages of fertilizer and improved seed.

Table 2: 2016 Meher *season* crop production performance by woreda in Harari region.

Woreda	*Meher season* crop production performance by woreda			
	Planned area in hectare	Plowed area in hectare	Sown area in hectare	% of sown area from the plan
Erer	6,285	5,970	5,970	94.99
Sofi	3,279	3,115	3,115	95.00
Dire Teyara	3,420	3,317	3,317	96.99
Total	12,984	12,402	12,402	95.52

Dire Dawa city administration: According to the report sent from the city administration, out of the planned 15,375 hectares for Meher season production, 70 to 75 % have been sown and found in the germination stage but fertilizer and improved seed shortage was reported from the city administration.

Somali Region: According to the regional early warning report Belg season growing crops like maize and sorghum are found from germination to flowering stages.

Tigray Region: In 2016 *Belg season* production, 10,861 hectares were sown with various crops in five woredas of the Southern and Southeastern zones of the region. Growing crops are found at grain filling and harvesting stages. However, the rainfall interruption that has occurred in these areas has imposed a negative impact on crop stands and expected yield. In addition, for *Belg season* production, 1.3 million hectares were planned to be cultivated with various crops. As a result, 389,483 hectares were plowed, and 54,232 (13.92%) hectares have been sown from the tilled area in 22 woredas of the region. Regarding input supply and utilization, 896,650 quintals of NPS and Urea fertilizer have been planned, and 720,519 quintals or above 80 % were supplied and distributed to different woredas of the region. However, from the planned 150,000 quintals of improved seed, only 27,000 quintals (18%) have been supplied and distributed to the farmers. Therefore, if the required input has not been supplied at the right time there should be a significant yield reduction in the coming *Meher* season.

3.2 Migratory pest condition

Sidama Region: A *Fall Armyworm pest* has occurred on 3,589 hectares of maize fields in 14 woredas of the region. Control measures have been undertaken on 2,649 hectares with the traditional method and on 770 hectares by chemical spray.

South Ethiopia: *Fall Armyworm pest* has occurred on 1416 hectares of crop fields in 81 kebeles of Selamago, Bena Tsemay, Dasenech, and Hamer woredas of the South Omo zone. Control measures were taken on 76 hectares with chemical spray and 1330 hectares with a traditional method. Additionally, pests like *Grasshoppers, Aphids, Stalk borers, and African Ballworms* have occurred, and control measures are being undertaken with traditional and chemical methods in different areas of the region.

Oromia Region: In West Hararge Zone, 9 woredas growing crops are affected by moisture stress and insect pest damage, and also *worm pests* have been observed on growing crops in Chiro and Gubi woredas. In addition, *Armyworm pests* have occurred on 6,100 hectares. In the West Guji zone of Melka Sodo woreda, 12 kebeles due to *Rust disease* 1862 hectares of crop fields have started wilting.

Central Ethiopia Region: *Regular Armyworm pests* have occurred on 24.5 hectares and 2,084 hectares of crop fields in Yem and Silta zones respectively. Control measures were taken on 1,161.8 hectares by chemical spray and on 415 hectares with a traditional method. Additionally, *cutworms* have occurred on 2,484 hectares, and 2,104 hectares were controlled by chemical spray. Also, the *stalk borer* has been infested 2,191.5 hectares, and control measure was taken on 2,056.5 hectares by chemical spray and 160 hectares with a traditional method. In addition, in Tembaro special woreda 8 kebeles *Fall Armyworm* occurred on 219.75 hectares of maize fields and 794 hectares of haircoat bean and taro crops are affected by moisture stress. On the other hand, Rust *and Late blight disease* occurrences have been reported from the Eastern Gurage zone.

SWEPR: In Kefa zone *unidentified pests* have occurred on 3982 hectares of crop fields, and control measure was taken on 2815 hectares with traditional and 1166.5 hectares by chemical spray. In addition, in the Dawro zone, 374 hectares of crop fields were affected by insect pests and control operations are being conducted.

Tigray Region: According to the regional report, *sorghum beetle* has occurred in a wide area of central Adiyabo woreda of the Northwest zone.

Somali Region: According to the regional report, the onion crop that was grown along the Shebelle River has been severely affected and damaged by fungus disease infestation.

Dire Dawa: According to the city administration *Shoot fly* has been occurring on growing crops found at the seedling stage.

4. Livestock Condition

4.1 Livestock Pasture and Drinking Water Condition

There was no shortage of pasture and water in Sidama, South Ethiopia, South West Ethiopia, Oromia, Benishangul Gumuz, Somali and Dire Dawa. On the other hand, Central Ethiopia, Amhara and Harari regions reported various levels of shortages of water and pasture. Throughout the past two weeks, inadequacy of pasture was reported in Tembaro special woreda and farmers were using crop residues to cope with the problem. Similarly, in eight kebeles of the same woreda, there was no rain causing scarcity of water for livestock. Harari regional report indicates that infrequent shortages of both water and pasture have been observed. In Amhara region, Waghimra, North Wollo, North

Gondar and Central Gondar zones have experienced pasture and water problems for over two months. The problem has even extended to more zones including South Wollo, Awi and South Gondar zones during the last two weeks (Table 3).

