



Food and Agriculture Organization
of the United Nations



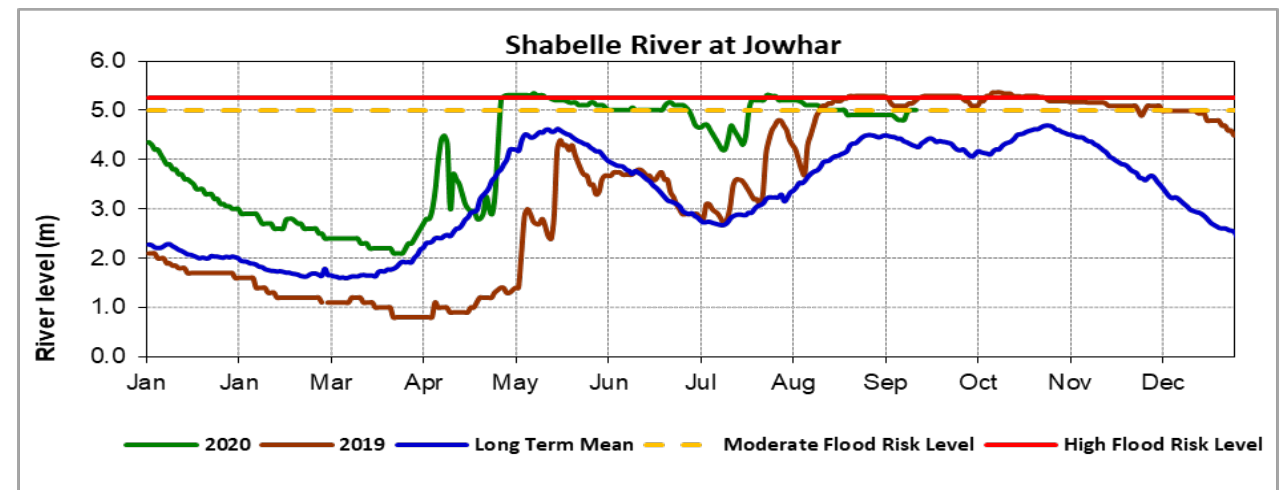
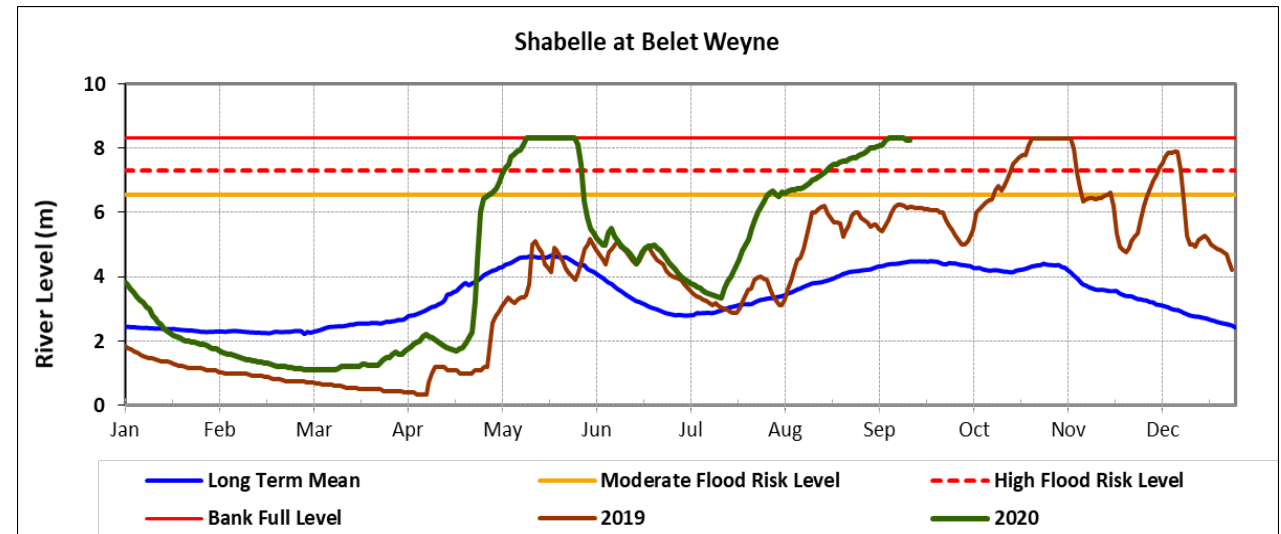
Flood Update and Trend Analysis at Belet Weyne, Shabelle River

