Food and Agriculture Organization of the United Nations

SWALIM Somalia Water and Land Information Management

FSNAU Food Security and Nutrition Analysis Unit - Somalia

Deyr 2018 Rainfall Performance

October to December 2018

Issued: 20 December 2018

Summary

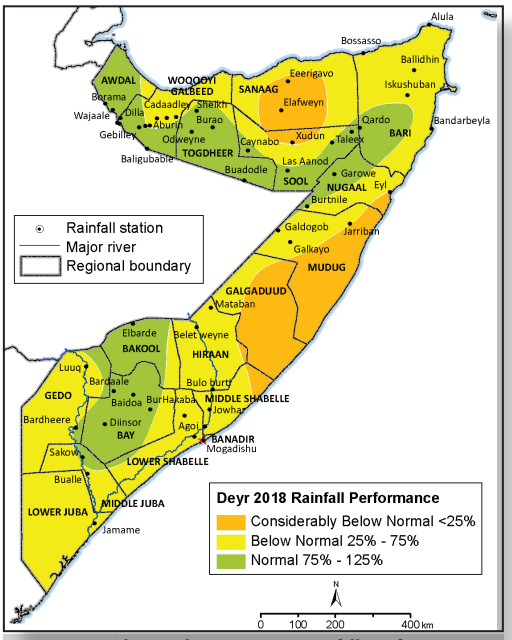
The 2018 Deyr (October-December) season rainfall was generally below average to poor in many parts of Somalia. This is contrary to earlier predictions of average to above average rainfall in the country. Some areas in Sool, Sanaag, Bari, Nugaal and most central regions recorded poor rainfall during the season. The season started off well in the northern regions and ended early while in most of the southern regions experienced a prolonged delay of the rains which ended in late November and early December. Since the beginning of December, good rains were recorded in most of the southern regions, particularly parts of Bay, Shabelle and Juba regions, however the amounts were not sufficient to compensate for rainfall deficits experienced in October and November, especially in agropastoral livelihoods.

Map 1 gives an analysis of the rainfall performance during the season based on observed rainfall data and field reports while Map 2 shows a comparison of current Deyr season rainfall compared to the long term average based on satellite rainfall data.

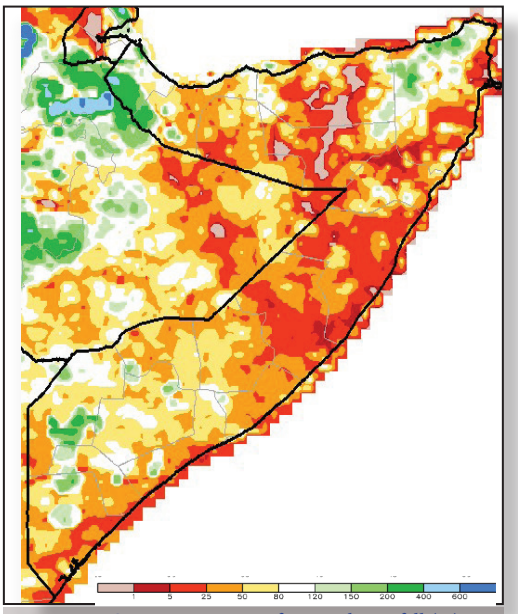
Both maps reflect poor rainfall performance during the 2018 Deyr with map 2 showing wide spread rainfall deficits in most parts of the country. This has adversely impacted on crop production and pasture conditions, particularly northern, central and parts of southern regions (Bay, Bakool and Hiraan regions) that have experienced below average rainfall.

In most parts of northeast and central regions, prospects of water availability for livestock is a great concern. Earlier than normal livestock migration and water trucking has been reported in parts of Bari and Nugaal regions of the northeast (berkad dependent areas) and central regions .

On the other hand, some areas in Bay and Bakool regions and a few places in northern regions bordering Ethiopia, experienced good rains especially in the last week of October up to mid November which boosted pasture growth.



