

**Federal Democratic Republic of Ethiopia National Disaster
Risk Management Commission, Early Warning and
Emergency Response Directorate**

Flood Alert #3



Landslide incident in Oromia region, 29 May 2018

June 2018

FLOOD ALERT

INTRODUCTION

In April 2018, the NDRMC-led multi-sector National Flood Task Force issued the first *Flood Alert* based on the National Meteorology Agency (NMA) Mid-Season Forecast for the *belg/gu/ganna* season (April to May 2018). Subsequently, on 20 May, the National Flood Task Force updated and issued a second *Flood Alert* based on the monthly NMA weather update for the month of May 2018 which indicates a geographic shift in rainfall from the southeastern parts of Ethiopia (Somali region) towards the western, central and some parts of northern Ethiopia including southern Oromia, some parts of SNNPR, Amhara, Gambella, Afar and Tigray during the month of May 2018.

On 29 May, the NMA issued a new weather forecast for the 2018 *kiremt* season indicating that many areas of northern, northeastern, central, western, southwestern, eastern and adjoining rift valleys are expected to receive dominantly above normal rainfall. In addition, southern highlands and southern Ethiopia are likely to receive normal to above normal rainfall activity, while normal rainfall activity is expected over pocket areas of northwestern Ethiopia. It is also likely that occasional heavy rainfall may inundate low-lying areas in and around river basins.

The Flood Alert has therefore been revised for the third time to provide updated information on the probable weather condition for the 2018 *kiremt* season and identify areas likely to be affected in the country to prompt timely mitigation, preparedness and response measures. The *Alert* will be further updated based on revisions in the NMA forecast and changes in the situation on the ground. The Alert will also form the basis for preparations of the contingency plan as required.