Belet Weyne Flood Update 15 September 2020

SWALIM

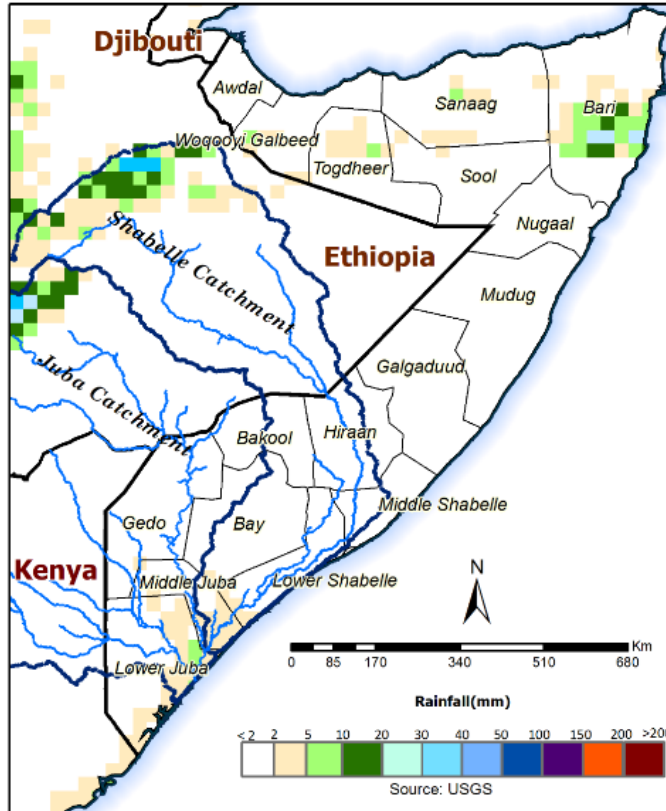
Shabelle River Levels

- River levels remained high in Belet Weyne reaching the bank-full on 8th to 13th September
- Today's river level is at 8.21 m a slight drop from bank-full.
- In Jowhar, Balcad and Afgooye the river levels declined slightly in the last week but are still significantly above normal at this time of the year
- The levels are expected to start decreasing gradually at the end of this week.

