Early Warning Bulletin

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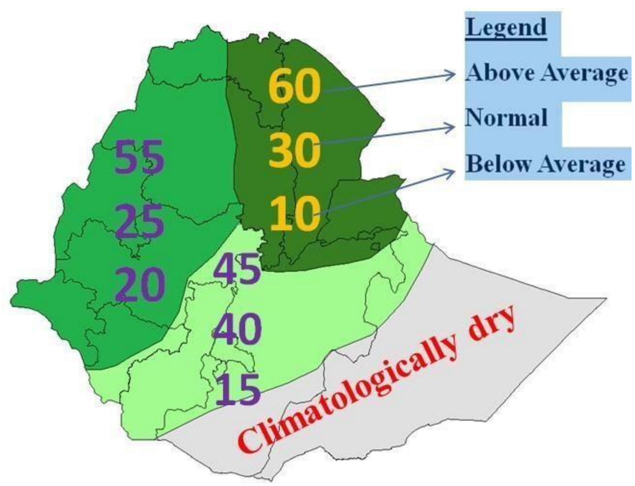
CLIMTE OUTLOOK FOR *KIREMT,* 2024

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 southwestern portion of the country.
- Late cessation from western, central, eastern and northeastern 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, Benishangul Gumuz, west Oromia, Gambella and Southwest 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 September 2024

Based on Ethiopia Meteorology Institute season classification September is the last month of *Kiremt* season. Hence the seasonal rain is starting to decline over most parts of the country. In contrast earlier during the season in southern parts of the country which usually do not have widespread of *Kiremt* rainfall, it is a time to start getting better amount of rainfall.

Under normal conditions *Kiremt* rain meteorological phenomena due to follow the direction of sun, from northern and northeastern parts weaken after the first week of September, but in the west, southwest and central part will have better strength. In the last week of September 2024 rain producing phenomena going to weaken over most parts of northeastern, central and eastern Ethiopia and they are starting to be under Bega dry air condition. *Kiremt* season weather condition will continue as of the above situation. Besides in the end of September 2024 the rainfall will persist in northwestern, western, southwestern and southern parts of the country.

Accordingly in the coming September 2024 *Kiremt* rainfall will continue until the end of the month in western Amhara, Benishangul Gumuz, Gambella, Southwest Ethiopia, western half of Oromia. Regarding to the probability of rainfall amount normal to above normal amount of rain fall will anticipate over most parts of Tigray, most of Amhara, central and western half of Oromia, Benishangul Gumuz, Gambella and Southwest Ethiopia Regions. Moreover, there will be accessional heavy fall a combined with hailstorm in some parts of the above areas. In addition, eastern parts of the country such as Dire Dawa Hareri, central Somale, in Oromia Region (East Harerghe, Arsi, and West Arsi, Bale, and East Bale Zones), Central Ethiopia, Sidama, and southern Afar expected to get near normal amount of rainfall. On other hand due to southward movement of *Kiremt* rain brings phenomena in South Ethiopia; South Oromia (Guji and West Guji Zones) occasionally will receive rain. And parts of southern Somale will get small amount of rainfall after end of the month.

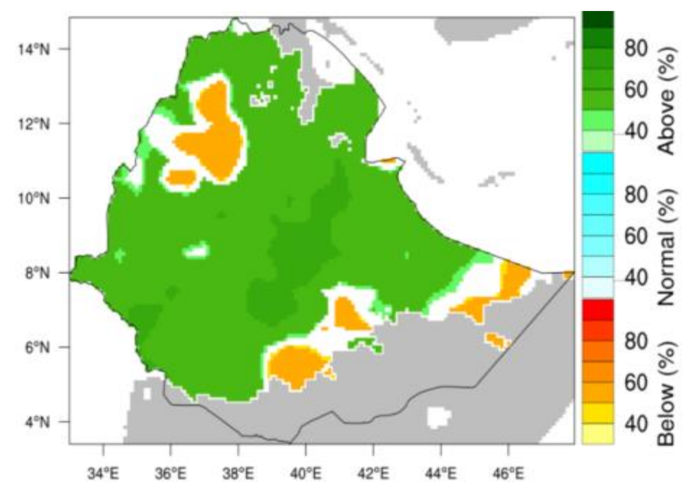


Fig.1 September 1-30, 2024, expected rainfall amount compared to the long year mean.