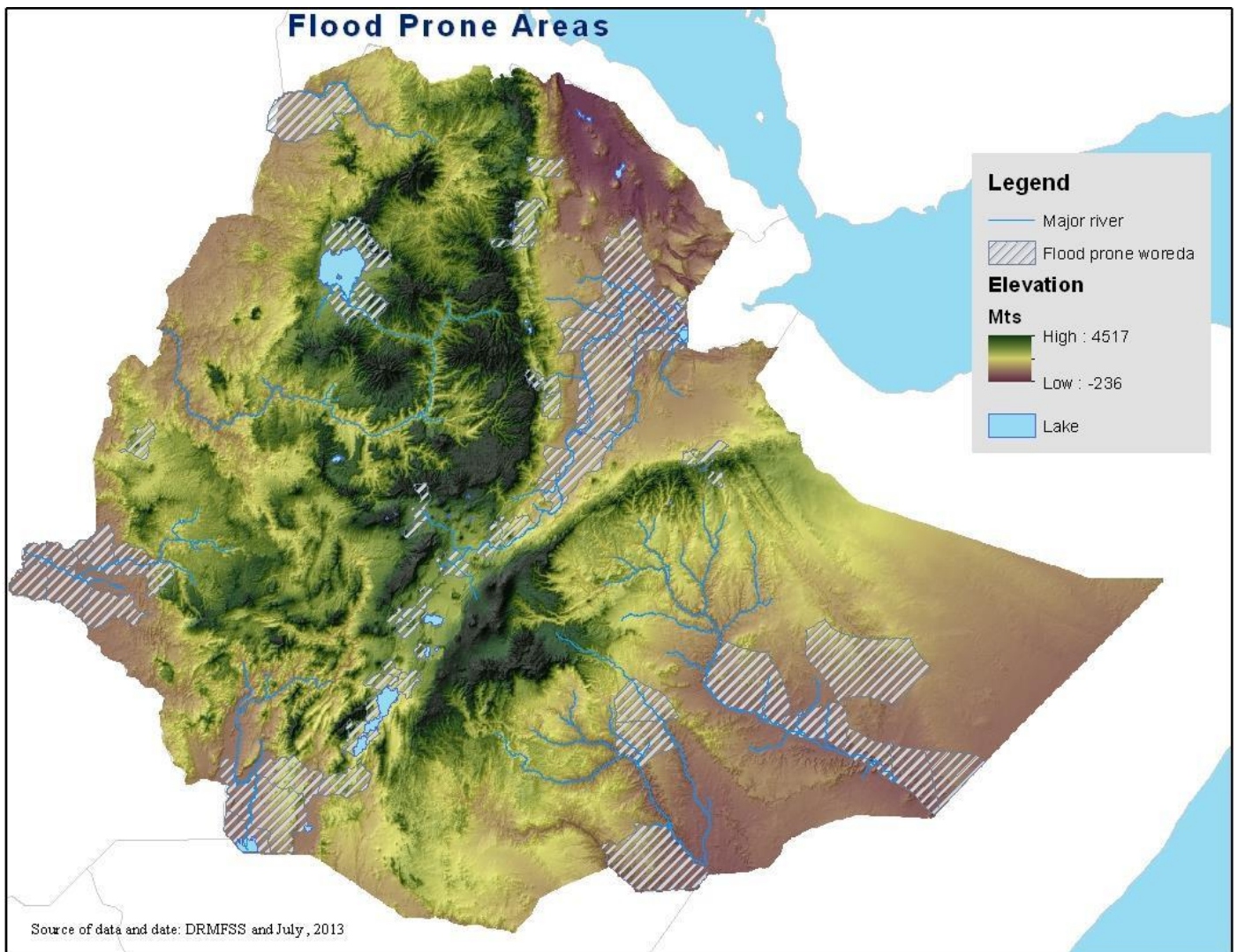
BACKGROUND

Flood is one of the major natural hazards in Ethiopia which causes significant damages to lives and livelihoods in parts of the country. Flooding in Ethiopia is mainly linked with torrential rainfall and the topography of the highland mountains and lowland plains with natural drainage systems formed by the principal river basins.

In most cases floods occur in the country as a result of prolonged heavy rainfall causing rivers to overflow and inundate areas along the river banks in lowland plains. Among the major river flood-prone areas are parts of Oromia and Afar regions lying along the upper, middle and down-stream plains of the Awash River; parts of Somali region along the Wabe Shebelle, Genale and Dawa Rivers; low-lying areas of Gambella along the Baro, Gilo, Alwero and Akobo Rivers; down-stream areas along the Omo and Bilate Rivers in SNNPR and the extensive floodplains surrounding Lake Tana and the banks of Gumera, Rib and Megech Rivers in Amhara (*see Map 1 below*).

Flash floods occur in lowland areas when excessive rains fall in adjacent highland areas. Flash floods mostly affect areas including Central, Southern and Western Tigray region; North and South Wollo, West Gojjam and Oromia zones in Amhara region; parts of Zone 1, Zone 2 and Zone 4 in Afar region; North Shewa zone in Oromia region; Wolayita, Hadiya, Siltie, Guraghe and Sidama zones in SNNPR; Jigjiga Town in Somali region and Dire Dawa City Administration. This type of flood is characterized by sudden onset with little lead time for early warning and often resulting in considerable damage on lives, livelihoods and property.