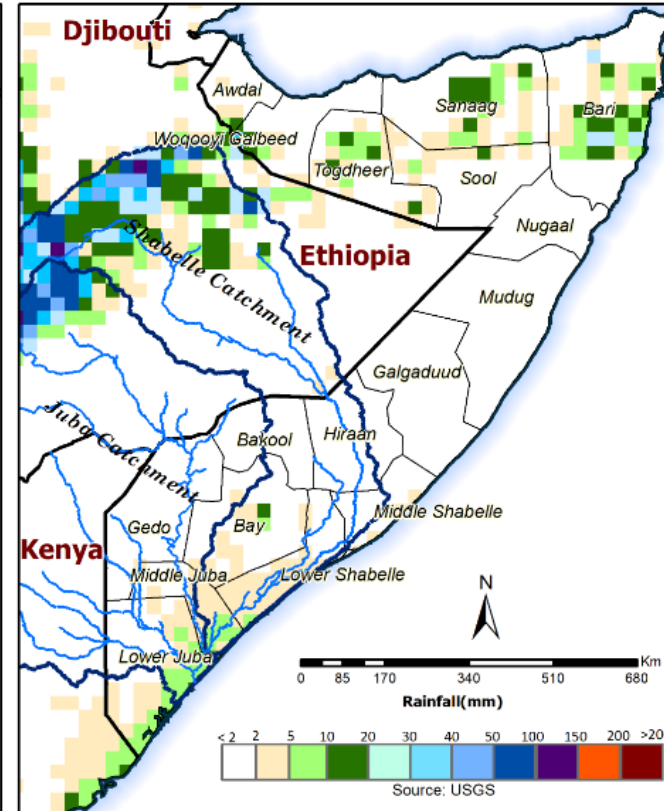


SOMALIA | Rainfall Forecast 16 to 22 Sept 2020

3 days forecast 16 to 18 Sept 2020



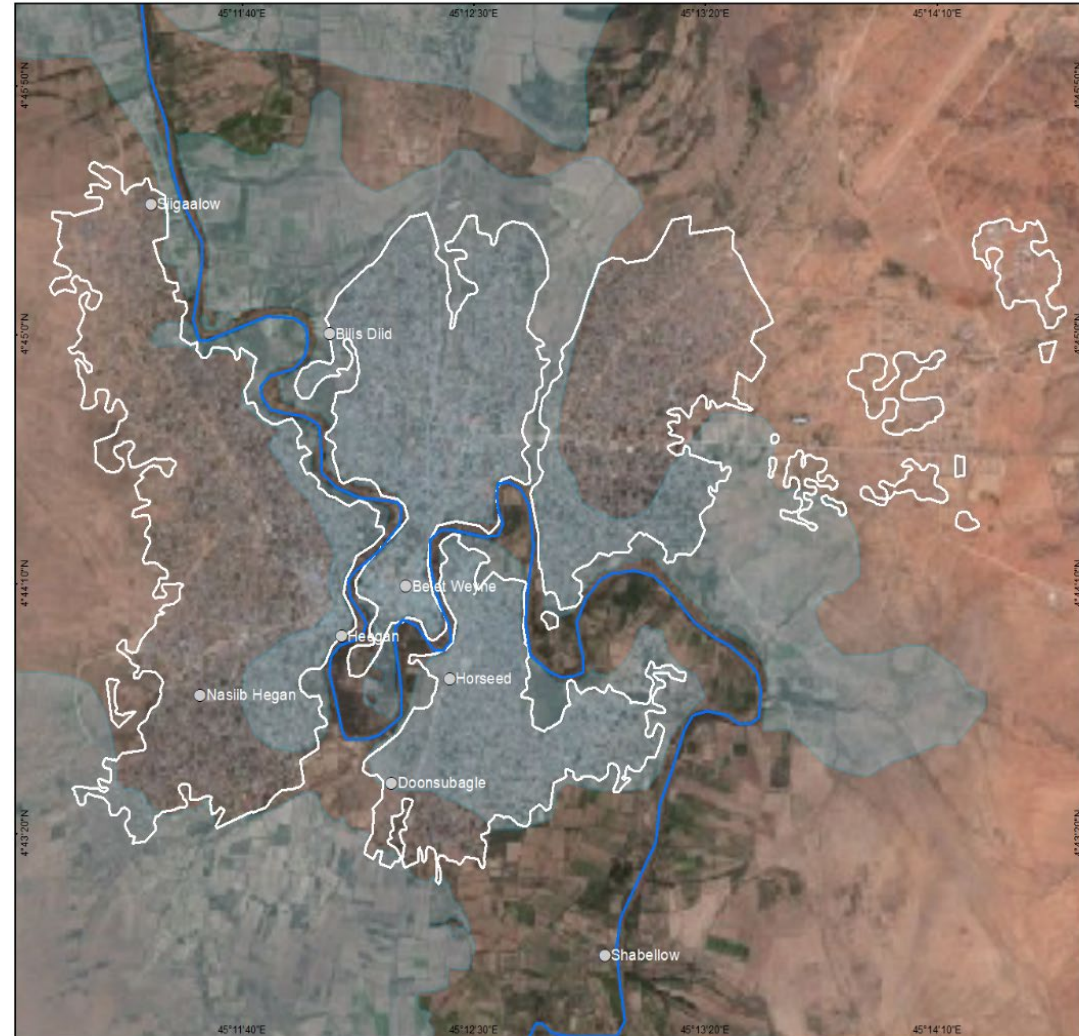
7 days forecast 16 to 22 Sept 2020



- Moderate to heavy rains will continue in the Ethiopian highlands during the forecast period.
- Parts of Sanaag, Baari and Nuugal regions will also record moderate rains within the course of this week.
- Light rains are also foreseen in the coastal areas of Lower Shabelle and Lower Juba regions.

