

Dekedal Hydro Meteorology



Forward

This Dekedal Hydro Meteorological Bulletin is prepared and disseminated by the Ethiopia Meteorological institute (EMI). The ultimate objective of producing and disseminating this bulletin is to inform all level decision makers with the updated and relevant hydro meteorological information. This Dekedal Bulletin reviews the July 21-31, 2026-month climate condition and its impacts over the river catchment across the country and highlights the August 1-10, 2026 climate outlook along with the likely impact over the water dams and the rivers basins.

The information contained in this bulletin is believed to assist the water professionals for planning the capacity expansion of reservoirs, water supply, ecosystem restoration as well as rehabilitation of existing systems including dams, irrigation, canals, pumps, wetlands and the likes. In addition to the aforementioned benefit the bulletin also reveals the aridity levels of each basin, extremes heavy rainfall events and areas where significant amount of moistures loss through evapotranspiration. In the impact outlook section of the bulletin it provides the likelihood of the climate in the coming month and its potential impact over various aspect of the river basins including the hydraulic structures such as culverts, bridges, reservoir spillways, road embankments and dikes. It also indicates the measures need to be taken as the early actions so as to reduce the possible negative impact of the upcoming month climate condition. Meanwhile, your comments and constructive suggestions are highly appreciated to make the objectives of this bulletin a success.



1. *Introduction*

The provision of hydro meteorological services can contribute a significant role toward water resource management and socio-economic development. Both surface water and groundwater management are essentially linked to climate variability. Therefore, the provided climate information and knowledge in this monthly hydro meteorological bulletin have a critical importance for efficient, equitable and sustainable development and management of the national water resources and for coping with any climate related risks. The information illustrates the impact of previous 10 day weather on each and every water basins and the associated climate risks observed during the day under review. In addition to the previous 10 day impact assessment, the bulletin also provided the expected climate condition for the coming ten day and its impact on the water resource. The design of water-use and flood-control facilities, mainly dams and reservoirs, is frequently based on these analyses. Estimating the likelihood of precipitation, the distribution of precipitation and the rate of evaporation in location and time, the heavy rainfall and the subsequent runoff, extreme temperature and wind are among issues that hydro meteorologists are concerned with.

Hydro Meteorological Impact Assessment July 21-31, 2026

During the 3rd decade of July, sub humid to very wet levels of surface runoff were experienced across the most of Abay, Tekeze, Baro Akobo, Omo-Gibe, Upper and Middle Rift Valley, Awash, and the upper Genale Dawa and Wabi Shebelle basins. Furthermore, exceptionally high surface runoff was observed in the upper and middle Abay, and Upper Tekeze basins. The Hydrometeorological analyses indicate that these runoff conditions substantially enhanced surface water availability and contributed positively to water resources within the affected basins. In contrast, much of the Ogaden, middle and lower Genale Dawa, Wabi Shebelle, and Lower Rift Valley basins remained under predominantly dry conditions throughout the decade.