Map 1: Observed Deyr 2018 Rainfall Performance



Map 2: Oct –Dec Percent of Normal Rainfall (%)

The short lived rains in the upper parts catchments of Shabelle and Juba rivers in the Ethiopian highlands led to reduced river flow in the Juba and Shabelle rivers compared to the previous two seasons. River levels are currently below their normal levels along the two rivers in Somalia. The levels are expected to further decrease until the start of the next rainy season in April with a high likelihood of experiencing dry river beds in the middle and lower reaches of the Shabelle River as early as late February. This declining trend of the river levels will affect riverine activities including offseason planting and pump irrigation.

With no foreseen rains in the coming weeks, there is a high risk of mild to moderate drought conditions in most parts of northeastern and central regions. Northeast regions have also experienced below average rainfall during the 2018 Gu (April-June) season. Drought conditions are expected to develop and worsen until the next rains, which are anticipated in April 2018.

This update is produced by the: FAO - Somalia Water and Land Information Management—SWALIM Project and the Food Security and Nutrition Analysis Unit – FSNAU. For more information regarding this product please contact SO-hydro@fao.org or visit http://www.faoswalim.org and http://www.fsanu.org

Primary data sources are; Ministry of Agriculture & Irrigation of Puntland and FGS, Ministry of Agricultural Development of Somaliland and Ministry of Energy & Water Resources of the FGS, SWALIM and NOAA/USGS. Tables, Maps and graphs on this bulletin are produced from these sources.

Overall Deyr 2018 Rainfall Performance

South and Central: A few places in the southern parts of the southern regions received good rains. Notably, the Sorghum Belt of Bay, Bakool and parts of Middle Juba recorded average amounts of rainfall which were observed in late October up to mid-November. The rest of the areas recorded below normal rains with the central regions recording little or no rains at all. Figure 1 presents the Deyr 2018 cumulative rainfall amounts compared to the Long Term Mean (LTM) for the same season for some selected rainfall stations in south and central regions. Hudur, Baidoa and Bualle stations recorded the highest amounts of rainfall exceeding 150mm translating to normal to below normal cumulative amounts. The rains were poorly distributed after a delayed start of the season in late October. Annex ii presents the total amounts of rainfall during the Deyr 2018 season for individual stations compared to the long term average for the Deyr season.

