Ethiopia Disaster Risk Management Commission (EDRMC), Early Warning and Response Directorate

Monthly Bulletin

EARLY WARNING AND RESPONSE ANALYSIS

February, 2024

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Early Warning and Response Directorate to coordinate and disseminate early warning and food security information.

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Contents

ACRONYMS

CPI	Consumer Price Index
EMB	Early Warning Monthly Bulletin
ENCU	Emergency Nutrition Coordination Unit
EPHI	Ethiopian Public Health Institute
ESS	Ethiopia Statistics Service
FAO	Food and Agriculture Organization
FMO	Federal Ministry of Health
GAM	Global Acute Malnutrition
HRF	Humanitarian Response Fund
MAM	Moderate Acute Malnutrition
OTP	Outpatient Therapeutic Program
PLW	Pregnant and Lactating Women
SAM	Severe Acute Malnutrition
TFU	Therapeutic Feeding Unit
TSF	Targeted Supplementary Food
TSFP	Targeted Supplementary Feeding Program
WFP	World Food Program

1. Key Highlights

Weather Conditions: All parts of South West Ethiopia, most of South Ethiopia and Central Ethiopia, parts of Eastern and Southern Gambella, parts of Western, Central and few places of Southern Oromia, Central and Northeastern Amhara, parts of Southern Tigray and few places of Northwestern Afar and pocket places of Northern Benshangul Gumuz Regions experienced normal and above normal amount of rainfall; while the rest most parts of the country had below-normal rainfall. Ethiopia Meteorology Institute February 2024 forecast information indicates many places of *Belg* benefiting areas will get light to moderate amount of rainfall. More over in some places will get heavy amount of rainfall in February, 2024

Crop Condition: *Meher* season crop production has been completed and above 70% of the gown crops were harvested and threshed in most parts of the country. According to the regional EW monthly report, Bega season irrigation farming has been started and continued in the following regions of the country.

Livestock Condition: Pasture and water supplies were generally sufficient nationwide, but Central Gondar, Waghimra, and North Shewa Zones in Amhara faced shortages. Livestock disease outbreaks have been reported in some areas, with efforts being made to treat and control the spread of diseases such as Bovine Pasteurellosis and Peste des Petits Ruminants. Overall, the livestock sector in Ethiopia faces challenges in certain regions, but efforts are being made to address and mitigate these challenges.

Nutrition, Health and Water: Ethiopia is currently facing multiple health crises, including outbreaks of diseases such as Cholera, Measles, Malaria, and Dengue fever, as well as high rates of Severe Acute Malnutrition among children under five years old and Moderate Acute Malnutrition among pregnant and lactating mothers. The response to these crises has involved various interventions such as surveillance, laboratory testing, WaSH activities, case management, vaccination campaigns, and coordination with international partners. However, there have been challenges in the response efforts, including delays in vaccine shipments, security issues, shortages of vaccines, and difficulties in detecting and reporting outbreaks. Urgent action is needed to provide support and intervention to address these crises and protect the health of the Ethiopian population, especially vulnerable groups such as children.

1. Key Highlights Continued…

Market Prices: January is the harvest season in most *Meher* producing areas of the country. In line with this market supply of Staple food increases in Oromia, South West Ethiopia Peoples, South Ethiopia, Gambela and Sidama Region with relative to the last month. Whereas supply has shown decrement in Waghemra, Oromia special, South Wollo and North Wollo Zones of Amhara Region. And it is relatively similar with the last month in Hareri, Afar and Dire Dawa City Administration. Regarding to the price of food grains, price has shown slight increment in Regions which are reported during December.

2. Weather Conditions

2.1. January, 2024 Weather Assessment

In January 2024, significant precipitation exceeding 61 mm was observed in all parts of South West Ethiopia Region, Eastern parts of Gambella and few places of Southwest Oromia. Parts of Northeastern, Central, Southwestern, and Southern were received ranging from 11-61mm amount of rainfall. The rest most the parts of Southeastern, Eastern, Northwestern, and Western as well as parts of Central and Northeastern received below 10mm or no rainfall. Throughout the month, heavy rainfall exceeding 30mm per day was recorded in some locations in the Southern Ethiopia Region (Arbaminch, Burji, and Jinka), in South West Ethiopia (Maji and Tercha), and in Oromia Region (Chira, Aliya and Meiso) station.

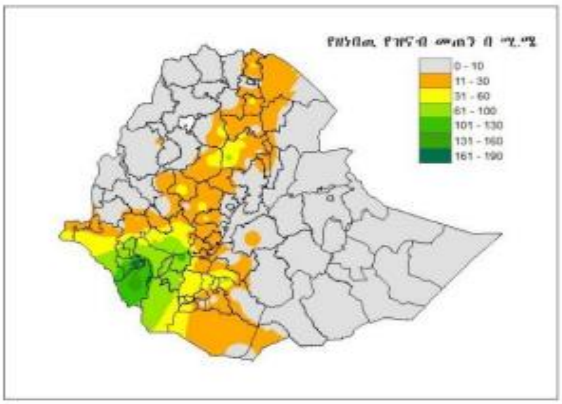


Fig1. Rainfall distribution for January, 2024 (source: EMI)

Parts of Southwestern, Southern, Northeastern and Central and a few places of Northern had greater than three rainy days, while the remaining areas experienced below two rainy days or hadn't rainy days.

In the month of January 2024, all parts of South West Ethiopia, most of South Ethiopia and Central Ethiopia, parts of Eastern and Southern Gambella, parts of Western, Central and few places of Southern Oromia, Central and Northeastern Amhara, parts of Southern Tigray and few places of Northwestern Afar and pocket places of Northern Benshangul Gumuz Regions were experienced normal and above normal amount of Rainfall. In the rest parts of the country below normal amount of rainfall were observed (Fig 2.)

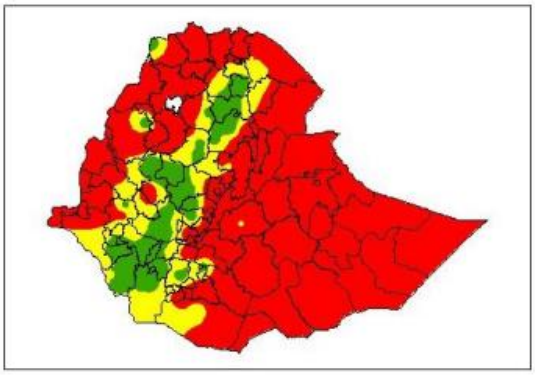


Fig2. Percent of normal rainfall distribution in January 2024. (Source EMI)

2.2. Weather Outlook for February, 2024

Under normal circumstances the month of February is a time that *Belg rainfall* starts on *Belg* crop growing and *Belg* rain benefiting areas of the country. Especially after mid of February due to the continuing strength of rain bearing meteorological phenomenon, the Southwestern, Southern, Northeastern, Eastern, Central and neighboring areas of Rift Valley receive different amount of rainfall.