BELET WEYNE | Shabelle Floods

- Following the heavy rain in the Shabelle River basin in Ethiopia, river levels continued to rise.
- About 45% of the town is currently inundated due to overbank spillage.
- About 14,029 ha of agricultural land has been submerged as seen from satellite images
- About 78 villages have been affected and evacuation has begun in the worst affected areas.
- FAO-SWALIM has sent over 1000 SMS flood alert messages to elders, community leaders and members of the communities likely to be affected by floods, including Belet Weyne



BELET WEYNE TOWN FLOODING AS AT 11TH SEPTEMBER 2020

Flooded	Area Flooded (Ha)	Percentage flooded
Town Area	1,122	45%
Town Flooded area	524	

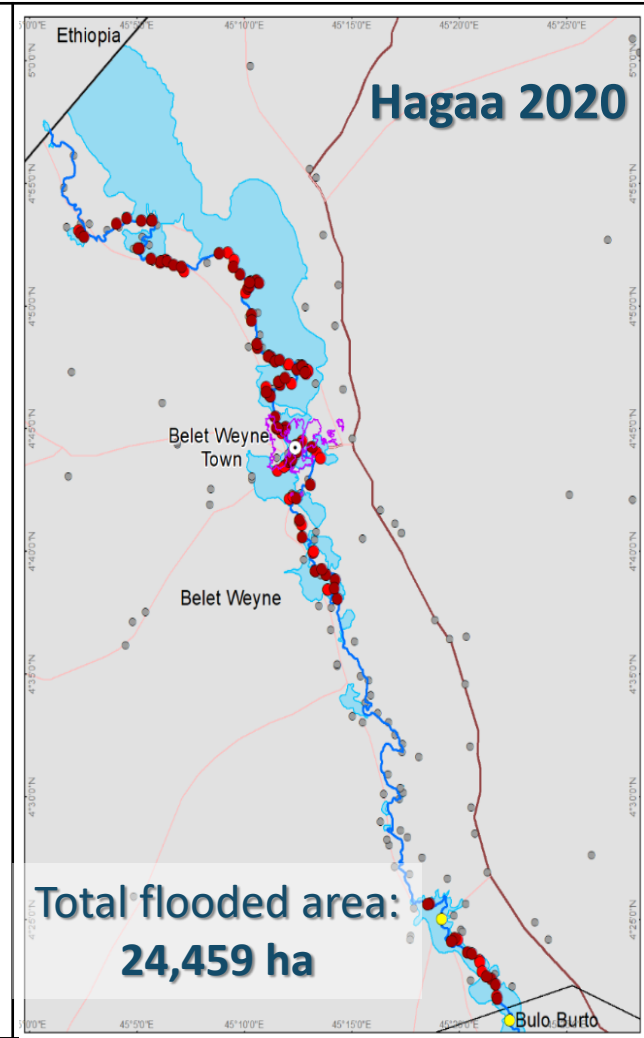
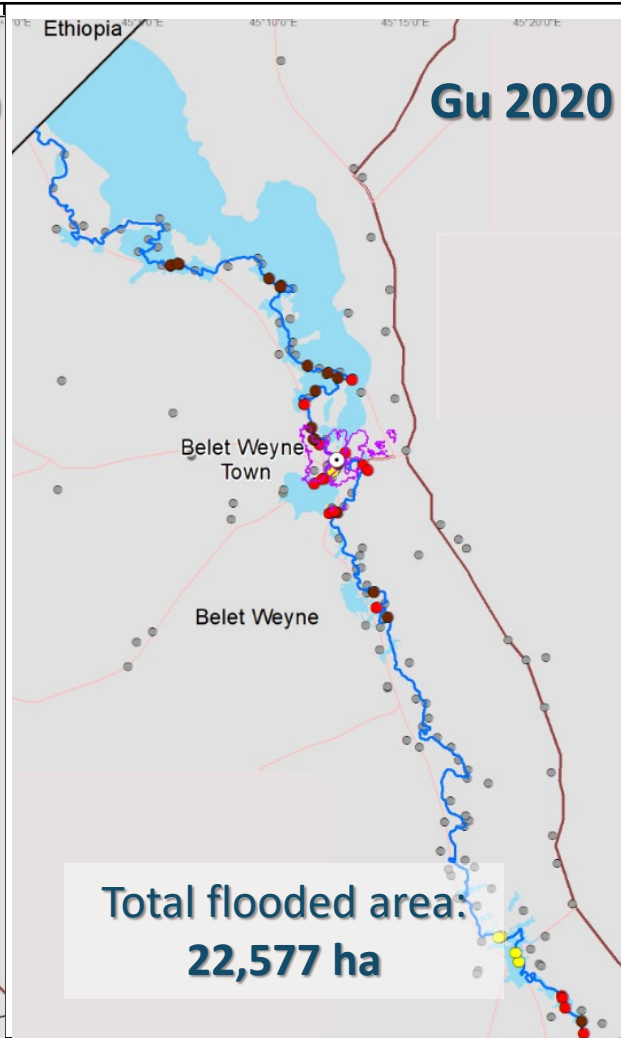
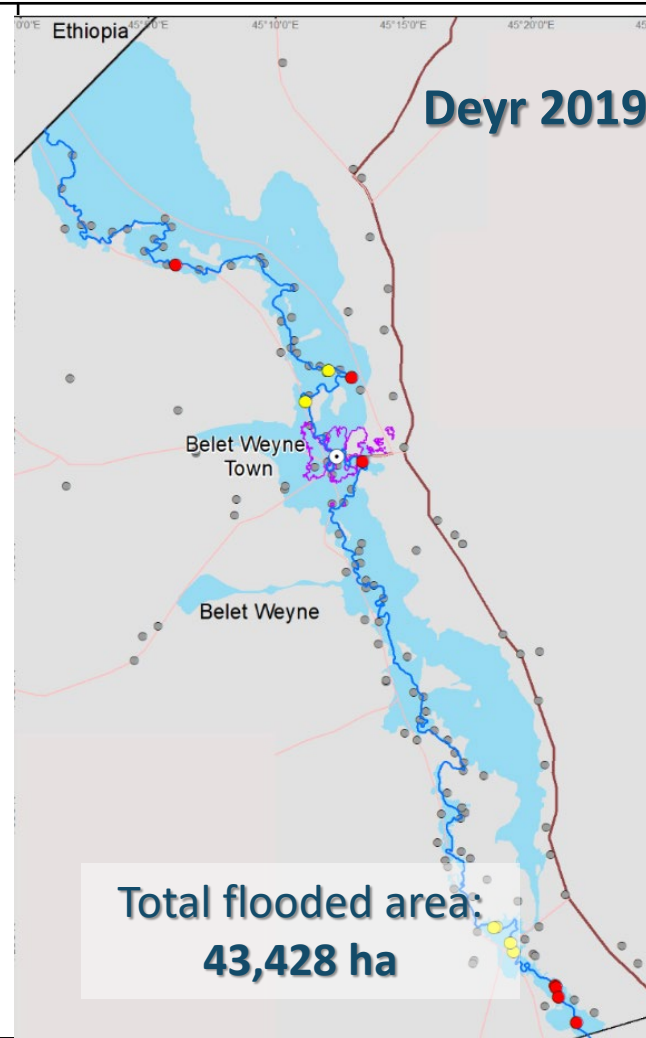
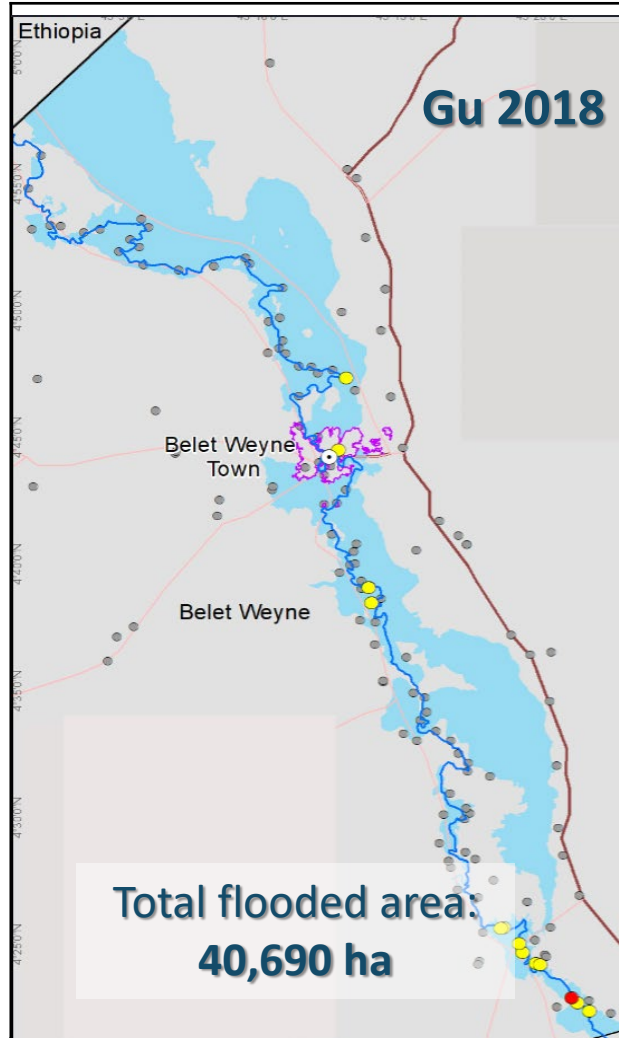
This dataset was obtained from the visual interpretation of Sentinel 2 Images of 11th September 2020 and VHR - GEO1 Images of 5th September 2020