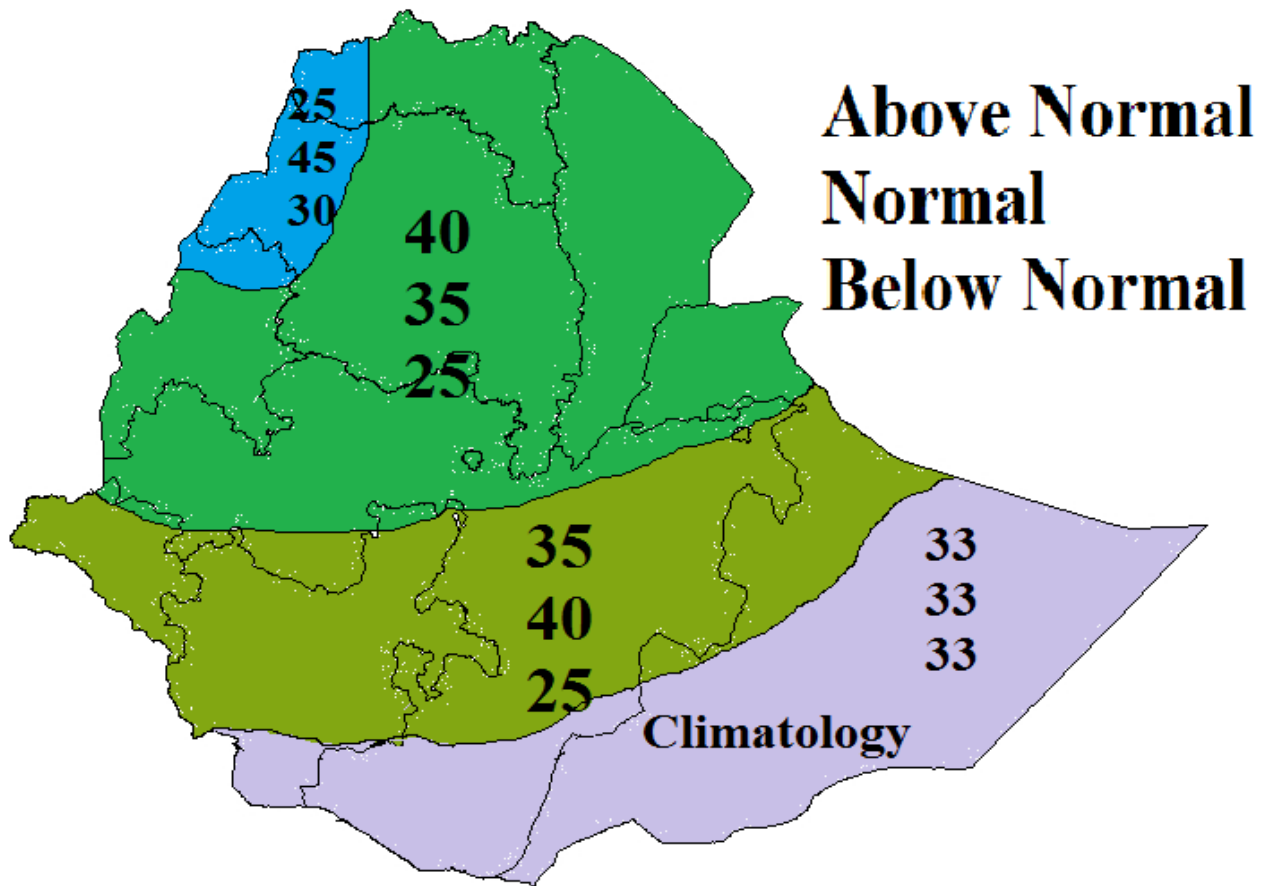
Map 1: Flood prone areas



In Ethiopia, flood usually takes place at the peak of the *kiremt* rainy season (July and August) in most flood-prone areas. In Gambella flooding often occurs during August and September. In Somali region, heavy rains in the neighboring highland areas of Oromia usually cause flooding in the *kiremt* season. Unseasonal and above-normal rainfall during October to January could also cause flooding in areas along Wabe Shebelle and Genale Rivers in Somali region and Omo River in SNNPR. Similarly, heavy rainfall in the surrounding highlands of Amhara, Tigray and Oromia often result in overflow of the Awash River and its tributaries in Afar. Flooding around Lake Tana (Fogera and Dembia Plains) is induced by backflow of Lake Tana and overflow of its major tributaries at times of heavy rainfall. It is also likely that heavy *belg/gu/ganna* seasonal rain (between February and May) induce flooding in *belg*-benefitting areas.

WEATHER OUTLOOK FOR 2018 *kiremt* season

- The onset of the seasonal rain is expected to be within the normal periods across the Southwestern and western Ethiopia and slightly late over Northwest.
- Normal Cessation for the Kiremt benefiting areas is expected.
- Many places of Northern, northeastern, central, western, south western, eastern, and adjoining rift valleys are expected to receive dominantly above normal rainfall.
- In addition, southern highlands and southern Ethiopia are likely to receive normal tending to above normal rainfall activity. Whereas, normal rainfall is expected over pocket areas of northwestern Ethiopia.
- It is also likely that occasional heavy falls at places that may inundate low-lying areas and around the river basins.
- South and southeast (climatologically dry) portions of the nation will receive occasional rainfalls during early June and September
- In general, with the expectation of near normal episodic event of the Pacific Ocean during the upcoming NH summer monsoon, most of the Kiremt benefiting areas of the country are anticipated to have at most wet weather activity.



Tercile rainfall probability for 2018 Kiremt season (NMA)

FLOOD RISK AREAS

Addis Ababa: Addis Ababa city

Afar: Zone 1 (Dubti, Afambo, Elidaar, Asayita, Mille and Chifra), Zone 2 (Ab'ala, Berhale, Megale, Dalule and Koneba), Zone 3 (Amibara, Dulecha, Gewane, Awash Fentale and Buremudaytu), Zone 4 (Teru, Yalo and Gulina) and Zone 5 (Dalifege, Arthuma, Dewe and Semurubi).