According to Ethiopia Meteorology Institute forecast for the coming month of February 2024, *Belg* season rainfall producing meteorological phenomenon gradually going to strengthen and create favorable condition more than the normal condition. In connection to this many places of *Belg* benefiting areas will get light to moderate amount of rainfall. More over some place will get heavy amount of rainfall as the forecast information indicatives.

3. Crop and Livestock Conditions

3.1. Crop Conditions

***Bega season* irrigation production**

According to the regional EW monthly report, *Bega season* irrigation farming has been started and continued in the following regions of the country.

Region	Bega regular irrigation			%	Bega wheat irrigation			%	Input\quintal			
	Plan (hectare)	Plowed (hectare)	Sown (hectare)		Plan (hectare)	Plowed (hectare)	Sown (hectare)		NPS/ quintal	Urea/quintal	Seed/ quintal	Compost/ ton
Sidama	55,603	53,731	53,731	94.2					15,792	8,232	40,947.6	146,940
SWEPR	45,947	39,922	29,126	63.4	12,358	3,505	2,571	20.8	2,768	2,213	869	
SNNPR	112,907	120,745	117,777	104	8,770	5,164	3,248	37				
Central Ethiopia	54,128	45,305	45,305	83.7	1,564	1,250	1,250	79.92				

However, close follow-up and necessary support should be strengthened in areas that have low irrigation production performance like Benishangul Gumuz, Gambela, Amhara, Oromia, Somali, and Afar regions that have a huge irrigation potential that could contribute significantly to the food security and price stability of food crops in these areas and to the entire country.

2.1. Status of migratory and regular pests during the month according to the regional EW report.

The suitable weather conditions during the month have favored migratory and regular insect pest occurrence on the growing crops in some parts of the country.

Sidama Region: In different Woredas of the region, 8,682 hectares of various kinds of vegetables and other crops were affected by pests and various other diseases, and chemical control measure was carried out on 6,173 hectares and 2,058 hectares with traditional methods.

SWEPR: *Ladybird* pest occurred in 866.5 hectares of wheat fields in Ginbo, Adio, Chata, Gewata, and Shishonde Woredas in the Kefa Zone, and 853.625 hectares of wheat fields were controlled by chemical treatments. In addition, *wheat rust* disease occurred on 198 hectares of land in the Bitana Adio Woreda, and 193.5 hectares of land were prevented with chemicals. On the other hand, in the Konta Zone, 31.5 hectares of wheat were damaged by a *ladybird*, and it was controlled using chemicals. Additionally, *wheat rust* has occurred on 19 hectares, and chemical control measure was taken on 11 hectares.

3.3. Livestock Conditions

3.3.1 Livestock Body Condition

Sidama

The region's report shows that there was no problem with pasture and water supply.

South-west Ethiopia People Region

Both pasture and water supplies were close to similar to the normal situations.

Central Ethiopia

Pasture has been scarce in Halaba zone and Tembaro special woreda. Overall, pasture has become insufficient in the region in which farmers have started to feed their animals with crop residues. Similarly, water supply has been inadequate in lowland and midland kebeles of the region. However, the livestock body condition has been identical with the normal in all parts of the region.

South Ethiopia

Overall, the lately ceased rainfall combined with the available crop residue favored the pasture and water supply in the region. However, pasture supply has been declining in lowland kebeles of Benatsemay woreda including Wurir, Asonda, Befo, Gone and Olo. As a result, livestock have started migrating to Golidiya kebele to search for pasture. Despite this sign of pasture problem, livestock were in good body condition.

Oromia

Both pasture and water were adequate except the scarcities observed in Siraro and Shala woredas of West Arsi zone and in 5 lowland woredas of Bale.

Amhara

The lack of water and pasture continues in 6 districts in South Wolo and Central Gondar. Similarly, in Argoba woreda in South Wolo zone and in Ziquala, Abergele and Sahila woredas in Waghimra zone, both water and pasture problems persisted. Furthermore, in East Balsa (Arbacheguar, Digum and Tartar) and Kinfaz (all kebeles) woredas of the Central Gondar zone, the shortages of water and pasture supply continued affecting a total 126,272 households. Looking the water supply in particular, it has been stated that it is scarce in Gazo and Lasta woredas in Wolo zone and in Berehet, Minjar and Mida woredas in North Shewa. There has been no livestock water and grazing problem in other zones of the region where information was obtained. However, in Central Gondar (Gelan, Kinfasz and East Belesa woredas) and South Gondar (Ebinat woreda), loss of livestock body condition was reported.

Somali

The report received from the region indicates that there is a severe water shortage and pasture shortage in the City zone due to the absence of Keran rain.

Afar

Pasture has been scarce in all zones of the region predisposing livestock to various diseases leading to deaths. Likewise, the water supply was low due to the lack of rain in the region. These problems have caused a decline in the body condition of livestock in the region.

Dire Dawa

The supplies of both pasture and water were comparable to the normal condition.

Benishangul Gumuz

There is a limited supply of pasture for livestock due to the start of damage of pasture land by natural forest fire. On the other hand, the crop residue from the Meher crop harvest has contributed for the

improvement of livestock body condition. Regarding the livestock water supply, due to the drying up of rivers, there has been limitation in the amount.

Gambella

As reported by the region, there was no problem of pasture and water supply.

3.3.2. **Livestock Disease Condition**

South-west Ethiopian People

About 43 cattle died of ***Contagious Bovine Pleuro-Pneumonia*** in Maj woreda of West Omo zone, and 31 cattle died of Lumpy Skin Disease in Sur woreda.

South Ethiopia

The weekly reports received from the region show that apart from normal disease prevalence, there was no livestock disease outbreak.

Oromia

About 500 cattle have been diseased with ***Bovine Pasteurellosis*** in the Gida Ayana woreda in East Wolega and they have been treated.

Amhara

In Albiko woreda of South Wolo zone, 550 sheep and goats were found infected with Peste des Petits Ruminants out of the 46,482 diagnosed. Out of these diseased, 71 goats died. In the same district, 3300 chickens have been diseased with Newcastle disease. Though appropriate treatment was given to them, 100 chickens died.