Source, EMI

2. Issues needing attention based on the seasonal and monthly weather forecast given by EMI.

According to Ethiopia Meteorology Institute forecast, the expected normal and above normal amount of rainfall will persist over most parts of *Kiremt* rain benefiting areas of most parts of Tigray, most parts of

Amhara, central and western half of Oromia, Benishangul Gumuz, Gambella and Southwest Ethiopia Regions during the coming September 2024. The expected weather situation would favour crops which are under growing stage to fulfil the maturation stage of water requirement. Moreover, the expected normal and above normal amount of rainfall highly contribute to maximize both surface and ground water potential. Thus, concerned personnel should continue to take appropriate measures to preserve available moisture condition of the next dry season.

Furthermore, eastern parts of the country such as Dire Dawa Hareri, central Somale, in Oromia Region (East Harerghe, Arsi, and West Arsi, Bale, and East Bale Zones), Central Ethiopia, Sidama, and southern Afar expected to get near normal amount of rainfall. This extended wet condition in the above areas also will have advantage for pasture availability, water need of long cycle crop, perennial and late sowing crops as well. Therefore, the concerned bodies are advised to practice appropriate water harvesting techniques to maximize the water potential for those areas where water shortage is critical in the coming dry period.

On the other hand, due to the sunlight driven strong convectional cloud development, thunderstorm and heavy rainfall accompanied with hail is likely to occur in some places. This situation might cause adverse impact like heavy fall, lighting and hailstorm on live and livelihood. And also, the expected above normal amount of rainfall might cause occurrence of flash flood and riverbank flood particularly over flood prone areas and downstream of main river basin of the country. Thus, to minimize the adverse impact of this situation, the concerned personnel should take appropriate measure particularly over low-lying areas and near riverbanks to work on possible protection measure and aware communities ahead of time to minimize the effect of flood hazard.

Water born human diseases like AWD Outbreak is likely to arise after flood occurrence due to heavy falls and riverbank flood, because of poor sanitation and improper use of contaminated water for drinking and cleaning vegetable products in case of urban agriculture which is going on near riverbanks. Likewise, contaminated animal disease due to the occurrence of flood is likely across low-lying pastoral areas. Thus, concerned bodies need to carry out proper preparedness ahead of time to reduce the impact of adverse weather condition on the wellbeing of both human as well as livestock.

Reports of pest incidence affecting Meher crop production have come in from multiple regions. To reduce the potential yield losses caused by pest damage, it is essential for relevant government agencies to closely monitor the situation and offer the necessary technical and material support to farmers.

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 such as maize, sorghum, haricot bean, and ground nut. As a result, 67,390 hectares

(98.77%) have been sown with the various crops. Growing crops are found at the grain-filling, maturity, and harvesting stages in most areas of the region. Regarding the 2016/17 *Mehere season* production, land preparation and sowing of various crops have been started and continued in most woredas of the region. Growing crops are found at the germination and seedling stages in some areas of the region.

South Ethiopia Region: In 2016/17 *Meher season* production, 660,529 hectares were planned to be cultivated with various crops. As a result, 585,580 (88.65%) hectares of land have been ploughed and 285,840 (43.27%) hectares were sown in the region.

Table 1: 2016/17 *Meher* crop production performance by zone in South Ethiopia region

Zone	Planned area in ha	Plowed area in ha	Sown Area in ha			% of sown area from plan
			Sown with row	Sown with broadcasting	Total	
Gedio	19,449	21,106	5,913	-	5,803	29.84
Woleyta	74,354	82,014	53,728	14,810	68,538	92.18
Gamo	106,168	111,000	68,663	12,581	82,013	77.25
Gofa	74,828	63,000	12,551	18,159	30,710	41.04
Konso	104,256	38,820	417	2,817	3,210	3.08
S/Omo	30,761	22,808	4,249	3,700	7,949	25.84
Ari	27,993	25,221	10,872	3,208	14,080	50.30
Baskato	8,500	9,118	4,778	1,757	6,535	76.88
Gardula	47,715	50,866	13,994	4,408	18,402	38.57
Kore	65,186	60,017	4,055	13,278	17,333	26.59
Burji	76,691	74,135	185	12,477	12,662	16.51
Ale	24,629	27,475	3,710	14,895	18,605	75.54
Total	**660,529**	**585,580**	**183,115**	**102,090**	**285,840**	**43.27**