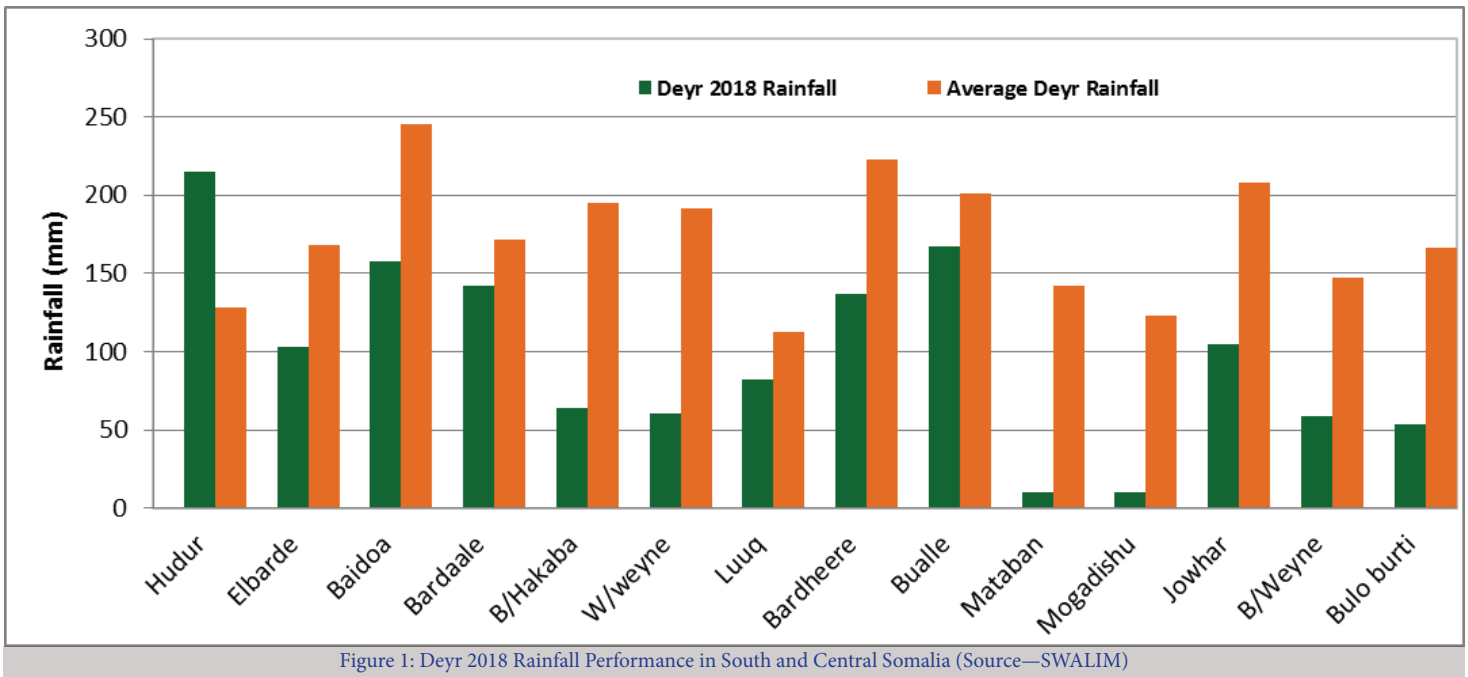


Figure 1: Deyr 2018 Rainfall Performance in South and Central Somalia (Source—SWALIM)

Somaliland: Poor rains were experienced in most parts of Somaliland. The eastern parts of Somaliland recorded no rains during the season leaving a large moisture deficit in the area. Erigavo, Elaffweyn and Xudun stations in Sool and Sanaag regions did not record any significant rains. Only a few places in Togdheer region and areas bordering Ethiopia recorded normal rains. In general, the total amount of rainfall received during the season remain low in many areas compared to the long term average as seen in Figure 2. Mild to moderate drought conditions are apparent in the eastern parts of Somaliland. The overall impacts of Deyr 2018 rainfall season in the country is presented in the annexes