Legend

- Villages
- Shabelle River
- ▭ Floods
- ▭ Town Boundary

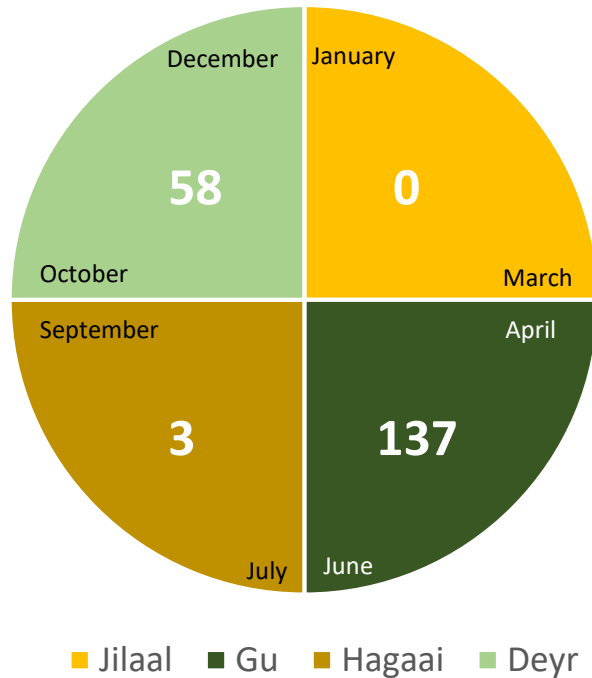


BELET WEYNE | Flood Extent (2018 to 2020)