Southwest Ethiopia Region: For 2016/17 *Meher season* production, 339,562 hectares were planned to be cultivated with various crops. As a result, 302,864.75 (89.2%) hectares of land have been plowed and 218,965.5 (64.48%) hectares were sown in the region. Regarding input utilization, 24,052.5 quintals of NPS, 14,395.75 quintals of UREA, and 23,657.5 quintals of improved seed have been used in the region. In addition, 84,655.125 hectares of vegetable crops are planned to be cultivated. As a result, 12,745.43 hectares were sown with various vegetable crops and 33.75 quintals of NPS, and 3.423 quintals of UREA fertilizer were used in the region.

Central Ethiopia: For 2016/17 *Meher season* production, 496,881 hectares were planned, and 398,634 (80.23%) hectares of land have been sown in Halaba, Hadiya, Kembata, Silta, Gurage, East Gurage, and Yem Zones as well as in Mareko, Tembaro and Kebena special woredas of the region. The detail information is shown in the following table.

Table 2: 2016 *Meher* crop production performance by zone and Special Woreda in Central Ethiopia region.

Zone/ S/woreda	Planned Area in hectares			Sown Area in hectares			% of sown area from plan
	Annual crop	Horticulture crop	Total	Annual crop	Horticulture crop	Total	
Kembata	41,744.7		41,744.7	36,748.3		36,748.3	88.03
Halaba	29,557		29,557	24,500		24,500	82.89
Hadiya	133,696	17,208	150,904	123,355	16,050	139,405	92.38
Silte	64,634		64,634	66,575		66,575	103.
Gurage	79,623	24,290	103,913	58,630	14,418	73,048	70.30
East Gurage	51,041		51,041	2,970		2,970	5.82
Yemi	16,258	1,891	18,149	17,717	1,835	19,552	107.73
Tembaro s/woreda	8,762.2		8,762.2	8,764.5		8,764.50	100.03
Kebena s/woreda	10,077	5,279	15,356	11,225	3,033	14,258	92.85
Mareko s/woreda	12,820		12,820	12,813		12,813	99.95
Total	**448,213**	**48,668**	**496,881**	**363,298**	**35,336**	**398,634**	**80.23**

Oromia Region: In 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, 9,289,074 hectares of land were plowed, and 7,645,521(72.41%) hectares have been sown in different Meher-benefiting areas of the region. Regarding the growing stages of Meher season crops, it was found from first development to maturity stages depending on the agroecology and the type of crops grown in each area. However, the existing excess rainfall has negatively affected mature and growing crops in some 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, 5,014,395 (98 %) hectares were plowed, 4,555,824 (89.05%) hectares were sown, and 203,942 hectares were harvested 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. About 220,876 (97%) hectares of *Belg* season crops were harvested. On the other hand, Meher season production is found at seedling and development stages while crops like potatoes are found at harvesting.

Afar Region: According to the regional report, Meher season-grown crops are found in better condition in most woredas of the region. In zone 3 and zone 5 woredas growing crops are found from sowing to development stages, while maize and onion crops are being harvested in Telalak and Dewa woredas. In addition, crops grown using irrigation are found at good growth stages, while some other crops sown with rainfall are currently found under moisture stress and poor growth conditions.

Benishangul Gumz Region: The regional report indicates that 2016/17 Meher season grown crops are found at sowing and development stages as well as in good growth condition due to the suitable rainfall existing in the region, along with the ongoing weeding, and hoeing activity on maize, sorghum and on other crops.

Harari Region: The regional crop production report indicates that in the Erer, Sofi, and Dire Teyara woredas of the region, 97.76% of the planned areas for Meher season production were covered with groundnut, maize, and sorghum crops. Growing crops are found at the development, flowering, and grain-filling stages. Regarding input accessibility and utilization, most parts of the region have reported shortages of improved seeds. The detail information has been provided in the following table.