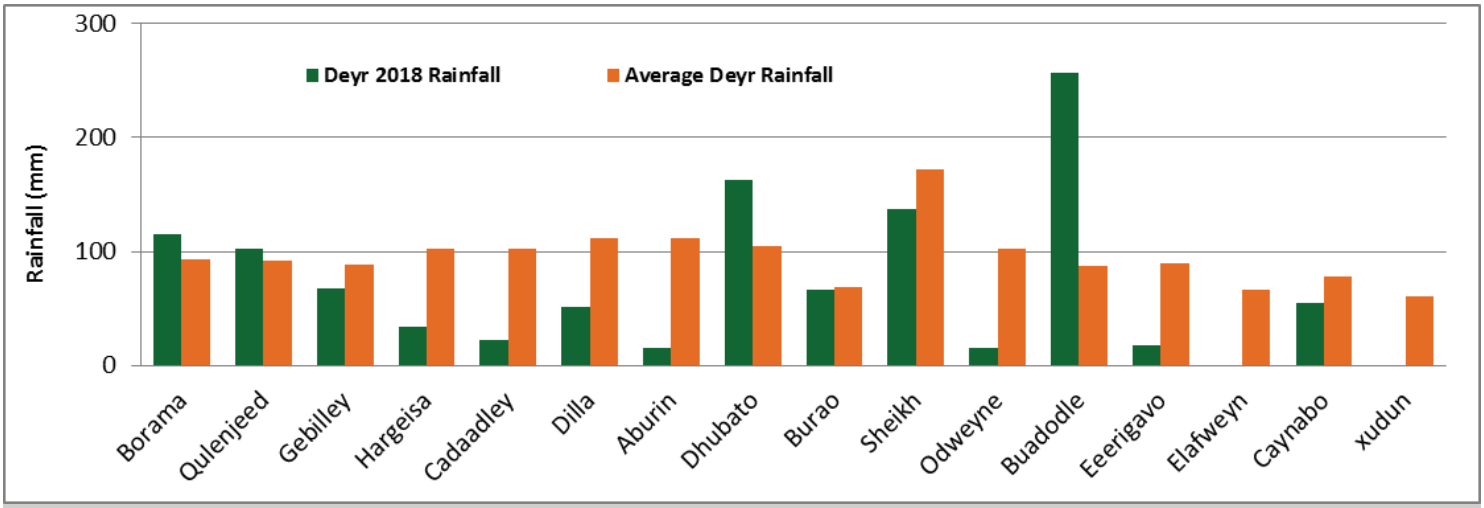


Figure 2: Deyr 2018 Rainfall Performance – Somaliland (Source—SWALIM)

Overall Deyr 2018 Rainfall Performance

Puntland: Below normal to significantly below normal rains were experienced across Puntland during the rainy season. Isolated cases of unusual storms were recorded a few stations during the passage of Cyclone Luban that made a land fall in Yemen. Some areas in Puntland including Dangoroyo, Garowe, Eyl, Galckayo and Jariban and their surrounding received very poor rains with 30% of the expected rains (Figure 3).

Early cases of livestock migration in search of greener pastures have been reported and the situation is expected to get worse with no foreseen rains until the next rainy season of Gu 2019.During the first half of October, Cyclones Luban made a passage in the coastal areas of Puntland leading to strong winds and heavy rains along their pathway. Minimal damages were reported during this time.