Amhara: North Shewa zone (AntsokiyaGemza, EfrataGidm, Kewet and TarmaBer), Waghimra zone (Dehnan, Sekota, GazGibla, Ziquala), North Gondar (Dembia, GonderZuria, Matema and Chelga), South Gondar zone (LiboKemkem, Fogera, Dera, Simada, and TacheGaint), West Gojam (Semen achefer, Debubeachefer, Baher Dar Zuria, Mecha and Degadamot), Oromia (JileTumuga, ArthumaFursi, Dewa Chefa, Shewa Robit, and Kemisie town), Awi (Ankeshia), East Gojam (Dejen), North Wollo (Kobo, Guba Lafto, Bugna, Habru, Mekete and Gidan), South Wollo (Kalu, Kembolcha, Wegadi, Desse, Ambasel and Thehulederie).

BenishangulGumuz: Assossa (Assossa) and Metekel (Debate)

Dire Dawa: Dire Dawa city and Kaka

Gambella: Etang special woreda (Etang), Nuer (Lare, Jikawo, Akobo, Mackoye and Wanthewa) and Anuak (Gambella town, Gambella zuria, Jor, Gog and Dimma).

Harari: Harar city

Oromia: East Shoa (Dugda, Bora, Adama, Boset, Fentale, Wonji and Ziekula), Southwest Shoa (Illu, Becho and Sebeta Awas), W. Shoa (Wolmera Dendi and Ejere), Borena (Moyale, Abaya, Dugda Dawa, Melka Soda, Dire, Miyo, Gelana, and Boku), W. Hararge zone (Habro, HawiGudina, Oda Buletuma and Mieso), West Wollega (MeneSibu, Gimbi, Yebdo, Kondal, Babogambel and Jaros), West Arsi (Shala and Siraro), Guji (Gorodola, Gumi El Dello, Sababoru, Aga Wayu and Liben), Bale (Agarfa, LegaHida, Gasera, Gololcha, Berbere and Dawa Serer), Arsi (Hitosa, Chole, OnkoloWabe, Jeju, Merti, ZiwayDugda, Gololcha, Seru and Dodota) and East Harage zone (Bedeno, GoroGutu, Jarso, Gursum, Dadar, Kumbi, Haromaya, Girawa, Meta, Gola Oda, Kersa and Kombolcha).

Somali: Shabelle (Kelafo, Mustahile, Ferefer, Gode, Berano, Addile, East Imy, and Danan), Afder (West Imy, Chereti, Dollo Bay, Hargelle, and El kari), Korahe (Kebridehar, Debewieyne, and Shellabo), Liben (Dollo Ado), Doolo (Warder), Fafan (Jiggiga, Togwajale and kabribayah), Siti (Afdem, Ayisha, Erer, Mieso, Hadigala, and Shinille).

SNNP: South Omo (Dasenech, Gngangatom, Hammer, BenaTsemay, Jinka town, Selamago, Debub Are and Semen Are), Hadiya (Shashogo, MirabBadewacho and Limu) Awassa City,

Gedeo zone (Kochere), KembataTembaro zone (Kachabira, Tembaro, HaderoTunto, KedidaGamela and Damboya), Wolayta zone (Humbo, Damotwoyide, Damot Sore, DugunaFango, KindoDidaye, Ofa, SodoZuria and KindoKoyisha), Alaba special woreda, Sidama (Lokaabaya, Hawassazuria, Dilla, Hula and Shebedino), Silte (Dalocha, Sankura, Lanfuro and Silti), Gurage (Mesqan, Mareqo, Muhur Na Aklil, Sodo and Butajira), GamoGofa

(Arba Minch town, Bonke, Deramalo, Mierab Abaya and Boreda), Keffa (Gimbo) and Basketo Special woreda (Basketo).

Tigray: Central Tigray, (Weri Lake and Adwa), Eastern Tigray (SaesiTseadeEmaba), Western (Humera), Southern (Alamata, Raya Azebo, Enda Mekoni, Maichew, EmbaAlaje).

Landslide Risk areas

Amhara Region – East GojamZone (Awabel), North Shewa Zone (Antsokiya Gemza, Basona Werena, Tarmaber, Merhabete), North Wello Zone (Habru and Meket) and South Wello Zone (Kalu, Mekdela, Sayint, Werebabu and Libo Kemkem and Dessie),

Dire Dawa Administrative Region.