Table 3: 2016 Meher *season* crop production performance by woreda in Harari region.

***Meher season* crop production performance by woreda**				
Woreda	Planned area in hectare	Plowed area in hectare	Sown area in hectare	% of sown area from plan
Erer	6,285	6,222	6,096	96.99
Sofi	3,279	3,246	3,246	98.99
Dire Teyara	3,420	3,385	3,351	97.98
Total	**12,984**	**12,853**	**12,693**	**97.76**

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 at the development, and flowering stages.

Tigray Region: In 2016/17 Meher season production, 1.3 million hectares were planned to be cultivated with various crops. As a result, 668,022.2 hectares were ploughed, and 668,022.2 (51.39%) hectares have been sown from the cultivated area. Growing crops are found from development to flowering stages in the region's South, Southeast, Central, and Northwestern Zones. However, the excess rainfall and flooding have negatively impacted the growth of the cultivated crops. Therefore, advisory information is being provided to farmers to drain excess water from their crop fields.

3.2 Migratory pest condition

Central Ethiopia Region: In Kebena special woreda, Fall Armyworm pests have occurred on 1,079 hectares of maize fields, and chemical control measures were taken with 645 liters of chemicals. Regular Armyworms have infested 858.25 hectares of crop fields, and chemical control measures have been implemented on 833.5 hectares in Yem zone. Furthermore, Regular Armyworm pests have occurred on 7,326 hectares of crop fields in Silta zone. So, traditional and chemical control measures were taken on 5,637 hectares of maize fields. Also, in Silta zone cutworms had occurred on 2,492 hectares of crop fields, and 2204 liters of chemicals were used to control the pest. In addition, stack borer occurred on 4,803 hectares of crop fields, so control measures were taken on 247 hectares with traditional methods and by 4,455 liters of chemical spray. Moreover, Migratory bird and Regular Armyworm infestation has been reported from Mareko special woreda, however, the level of the damage and control measures taken was not reported.

Dire Dawa city administration: According to the Administration report, stalk borer and Fall Armyworm infestation have occurred on 250 hectares of the growing maize and sorghum crops in Aseliso, Biyo, and Awale woredas, as well as in Chiri, Miti, Gerba, and Aneno kebeles which are found in the lowland woredas of the Administration.

Oromia Region: in Arsi zone 8 Woredas, Rust disease has occurred on 8458 hectares of crop fields found in 66 kebeles. So, chemical control measures have been taken on 7088 hectares with chemical spray.

Amhara Region: In North Wello zone of Bugna woreda six kebeles Chocolate spot disease has occurred on 29.7 hectares of 39 household faba bean fields and caused 50% damage. Also, stalk borer has occurred on 51.75 hectares of 158 households' sorghum fields and caused 35% damage. In addition, in South Wello zone Mekdela woreda of five kebeles Chocolate Spot disease infestation had occurred on 125 hectares of faba bean crop fields and caused 60% damage on 223 households. Also, 35 hectares of faba bean fields are affected by faba bean scorching disease in Dessie Zuria Woreda.

4. Livestock Condition

4.1 Livestock Pasture and Drinking Water Condition

Pasture and livestock water supplies were adequate in most of the regions during the last two weeks. However, scarcity of pasture reported in the previous months also continued in this fortnight in Lasta, Wadila, Bugina, Angot, Gazo and Gidan woredas of North Wollo zone in Amhara region. Similarly, East Wollega experienced shortages of pasture and water.