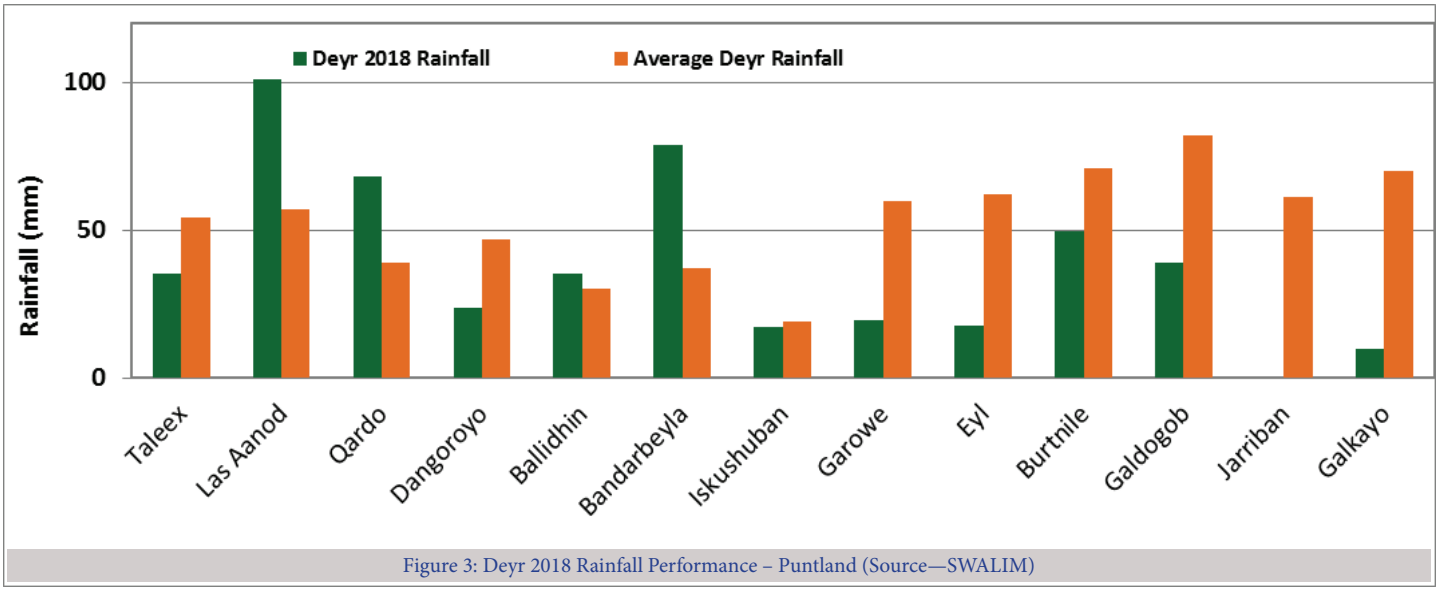
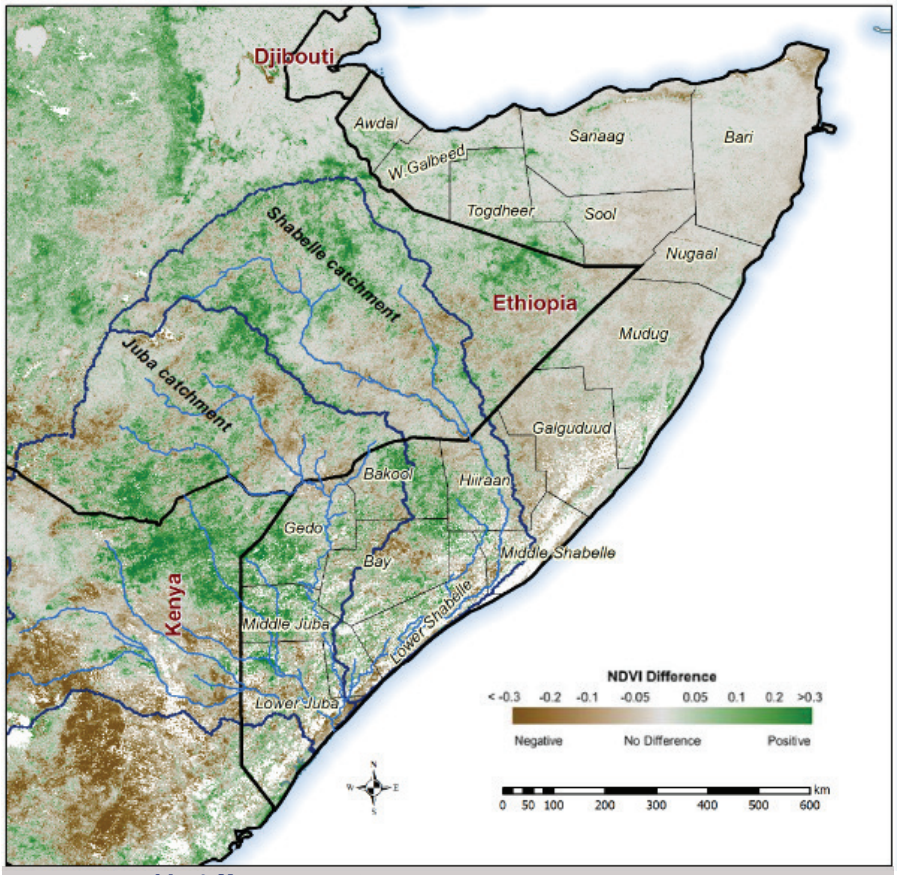


Figure 3: Deyr 2018 Rainfall Performance – Puntland (Source—SWALIM)

Vegetation Conditions



Map 3: Vegetation Conditions as at 10 December 2018 (Source—USGS)

Satellite-derived vegetation condition (Normalized Difference Vegetation Index – NDVI) is used to assess the spatial distribution of vegetation during the season. As seen in Map 3, most areas in the country indicate negative conditions (Brown colour) compared to the long-term average apart from few pockets that show positive vegetation conditions (Green colour). The positive parts was particularly due to the average rains recorded in October and November, which boosted the growth of pasture and crops. A deterioration of vegetation conditions is apparent in the large areas of Puntland and central regions of Galgaduud and Mudug. There also exists pockets of negative conditions in the sorghum areas of Bay and Bakool owing to the poor spatial distribution of rainfall.

Water Resources

Generally, the rainfall performance was poor with some areas receiving rains that were beneficial in terms of water availability for domestic use, irrigation and livestock across the country. In particular, parts of the northern regions of the country also benefited immensely from the good rains in late September and early November by replenishing the ground water which is the major source of water in the regions. However, this was short lived and currently the rare commodity is getting depleted at an alarming rate.