Somali

Occurrence of Peste des Petits Ruminants cases was reported in Dambal, Meiso, Afdem, Erer and Aysha districts.

Benishangul Gumuz

It was found out from the report received from the region that there was no livestock disease outbreak.

4. Nutrition, Human Health, and Water Availability

4.1. Nutrition

In 2024, a total of 22,865 cases of Severe Acute Malnutrition (SAM) and 25 deaths were reported among children under five years old. There were 699 Woredas that reported at least one SAM case, with high burdens reported in the Amhara region, Somali Region, and the Southern Nations, Nationalities, and Peoples' Region (SER). Additionally, there were 50,558 cases of Moderate Acute Malnutrition (MAM) reported among pregnant and lactating mothers. In epi week 4 of 2024, there were 5,002 SAM cases and 9 deaths reported, along with 9,430 MAM cases and 15 inpatient cases among pregnant and lactating mothers.

Fig. 16: Under 5 years of age SAM case by region and top 10 reporting Woredas in epi week 04, 2024

Fig. 17: Pregnant and lactating women MAM case by region and top 10 reporting Woredas in ep-wk 04, 2024

4.2. Human Health Situation

Ethiopia is currently facing multiple outbreaks of diseases such as Cholera, Measles, Malaria, and Dengue fever, as well as internal displacement of people due to conflicts and natural disasters. These crises are significantly affecting the Ethiopian population, particularly children and vulnerable groups. Cholera has resulted in 33,496 cases and 502 deaths, with ongoing outbreaks in 50 Woredas. Measles has seen 48,419 cases and 397 deaths, with active outbreaks in 71 Woredas. Malaria cases have seen a slight decrease, with 102,333 cases and 22 deaths reported, affecting multiple Woredas. Dengue fever has seen 23,217 cases and 17 deaths reported mainly in Dire Dawa and Afar Regions. COVID-19 cases have been relatively low, and emergency nutrition cases have also been reported, highlighting the urgent need for support and intervention.

Cholera Outbreak

Between August 27, 2022, and February 4, 2024, a total of 316 Woredas in Ethiopia was affected by cholera, with the outbreak ongoing in 50 Woredas currently. The majority of active Woredas were in the Somali and Oromia regions. During this time period, there were 33,496 reported cases and 502 deaths. The regions with the highest case load were Somali, Oromia, Dire Dawa, and Harari. In the last week of this period, 198 cases and 2 deaths were reported.

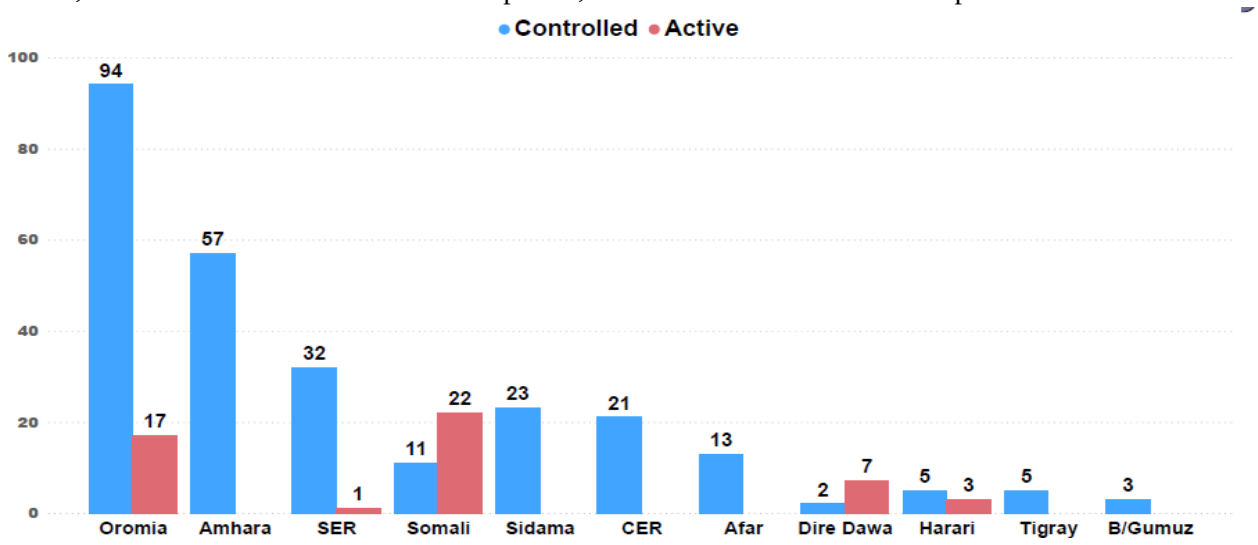


Fig : Cholera active Woredas disaggregated by regions affected, 04 Feb 2024.