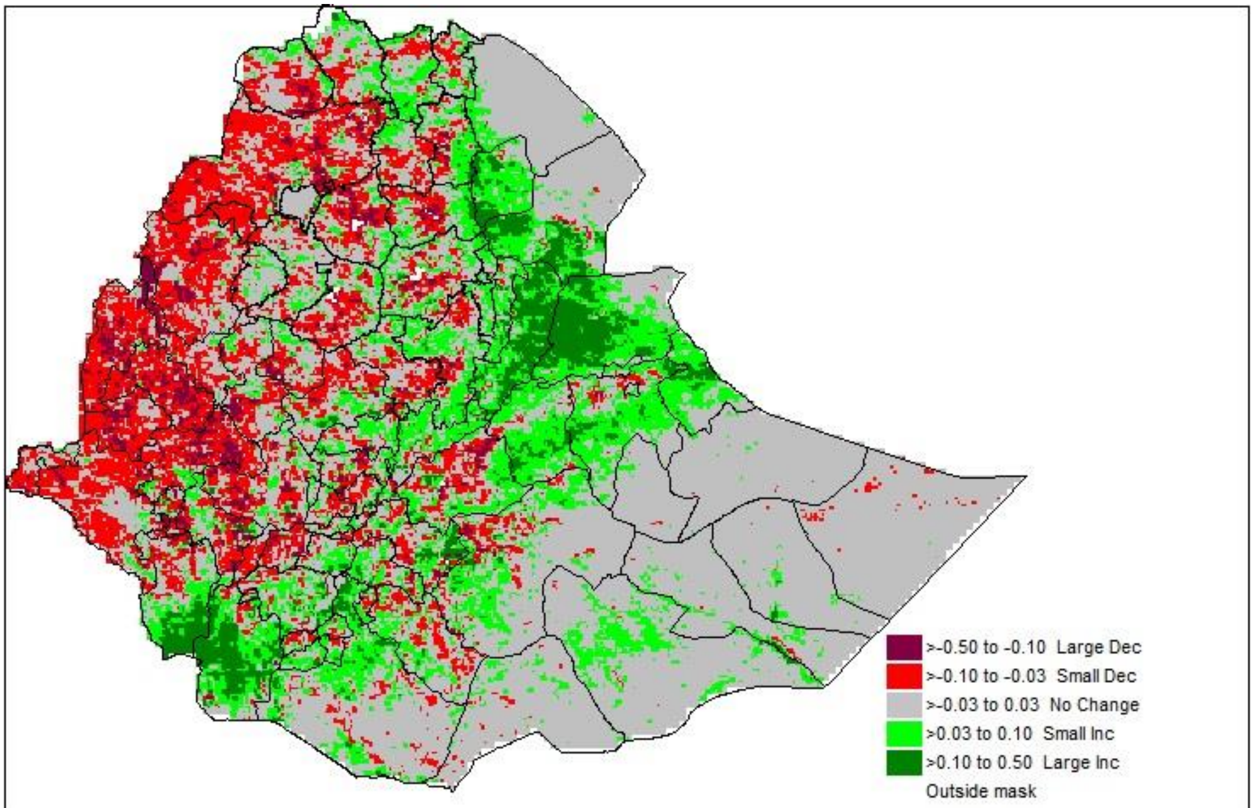
4.2 Livestock Disease Outbreak

Like the pasture condition, the burden of the livestock diseases declined. However, some disease occurrences were reported as indicated in Table 1.

Table 1: Summary of livestock diseases reported in the second half of August 2024

Disease	Region	Zone/Woreda	#Morbidity	#Death	Response
Lumpy Skin Disease (LSD)	Central Ethiopia	Silte	2260	151	
	South Ethiopia	South Omo/Salamago			Vaccination to 5500 – 7000 cattle
Anthrax	Amhara	Central Gondar		15	Vaccination

Incidences of LSD were also detected in Ari woreda of Ari zone, East Gurage zone and West Guji.



Vegetation Greenness (NDVI) for the third dekade of August 2024 [Compared to Normal], Processed by LEAP (Version 3.1.1)

As can be seen from NDVI picture (21-31 August 2024 METEOSAT) below normal Vegetation Greenness (small to large decrement) was observed over most areas of Western, Northwestern, Western Tigray and Northern Amhara Region, some areas of Central, sparse areas of Northern and Central Oromia, as well as pocket areas of Southern, Eastern and Southeastern parts of the country. On the other hand, most areas of the Eastern, some areas of Northeastern, Southwestern, sparse areas of Northern, Central and Southern parts of the country, as well as pocket areas of Western and Southeastern Ethiopia exhibited above normal vegetation greenness (small to large increment). The rest of the country experienced normal vegetation greenness as compared to that of the long-term average of vegetation greenness.