This Deyr season has seen a reduction of river flow at the upper stations of the two rivers, Juba and Shabelle compared to the previous seasons. This has been contributed to by the below normal rains in the upper catchments of the basins in Ethiopia which are the water towers of the two rivers.

Observed river levels along the Juba and Shabelle rivers remained slightly above normal in mid-October to late-November with no cases of flooding being reported, Figure 4 and 5. Starting the last week of November River levels along the Shabelle River dropped drastically and this trend is expected to continue with no rains foreseen in the near future.

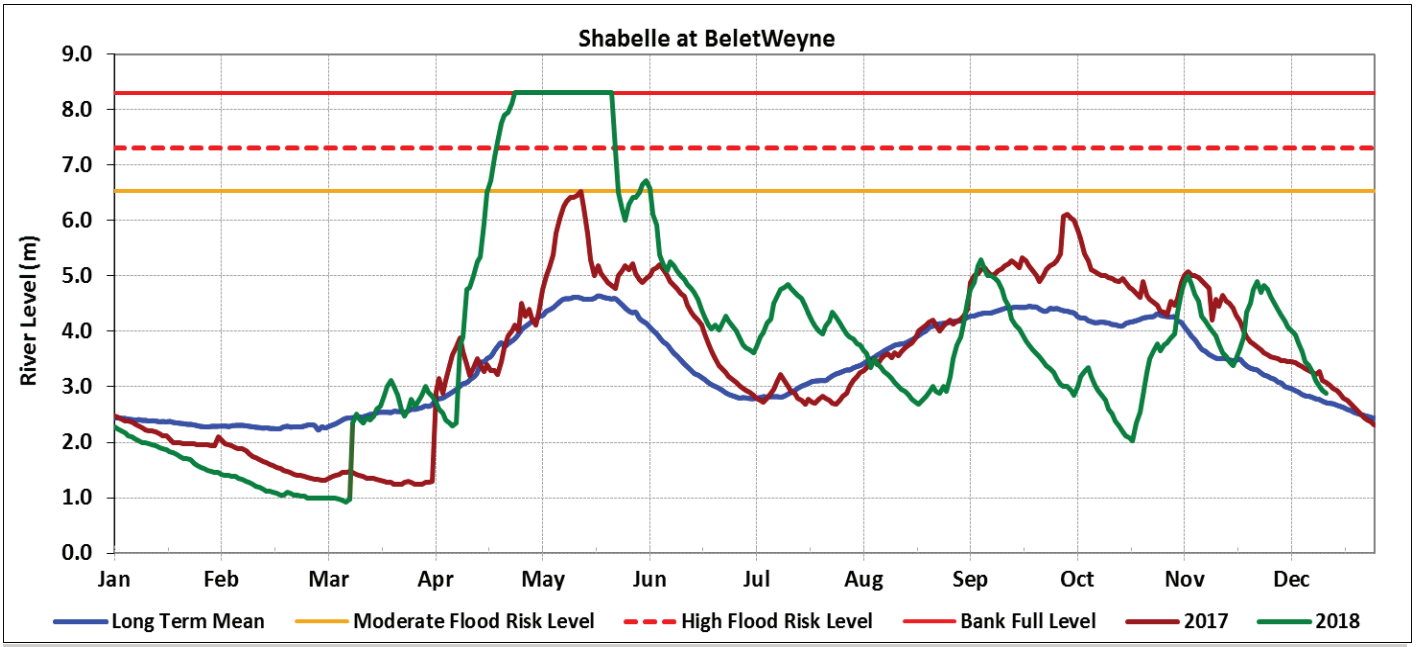


Figure 4: Observed river levels at Belet Weyne (Source—SWALIM)