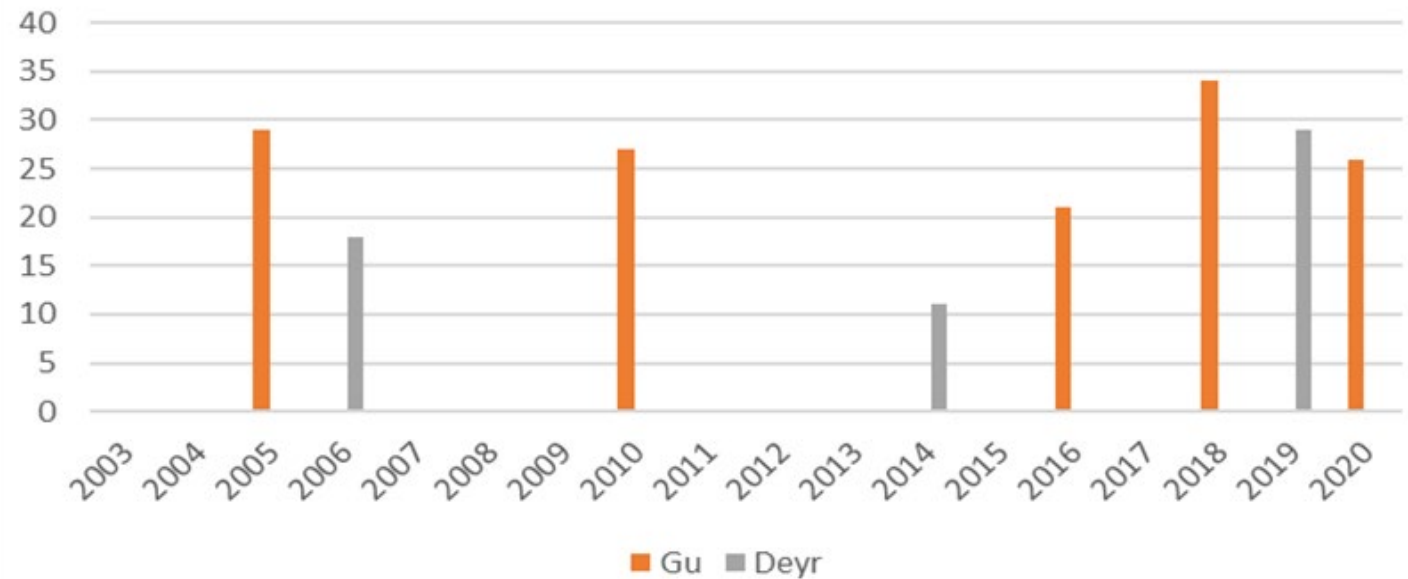


BELET WEYNE | Seasonal Flood Events (2002 – 2020)

Seasonal flood events (2002 - 2020)



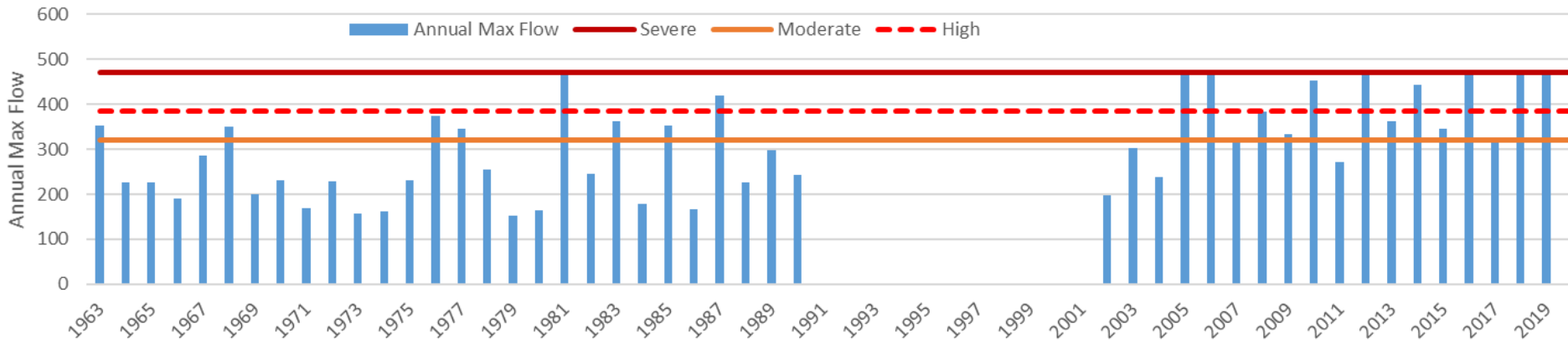
Number of days high flood risk level was surpassed



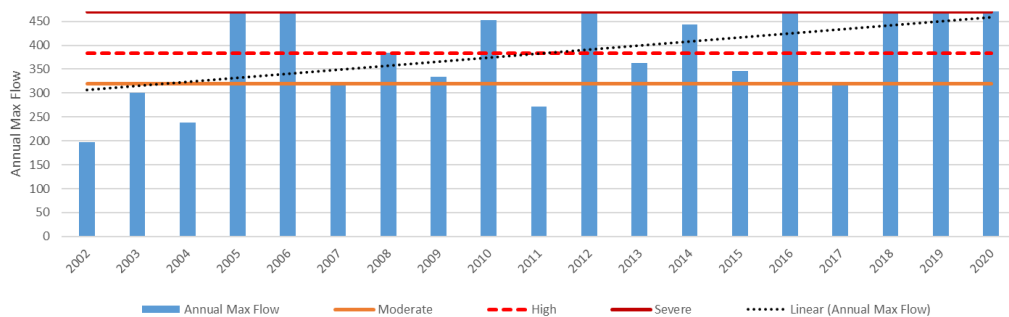
- There has been an increase in the frequency of floods at Belet Weyne in the last 5 years.
- **Worst floods:** Gu 2005; Deyr 2006; Gu 2010; Deyr 2014; Gu 2016; Gu 2018; Deyr 2019, Gu 2020 and Haggaa 2020
- The Gu season has had more flood events in terms of frequency and magnitude.