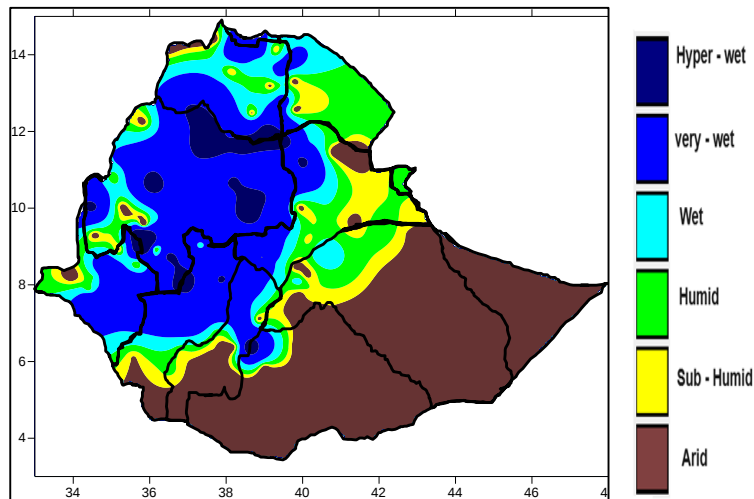


Figure 1 Dekedal Hydro Meteorological Assessments from July 21-31, 2022

1.2 Hydro Meteorological Impact Outlook for August 21-31, 2026

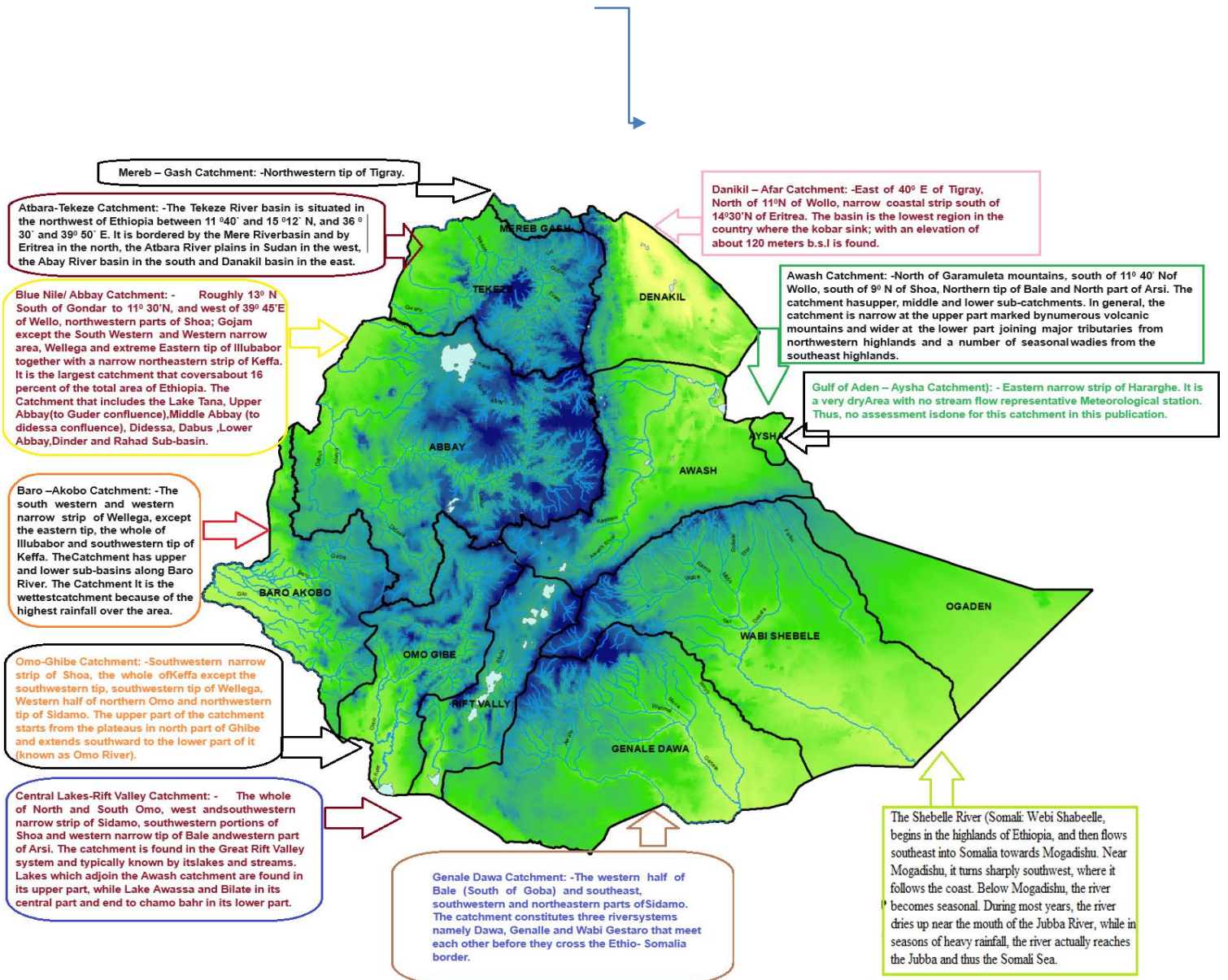
The country's basins that benefit from the kiremt rains are expected to experience very high to moderate surface water flows during the 1st decade of August. Therefore, it is recommended that the following sub basin hydro meteorological recommendations be implemented immediately to take advantage of the opportunities and minimize the expected negative impacts.