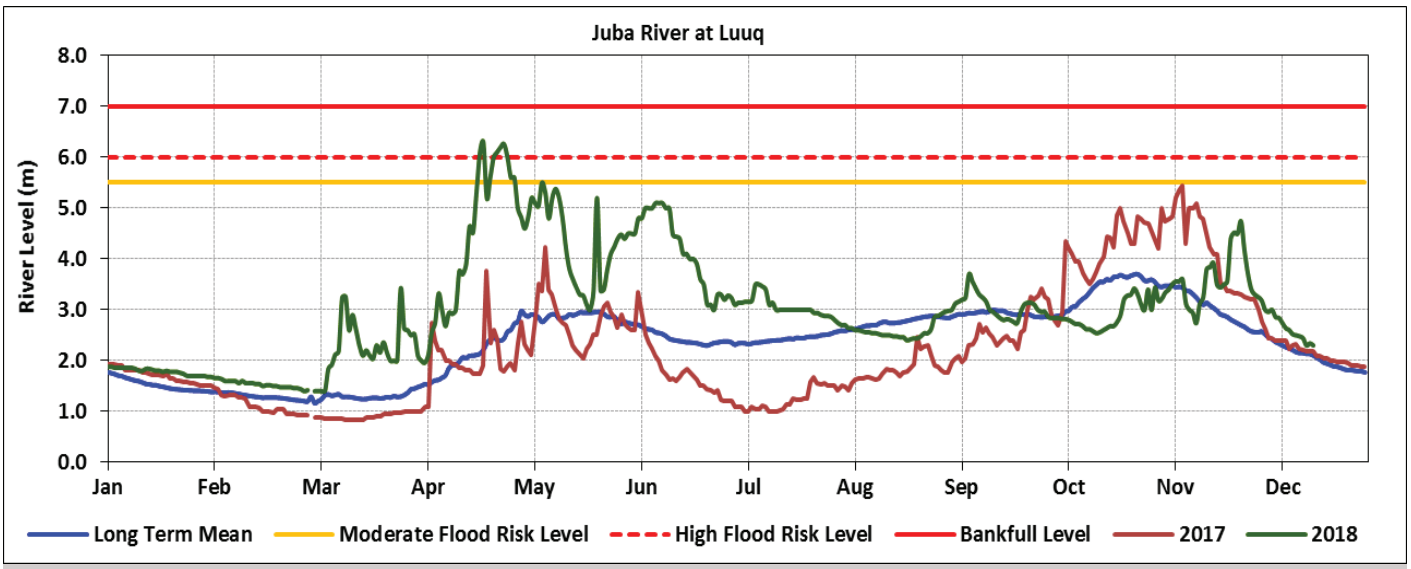


Figure 5: Observed river levels at Jowhar (Source—SWALIM)

Annex I - Deyr 2018 Rainfall Sectorial Impacts in Somalia

Region	Rainfall	Sectorial Impacts			Drought situation
		Livestock	Agriculture	Water resources	
Awdal and Woqooyi Galbeed	Average to below average rains	Owing to good rains in the previous Gu rainy season, pasture conditions have remained good boosting livestock body conditions. However, with the poor Deyr rains and high temperatures, this situation may not be sustained for long	The agro pastoral areas of Gebilley and Borama in Awdal region received good rains which have helped boost agricultural activities. However, there is no cereal stocks available for greater parts of the regions and there remains a gap	Most parts of these two regions are have good water resources due to significant recharge in the Gu season. However, there is need to use this sparingly because there was no significant recharge the months following end of Gu until now.	No drought conditions have been reported.
Togdheer	Average rains	Improved pasture condition in west Golis Pastoral and poor pasture in parts of Hawd and Agro-pastoral livelihoods	Average-Sorghum, Below average – Grass Fodder	Good rains led to increased water availability in the west Golis	No drought
Sool And Sanaag	Considerably poor rains	Below average	None	High levels of water shortages in the regions	Mild to Moderate drought conditions
Bari and Nugaal	Below average	Below average	None	Water shortage reported in most parts of Bari and Nugaal regions	Mild to Moderate drought conditions
Mudug and Galgaduud	Considerably poor rains	Below average	None	High levels of water shortages in the regions	Mild to Moderate drought conditions
Shabelle (Hiraan, Middle Shabelle, Lower Shabelle and Bandir regions)	Below average	Livestock migration has been reported from rain deficit areas to the areas that have moderate rains within the regions	Average	Average water resources recharge in October. River levels remained average from Mid-October to Late November but have started to decline.	No drought but there are large moisture deficits
Juba (Gedo, Middle Juba and Lower Juba regions)	Below average	Livestock migration has been reported from rain deficit areas to the areas that have moderate rains within the regions	Average	Average water resources recharge in October. River levels remained average from Mid-October to Late November but have started to decline.	No drought but there are large moisture deficits
Bay and Bakool	Average in most areas but poor rains in southern parts of Bay region	Average body conditions and pasture availability	Average	Good water recharge following good rains.	No drought but there are large moisture deficits