Table 3: The list of zones and woredas reporting pasture and water shortage in Amahara region during the second half of June 2024.

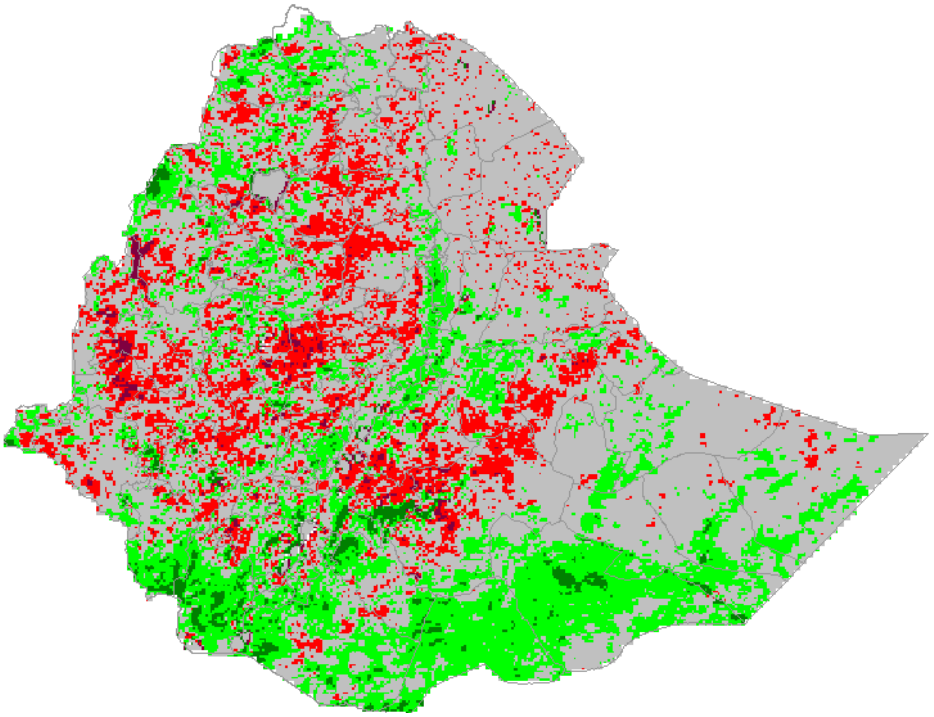
Zone	Woreda
South Wollo	Borena, Mekdela, Wogdi, Delanta, Kelela and Kutaber
North Wollo	Lasta, Angot, Gazo, Gidan, Dawunt and Bugina
Central Gondar	Kinfaz and East Belesa
South Gondar	Tach Gaynt, Lay Gaynt, Ebinat, Sede Muja and Meketewa
North Gondar	All woredas
Waghimra	Sahila, Ziquala, Segen Zuria and Abergele
Awi	Ayehu and Zigem

4.2 Livestock Disease Outbreak

Except the occasional occurrences, there was no livestock disease outbreak in Sidama, South-West Ethiopia, Amhara, Benishangul Gumuz, Harari and Gambella regions. However, some disease outbreaks were reported in South Ethiopia, Oromia and Somali regions. In Kolme woreda of Konso zone, 6 people were sick due to eating beef from Anthrax affected cattle. This is an indicative that awareness creation is highly required to the public on zoonotic diseases including *Anthrax*. In Somali region, though there was no critical livestock disease outbreak, unusual abortions were reported in goats and camels in Ferfer, Gode and Elele woredas of Shebelle zone. In West Guji zone of Oromia region (Gelana and Bule Hora woredas), higher incidences of diseases *Anthrax*, CBPP, *Blackleg*, CCPP, *Trypanosomiasis*, *Pasteurellosis* and *Mastitis* have been reported. The cumulative disease occurrence and associated death in Gelana and Bule Hora woredas since September 2023 is presented below (Table 4).

Table 4: The summary of the disease burden in Gelana and Bule Hora woredas in Oromia region since September 2023.

Zone	Woreda	Disease occurred	Species of livestock	No diseased	No died
West Guji	Gelana	*Anthrax*, CBPP, *Balckleg*	Cattle	20,500	15
	Bule Hora	*Trypanosomiasis*	Cattle	11,359	13
	Bule Hora	CBPP	Cattle	8,944	44
	Bule Hora	*Blackleg*	Cattle	6,495	44
	Bule Hora	*Pasteurellosis*	Cattle	5,933	28
	Bule Hora	*Mastitis*	Cattle	12,875	



Vegetaio Greenness (NDVI) in fraction for the third dekade of June, 2024[Comared to Normal], Processed by LEAp (Version 3.1.1)

As can be seen from NDVI picture (21-30 June, 2024 METEOSAT) below normal Vegetation Greenness (small to large decrement) was observed most parts of Central, Western and Northern and some of Eastern parts ,in scatter places of Northeastern parts of the country. On the other hand, above normal Vegetation Greenness(small to large increment) was observed most parts Southern and Southeastern as well as partiallyin Eastern and Central parts and sparse increment also observed over Northwestern, Western, and Northern parts of the country. The remaining Northeastern, Eastern ,Southeastern andNorthern parts and some parts of the Southern, Western and Central, pocket places of Southwestern parts of the country experienced normal vegetation greenness as compared to that of the long term average of vegetation greenness.