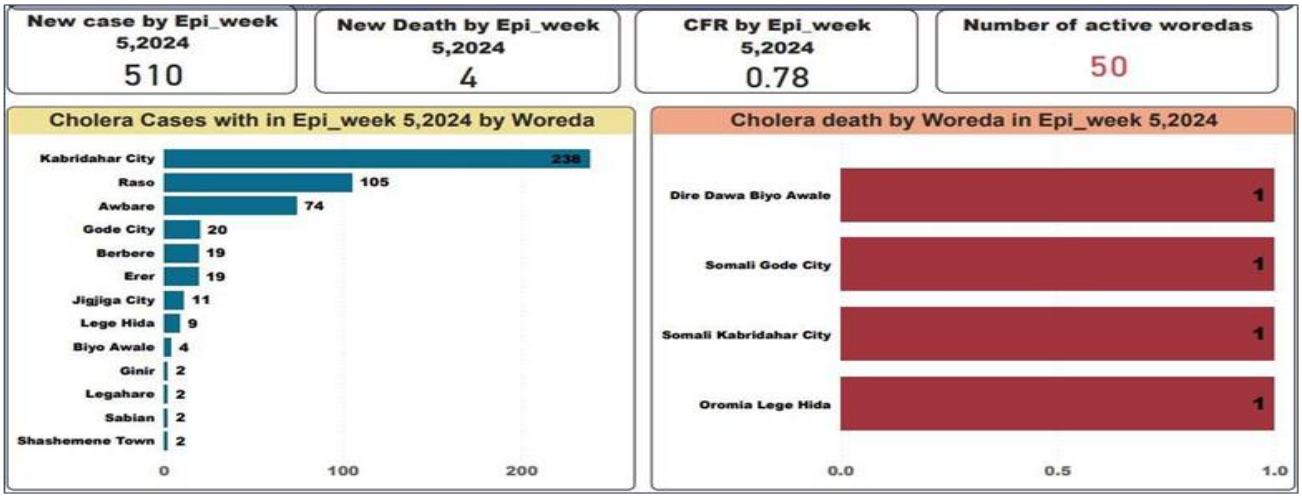
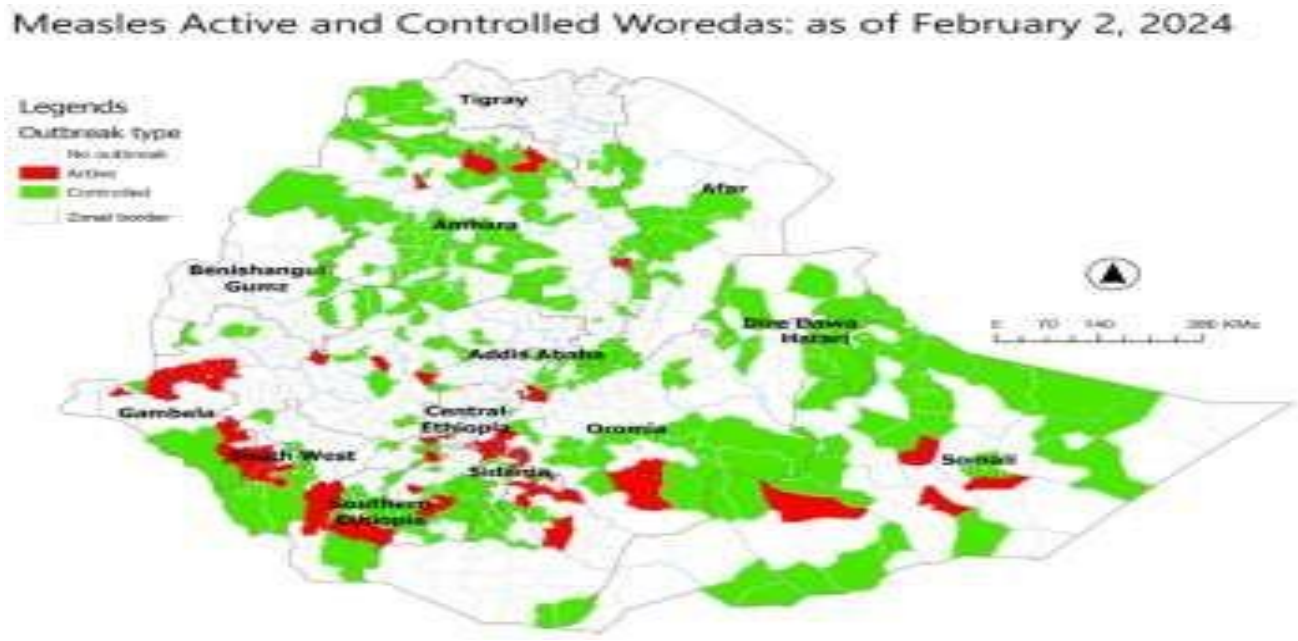


Figure: Cholera cases status in Ethiopia by Epi week 05, 2024.

Cholera outbreak interventions have included surveillance, laboratory testing, WaSH activities, case management, RCCE/IPC/WASH activities, and vaccination campaigns. Logistics support from EPHI, UNICEF, WHO, CDC USA, IOM, and MSF-H has also been crucial in responding to the outbreak.

Measle Outbreak

Between August 12, 2021, and January 29, 2024, a total of 331 Woredas in Ethiopia were affected by a disease outbreak, resulting in 48,419 reported cases and 397 deaths. From January 1, 2023, to January 22, 2024, there were 37,586 cases and 285 deaths reported. The majority of cases were concentrated in five regions: SWEP, Oromia, Somali, Amhara, and South Ethiopia. Over half of the cases reported between August 12, 2023, to January 29, 2024, were in children under 5 years old, with a significant portion of them being unvaccinated. As of January 29, 2024, there were 71 active Woredas with an increase from the previous week, and 69 new cases were reported.



Map 3: Case distribution in Ethiopia, 04 Feb 2024

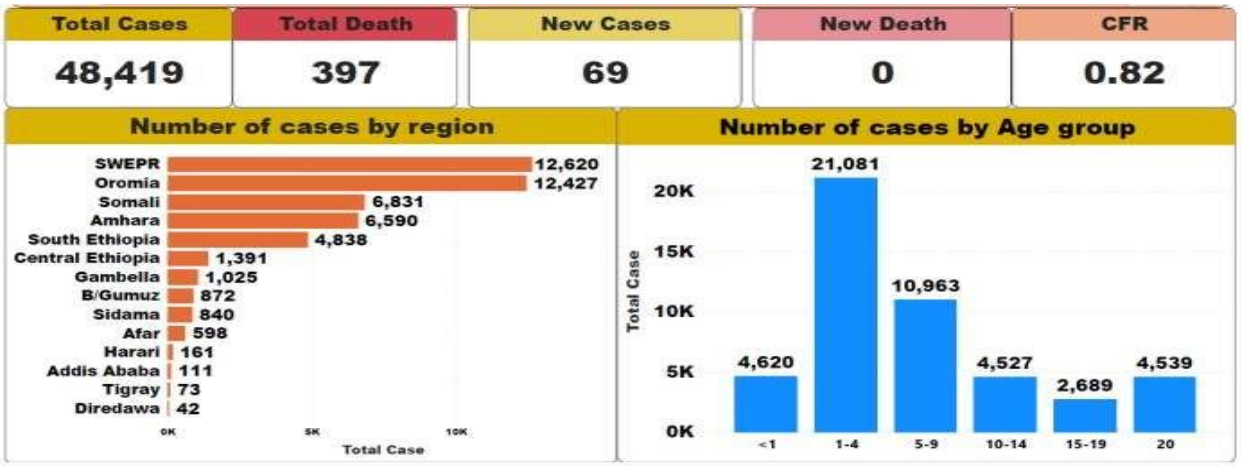


Fig. 6: The Epidemiological update of measles outbreak in Ethiopia, Aug 12 2021 to 29 Jan 2024

So far, the response to the measles outbreak in Ethiopia includes a nationwide campaign in 2022, a nationwide SIA for children under 5 years old, catch-up vaccinations for children aged 9-23 months, targeted campaigns in 2023, and intensified routine immunization activities. There have also been efforts to enhance surveillance, improve case management, conduct outbreak investigations, and engage in risk communication and community mobilization. However, there have been challenges such as delays in vaccine shipments, security issues hampering response efforts, and shortages of vaccines and operational costs for reactive vaccinations. Additionally, there have been difficulties in detecting and reporting outbreaks, as well as lack of support from partners at the local level.