Annex II - Deyr 2018 rainfall performance

Station Name	Region	Deyr 2018 Rainfall (mm)	Deyr Long Term Average Rainfall (mm)	Percent of Normal (%)
Borama	**Awdal**	**115.0**	**93.0**	**123.7**
Qulenjeed	**Awdal**	**103.0**	**92.0**	**112.0**
Gebilley	**Wogooyi Galbeed**	**68.0**	**88.0**	**77.3**
Hargeisa	**Wogooyi Galbeed**	**33.5**	**103.0**	**32.5**
Cadaadley	**Wogooyi Galbeed**	**22.0**	**102.0**	**21.6**
Dilla	**Wogooyi Galbeed**	**51.0**	**112.0**	**45.5**
Aburin	**Wogooyi Galbeed**	**15.5**	**112.0**	**13.8**
Dhubato	**Wogooyi Galbeed**	**163.0**	**105.0**	**155.2**
Burao	**Togdheer**	**67.0**	**69.0**	**97.1**
Sheikh	**Togdheer**	**137.5**	**172.0**	**79.9**
Odweyne	**Togdheer**	**16.0**	**102.0**	**15.7**
Buadodle	**Togdheer**	**256.3**	**87.0**	**294.6**
Eeerigavo	**Sanaag**	**18.0**	**90.0**	**20.0**
Elafweyn	**Sanaag**	**0.0**	**67.0**	**0.0**
Caynabo	**Sool**	**55.0**	**78.0**	**70.5**
xudun	**Sool**	**0.0**	**61.0**	**0.0**
Taleex	**Sool**	**35.4**	**54.0**	**65.6**
Las Aanod	**Sool**	**101.0**	**57.0**	**177.2**
Qardo	**Bari**	**68.0**	**39.0**	**174.4**
Dangoroyo	**Bari**	**23.7**	**47.0**	**50.4**
Ballidhin	**Bari**	**35.2**	**30.0**	**117.3**
Bandarbeyla	**Bari**	**79.0**	**37.0**	**213.5**
Iskushuban	**Bari**	**17.0**	**19.0**	**89.5**
Garowe	**Nugaal**	**19.7**	**60.0**	**32.8**
Eyl	**Nugaal**	**17.5**	**62.0**	**28.2**
Burtnile	**Nugaal**	**49.4**	**71.0**	**69.6**
Galdogob	**Mudug**	**39.0**	**82.0**	**47.6**
Jarriban	**Mudug**	**0.0**	**61.0**	**0.0**
Galkayo	**Mudug**	**10.0**	**70.0**	**14.3**
Hudur	**Bakool**	**215.0**	**128.0**	**168.0**
Elbarde	**Bakool**	**103.0**	**168.0**	**61.3**
Baidoa	**Bay**	**158.0**	**245.0**	**64.5**
Bardaale	**Bay**	**142.5**	**172.0**	**82.8**
B/Hakaba	**Bay**	**64.0**	**195.0**	**32.8**
W/weyne	**Gedo**	**61.0**	**192.0**	**31.8**
Luuq	**Gedo**	**82.0**	**113.0**	**72.6**
Bardheere	**Gedo**	**137.0**	**223.0**	**61.4**
Bualle	**Middle juba**	**167.5**	**201.0**	**83.3**
Mataban	**Lower Shabelle**	**10.0**	**142.0**	**7.0**
Mogadishu	**Banadir**	**10.0**	**123.0**	**8.1**
Jowhar	**MiddleShabelle**	**105.0**	**208.0**	**50.5**
B/Weyne	**Hiraan**	**59.0**	**147.0**	**40.1**
Bulo burti	**Hiraan**	**54.0**	**166.0**	**32.5**