BELET WEYNE | Trend analysis using annual maximum river flow (1963 -1990 and 2002 to 2020)

Annual Max Flow at Belet Weyne (1963-1990 & 2002-2020)

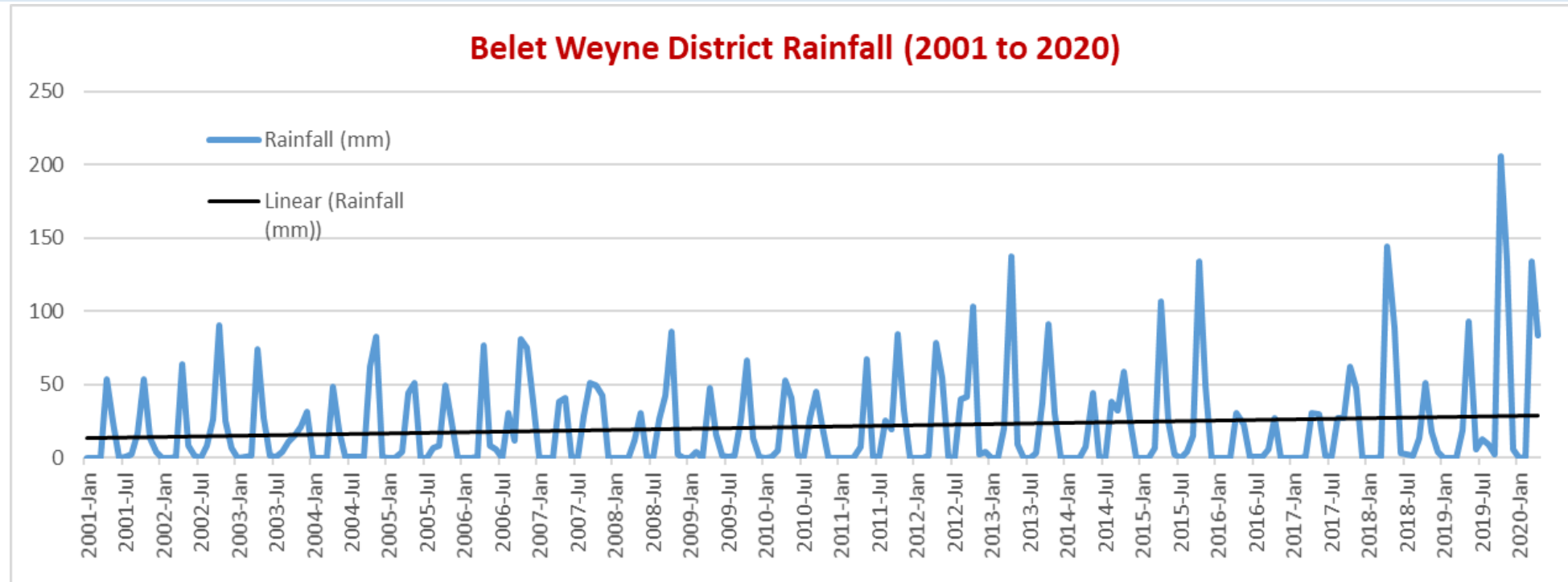


Annual Max Flow at Belet Weyne (2002-2020)



- An increasing trend in river discharge is observed at Belet Weyne
- The pre-war era has had fewer flood events compared to the post war era
- In the last 20 years, the high-risk flood level has been surpassed more frequently especially in the last five years

BELET WEYNE DISTRICT | Monthly Rainfall Trend (2001-2020)



- Trend analysis of rainfall in Belet Weyne for the last 20 years (2001 to April 2020) shows an increase in annual rainfall amounts over the years.
- This can be contributed to Climate change among other reasons - more research needs to be conducted to support the same. The pattern is also observed in the Ethiopian highlands which contributes more than 80% river level inside Somalia



CONCLUSION

- Current ongoing floods affected more than 132,000 ha of agricultural land and 294 villages in Belet Weyne, Jowhar, Balcad and Afgooye
- A positive trend in flood frequency is observed in Belet Weyne, especially in the last 5 years.
- The severity of the floods has also gone up with time.
- Gu season is most vulnerable, as more floods occurred during this time
- A positive trend of annual rainfall amounts has also been observed. This can be lined to climate change, but subject to further analysis
- A new analysis of the status of Shabelle and Juba river was finalized by SWALIM indicates that there are 154 open river breakages which pose threat to flooding. The analysis can be found here: <http://frrims.faoswalim.org/rivers/breakages>