Malaria Epidemic Situation

In early 2024, a total of 431,214 malaria cases and 106 deaths were reported across the country, with 102,333 cases and 22 deaths reported in Epi-week 4. Malaria cases decreased by 4.3% in week 4 compared to the previous week. More than 70% of the cases were reported in four regions - Oromia, Amhara, SWEPRS, and South Ethiopia. Approximately 1393 Woredas reported at least one case of malaria in week 4. 96.6% of the cases were lab-confirmed, with Plasmodium falciparum being the most prevalent strain, accounting for 63.6% of cases.

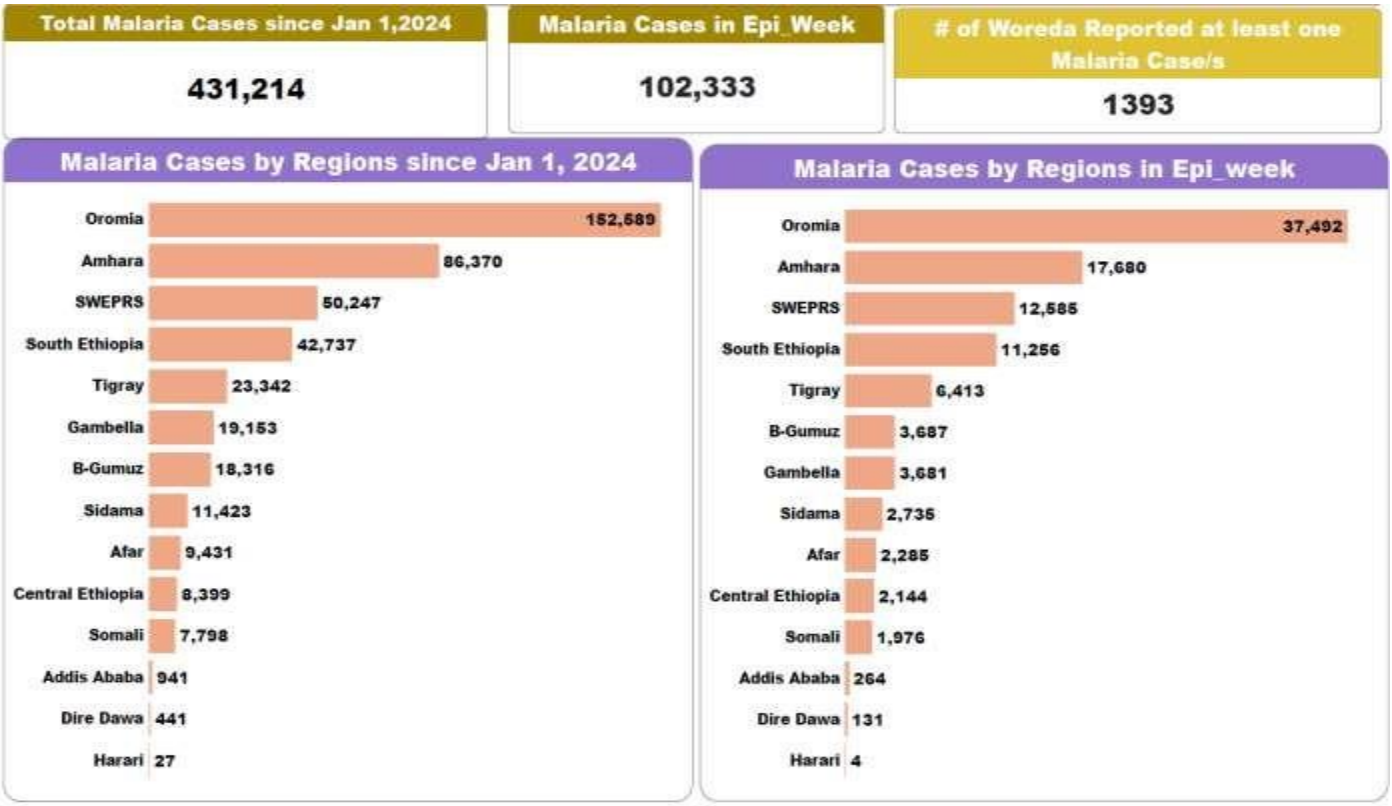


Fig 9: Malaria case distribution by region as of from 01 Jan –04 Feb 2024.

Response activities implemented so far include coordination of the malaria epidemic response with other vector-borne outbreaks, establishment of a Pandemic and drought-related health response emergency operation center, regular virtual meetings with regions to monitor response activities, facilitating delivery of malaria commodities to regions through partnerships, daily follow-up of zones on public health emergency surveillance

and response activities, weekly feedback to zones based on surveillance reports, regular lower-level support by assigned Public Health Emergency Management Officers, surveillance of malaria cases in health facilities, monitoring of previously identified breeding sites, supportive supervision in high-burdened zones, and identification and reduction of vector breeding sites in high-burdened zones.

5. Food Assistance

- For the month of December, the food partners, Ethiopia Disaster Risk Management Commission (EDRMC), Joint Emergency Operation Program (JEOP), World Food Programme (WFP), Ministry of Agriculture (MoA) and Action Against Hunger (ACF) distributed in-kind and cash assistance to the most food-insecure people in the targeted regions. Partners assisted 68% of the planned 6.4 million people in the December cycle. 172,641 (4%) people received cash, and 4,121,277 (96%) people received in-kind food assistance.
- Ministry of Agriculture (MoA) targeted 1.3 million people with ETB 539.7 million (US$ 10.2 million) through the Shock Responsive Safety Net (SRSN).
- JEOP distributed 21,600 MT of food to 1,278,948 food-insecure people.
- EDRMC has distributed 21,020 MT of food to 1,401,351 food-insecure people.
- WFP distributed 5,381 MT of food to 318,428 food-insecure people. Additionally, WFP distributed 2,126 MT of cereals to 141,778 food insecure people in Tigray region; from Government's Shock-Responsive Safety Net Assistance (SRSN) resources.
- ACF distributed ETB 155.4 million (US$ 2.77 million) in four towns of Tigray (Adwa, Axum, Adigrat and Shire Towns) assisting 172,642 food-insecure people.