Oromia Region- Adama Town, Arsi Zone (Aseko), East Shewa (Gimbichu), east Wellega Welega (Sasiga), Jima (Dedo, Goma, and Seka Chekorsa), North Shewa (Werajarso, Abuna Gende Beret, Dera, Ginde beret, Jeldu, and Meta Robi), Jimma (Jimma Town) and Kelem Wellega (Kelem),

SNNPR - Segen Zone (Burji, Konso, Derashe and Amaro), Dawuro Zone (Loma), GamoGofa Zone(Arabaminch town, Bonke, Chench, Dita, Gofa Zuria, Kemba, Kucha, Melekoza, Mierab, Gardula, Gemu and Kercha), Gedio Zone (Bule and Wenago), Guraghe Zone (Mareko, Meskan, Muhur Na Akill and Sodo, Hadiya Zone (Shashego and Soro), Kefa Zone (Bita, Decha, Cheta and Gimbo) Kembata Tembaro (Kachabira), Sidama Zone (Awassa Zuria, Dale, Chere, Hula, Shebedino, Wensho and Loko Abeya) South Omo Zone (Debub Ari and Hamer), and Wolayita Zone (Bolossore, Ofa, Boloso Bonibe and Damot Sore),

Tigray Region – Central Tigray (Kola Temben and Axum),

These areas require close monitoring and precautionary measure at times of heavy rains and flooding.

Recommended interventions – Immediate

In areas where flood hazards triggered impacts like the one in Somali region, it is imperative that humanitarian responses and early recovery activities need to be urgently started. Some of these immediate recommendations for such scenarios include:

- Emergency food intervention, including nutritious foods, for the affected and the displaced people; Distribution of NFIs; Distribution of treated mosquito nets and water purifying chemicals and health hygiene education to prevent the spread of water-borne diseases in the affected and surrounding areas; Campaign to back fill of collapsed latrines and assistance to construct new ones; Campaign to back fill of remaining stagnant water and ponds to reduce effects of contaminations and breeding of mosquitoes; Vector control in the flood affected areas. Special assistance should be extended to people with special needs; Close monitoring of the situation in the affected areas to avoid any further floods, subsequent impacts and public health related threats. Avail boats to the affected areas for immediate lifesaving interventions. Continuous monitoring of rivers and dam water levels.

Recommended interventions - Short and Long-term

General:

- Reactivation of Regional Flood Task Forces to work closely with regional early warning experts, to monitor river water levels, to oversee below recommended actions, coordinate multi-agency flood impact rapid assessments and to ensure that findings shared timely with relevant actors at regional and federal level. The National Flood Task Force to review and determine which tools to be applied if assessment is required.
- Government bodies at woreda level need to undertake preparedness actions including dissemination of early warning information to at-risk populations, reinforce flood protection structures in at-risk areas, and strengthen community mobilization and sensitization, communication between highland and downstream areas to prepare for likely runoffs, timely evacuation of communities at risk to higher grounds and provision of immediate emergency support is recommended.
- Government authorities with partners to undertake mitigation and preparedness measures including scaling up water harvesting, water treatment, sanitation and hygiene promotion, prevention and surveillance of communicable diseases, enhancing other health and nutrition interventions to minimize the likely impacts of flood on lives and livelihoods.
- Government authorities including partners at all levels to prioritize pre-positioning of food and non-food items for rapid response with particular emphasis to areas that may become inaccessible.
- The National Flood Task Force to continue to closely monitor the situation and regularly update the Flood Alert. A National Contingency/Response plan will be developed to facilitate preparedness and response activities as required.
- Enhance structural and non-structural flood mitigation activities to minimize the impacts of flash floods and river floods including community engagement/awareness, working with stakeholder, improving the physical structures of flood mitigation facilities
- Enhance community mobilization and engagement in all aspects of the interventions.

Specific:

- Support affected community to re-construct their permanent shelter with specific design and planning of residential areas, and if necessary relocating people to more secured and high-ground areas to avoid major losses in future flooding;
- Constructing and rehabilitation of affected basic social infrastructures to ensure continuity of social services to affected community;
- Distribution of seed and agricultural inputs to communities whose crops have been washed away by the floods;
- Restocking for communities who have lost livestock during the droughts and floods to gradually build their livelihood assets;
- Close monitoring of the weather and the situation of the affected areas and the people.