Operational Challenges

- Resource shortfalls will likely contribute to distribution of incomplete food basket in some of the targeted woredas. Not all that targeted food insecure people were assisted with a complete food basket and adequate cash transfers in December 2023.
- The conflict in Amhara region contributed to delays in food deliveries to some of the woredas in the region, particularly to the rural communities.
- Additionally access challenges in Western Oromia and Benishangul Gumz locations are delaying food dispatch and distribution to the most in need.

6. Market Prices

6.1Staple food and livestock prices

December is the harvest season in most *Meher* producing areas of the country. In line with this market supply of Staple food increases in Oromia, South West Ethiopia Peoples, South Ethiopia, Gambela and Sidama Region with relative to the last month. Whereas supply has shown decrement in Waghemra, Oromia special, South Wollo and North Wollo Zones of Amhara Region. And it is relatively similar with the last month in Hareri, Afar and Dire Dawa City Administration.

Regarding the price of food grains, it increases in the Sidama Region (teff, barley, haricot bean and coffee), South Ethiopia (maize) but price of tefff decreased in Gofa, Wolayita and Gedio Zones respectively in the region, South West Ethiopia Peoples Region, Oromia Region and Amhara Region. On the other hand decreases in Gambela Region and Sidama (wheat, bean and peas). And it is relatively similar to the last month in Hareri, Afar Region, and Dire Dawa City Administration.

The Supply of livestock increases in South West Ethiopia Peoples, and Waghemra, Oromia Special, South Wollo and North Wollo Zones of Amhara Region. The price of livestock increases in South West Ethiopia Peoples, Amhara, Oromia and Gambela, South Ethiopia Regions. Both the supply and price is relatively similar with the last month in Sidama, Hareri, South Ethiopia, Afar and Dire Dawa City Administration.

7. Damages Reported in January, 2024

Different climate-induced and human made damages were reported in several areas of the country during the month, such as floods, Hailstorm, Frost, landslides, Conflict and fire which affected the lives and livelihoods of vulnerable communities.

Conflict

- Due to conflict between the two ethnic group in South Ethiopia Region East Guraghe Zone East Mesqan Woreda schools are damaged and the learning process has been affected.
- In Amhara Region schools are closed in West Gonder Zone Metema Woreda 1,303 students are out of school. In North Shoa Zone Antsokiya, Moretna Juru Woredas schools are closed due to conflict.

Fire

- Fire causes for 2people injury and 13 shops totally destroyed in Southern Ethiopia Region South Omo Zone in Ngangatom Woreda.

Zone	Woreda	Infrastructure damage	Affected population
Kembata	Hadero Tito	3 houses with property	21
East Guraghe	Debub Sodo	Property damage	75
Halaba	Weyra Dijo, Weyra, and Atote Ello	4 houses with property	36
Qebena Special		4 houses with property	54
Hadiya	West Badawacho	1houses with property	7
Tembaro Special		3 houses with property	21
Silte	Dalocha, Lanfaro, East Silte, Silte, Wulberg, Sankura, Mito,Alicho and West Azernet	75 houses with property	406

Table 2. Fire disaster caused in Oromia Region

Zone	**Woreda**	Infrastructure damage	Affected population
Bale	Guradamole	15.5ha matured wheat crop field	40
West Arsi	Shala	1 house and 1shop	unknown
Horo Guduru	Jimma Genet	2houses total damage	2
West Wellega	Nejo	2HH houses	
East Wellega	Leqa dulech	2 houses with property	
West Harerghe	Darolebu	18 gallon fuel and property	
South West Shoa	Wenchi	1HH houses	
Jimma	Nedigibe	2kimr Teff crop	4
Sheger ketema	Koye Feche sub city Gelan Arabsa	31.25 kt Teff and 150kt wheat	

Teble1. Fire disaster caused in Central Ethiopia Region

Strong Wind

- In Basketo Special Woreda strong wind destroyed 7 farmer's houses and 2 government office infrastructures.

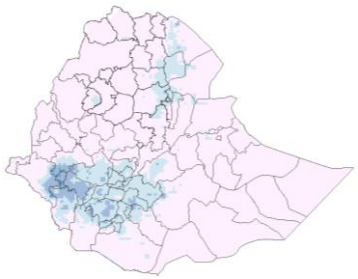
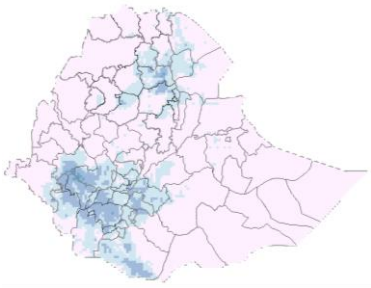
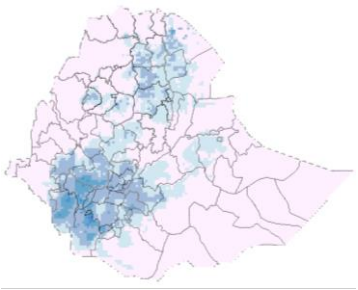
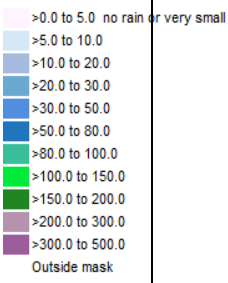
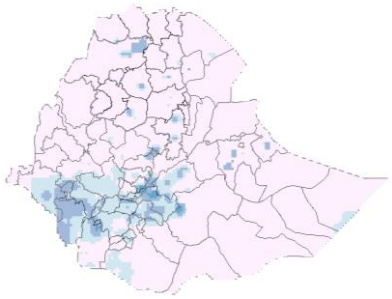
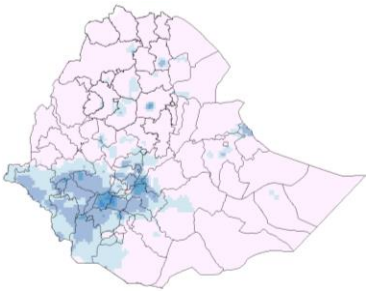
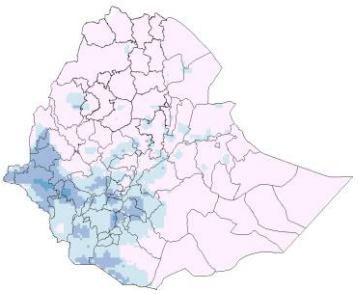
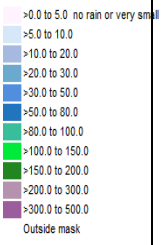
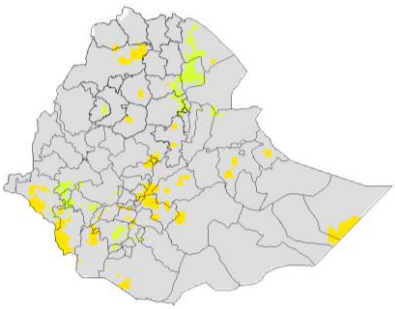
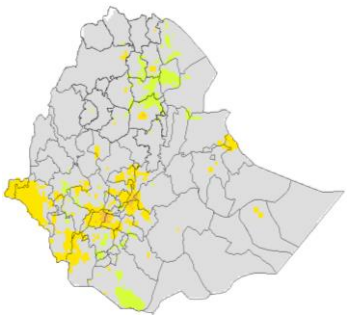
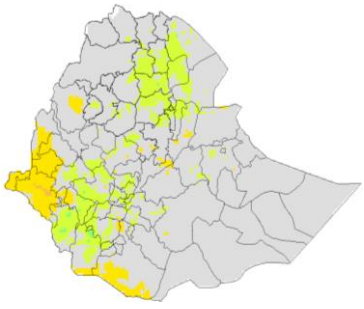
Drought

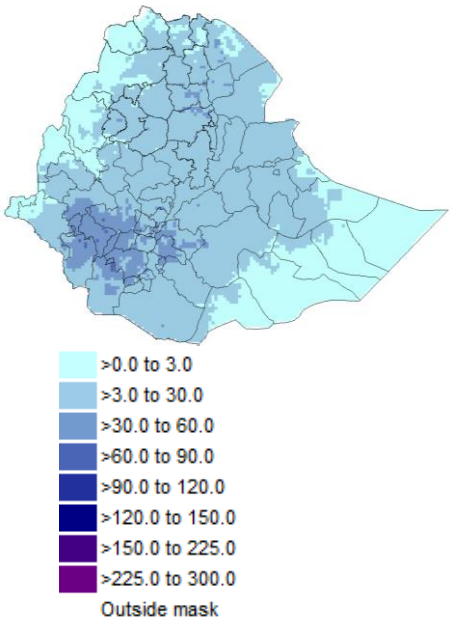
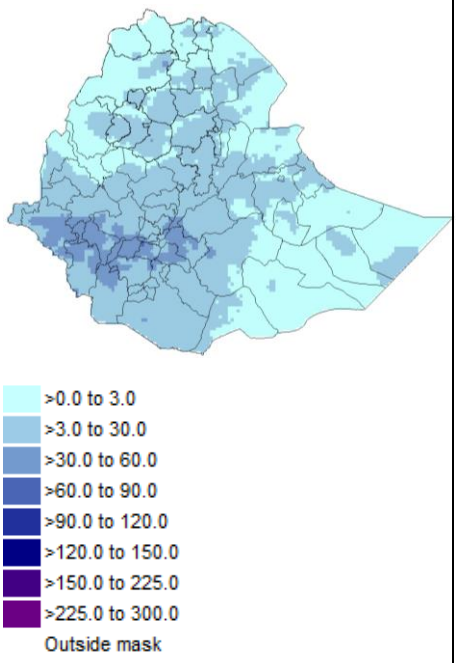
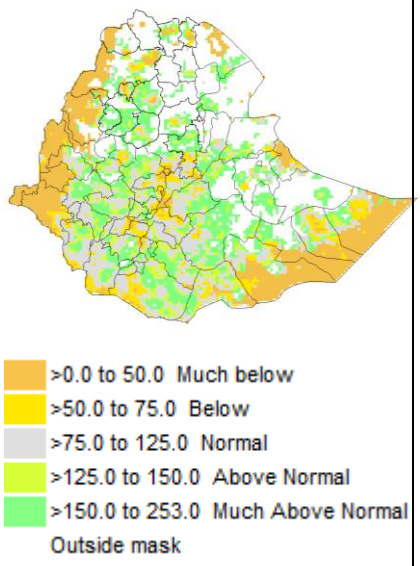
- In Somale Region Sity Zone due to shortage of rainfall food shortage and malnutrition cases are increased.

8. Advisory Notes

1. The expected light to moderate amount of rainfall over Central, Northeastern, Southwestern, Southern and Eastern parts of the country might contribute for land preparation and sowing *Belg* crops which are start sowing early as well as perennial crops water requirement. On top this for pastoral and agro pastoral areas will contribute for pasture and water availability and minimizing the dry condition over those *Belg* rain benefiting areas. Accordingly, concerned bodies should be aware to manage the coming weather situation.
2. Meanwhile, the anticipated heavy amount of rainfall might create flash floods on which areas are not cover by grass or vegetation because of the previous dry period. In contrast the expected heavy fall in some places will have positive impact for water availability for livestock by collecting the runoff in ponds and other harvesting methods. Thus concerned bodies should be aware to use timely the favorable condition.
3. On the other hand the expected enhanced temperature would favor the occurrence of wildfire particularly in grass land and forest areas. Therefore the concerned personnel should undertake close monitoring and appropriate precaution measures in the process of fire use in order to avoid the outbreak of fire hazard ahead of time.
4. Support and promote vaccination campaigns: MOH and any concerned body should actively support and promote the ongoing vaccination campaigns for cholera and measles in Ethiopia. This includes providing funding, resources, and logistical support to ensure the successful implementation of these campaigns. strengthen surveillance and response systems:
5. Stakeholders should work together to strengthen the surveillance and response systems for cholera, measles, and other diseases in Ethiopia. This includes improving case reporting, early detection, and timely response to outbreaks to prevent further spread. Enhance community engagement and education: Stakeholders should prioritize community engagement and education activities to raise awareness about the importance of vaccinations, hygiene practices, and disease prevention.
6. Increase food support: Urgent action is needed to provide sufficient food support to areas experiencing shortages, especially to children, pregnant women, and lactating mothers. Collaborative efforts can be made with stakeholders to ensure that the necessary nutrition supply available for distribution.
7. Strengthen the IMAM program: In order to address the decrease in the number of children admitted to malnutrition treatment programs, efforts should be made to strengthen and expand the Integrated Management of Acute Malnutrition (IMAM) program.

Appendix I
RAINFALL ANALYSIS
OPTION 1: DAKADAL RAINFALL ESTIMATE (mm)

	January 1-10, 2023	January 11-20, 2023	January 21-31, 2024	Legend
Estimated Rainfall Versus Normal Rainfall (Average of 1995- 2010)				Rainfall in mm 
				Rainfall in mm 
				Rainfall Diff. in mm 

	ESTIMATED CUMMLATIVE RAINFALL, January 2024	NORMAL CUMMLATIVE RAIN, January	CUMMLATIVE VERSUS NORMAL, January 2024
Estimated Cumulative Rain			
	As can be seen from LEAP software, in January 2024 better rainfall was observed over some places of Southwestern and pocket places of Southern parts of the country during the month. Accordingly, it is estimated that above 30 mm of rainfall occurred over parts of Southwestern and pocket places of Southern parts of the country. Ranging from 3-30 mm rainfall was observed over most parts of Central, Southwestern, Southern and Northeastern and some parts of Northern, Western, Eastern and Southeastern parts of the country. The remaining parts of Western, Northwestern and Southeastern showed below 3 mm or no rainfall. The estimated rainfall in January 2024 compared to the normal condition, normal and above normal rainfall was observed across most parts of Northeastern, Southern, Central and Eastern, parts of Western, Northern, Southwestern and Southeastern parts of the country; while the rest some parts of Southeastern, Western, parts of Northwestern, Southwestern and few place of Central Ethiopia experienced below normal estimated rainfall.		

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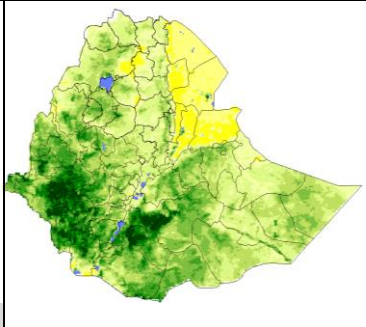
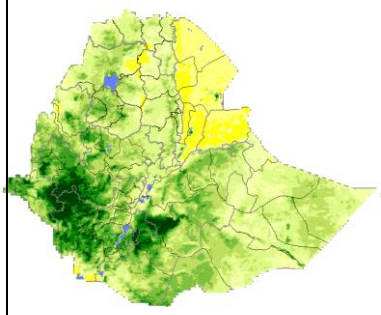
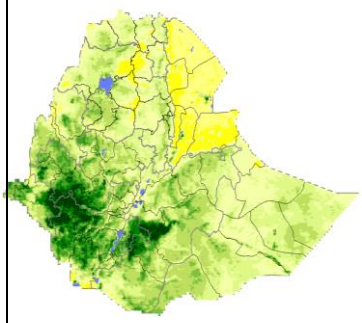
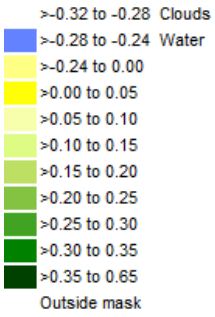
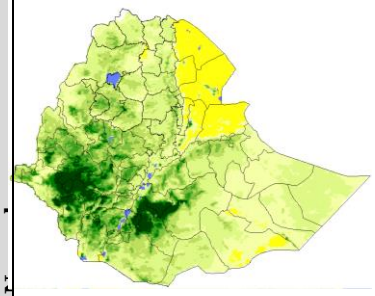
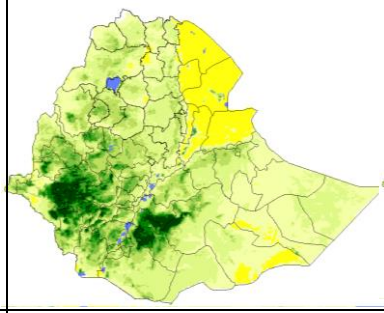
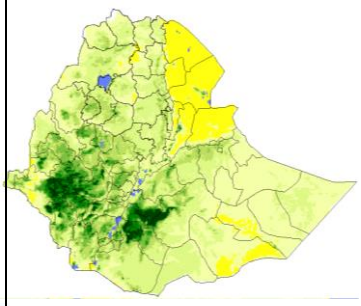
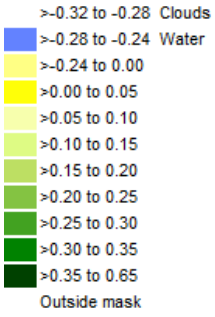
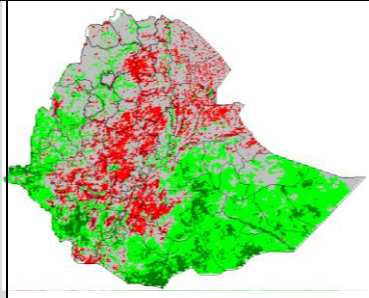
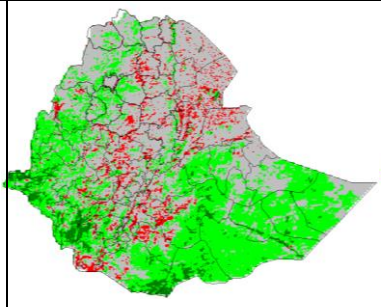
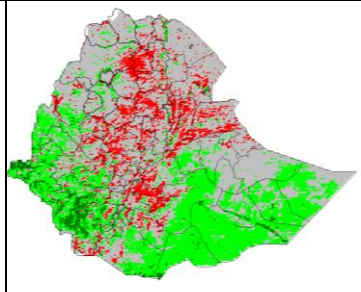
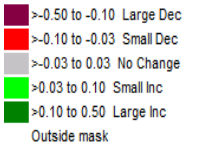
Appendix II. Normalized Difference Vegetation Index (NDVI) January 2024

	January 1-10, 2024	January 11-20, 2024	January 21-31, 2024	Legend
Actual in Fraction				
Vegetation Greenness (NDVI) in fraction -				
Actual Versus Normal				Vegetation Greenness (NDVI) in fraction - [Compared to Normal] 
	As can be seen from NDVI pictures of January 2024(METEOSAT), the first ten days of January 2024 vegetation greenness as compared to the normal, large increment was shown over Southeastern, Southern, Southwestern, Eastern highlands and partially in Western half as well as few places of Northeastern and Central parts of the country. There was partial decrement of greeness over Northeastern, Central, parts of Eastern, few place of Southwestern, Southern and Western parts of the country. In the second ten days scatter decrement was seen in Northeastern, Central, parts of Eastern and Southern as well as pocket places of Western part, in the rest part there was better increament of vegetation greenness as compared from the 1st ten days. Similarly in the third week of the month, vegetation greennees decrement was shown over Northeastern and Central and scatter decrement over Eastern, Southern and pocket places of Western parts of the country. On the other hand, vegetation greenneess increment was observed over Southern, Southeastern, Southwestern and Western, few places of Northwestern, Northeastern, Central and Eastern parts of the country. The remaining areas showed no change in the month.			