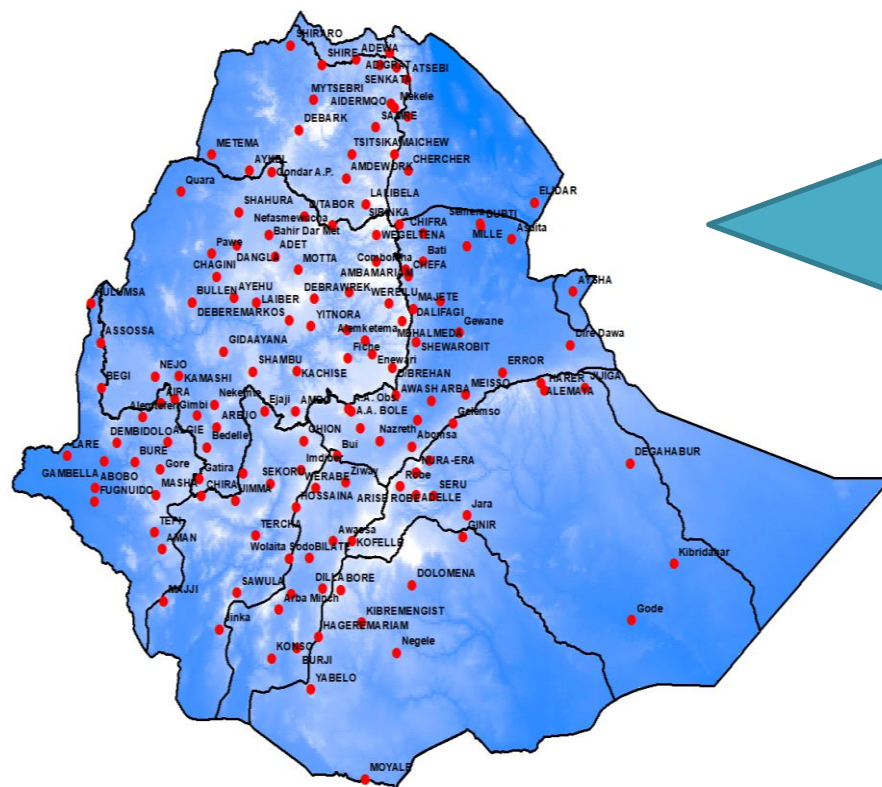


Moderate to High Surface Runoff	Positive Impacts	Negative Impacts	Hydro meteorological Recommendations
Most of Abay (Blue Nile), Baro Akobo, Tekeze, Mereb, Upper & Middle Omo Gibe, Rift Valley, Awash, Upper Genale Dawa	• Increased surface water and river flows • Improved groundwater recharge • Increased water storage in irrigation & hydropower dams • Improved irrigation & drinking water supply • Enhanced agricultural productivity & hydropower generation • Strengthened base flows in rivers during dry seasons • Improved water resource accessibility & local economy	• Risk of flash flooding • Increased risk of sedimentation • Increased water pollution • Flooded roads & traffic congestion • Blocked drainage pipes due to debris • Increased health risks for humans & livestock	• Do not attempt to cross flowing water on foot or in light vehicles • Harvest and store rainwater • Treat drinking water before use • Regularly monitor weather forecasts & advisories • Clean drainage channels & gutters • Prepare flood diversion ditches
Light to Moderate Surface Runoff	Positive Impacts	Negative Impacts	Recommendations
Lower Awash, Afar Denakil, Aysha, Upper Wabe Shebelle	• Slight improvement in surface water flow • Reduced risk of flooding & sedimentation	• High evaporation rate • Low river/water flow • Mild water scarcity in moisture-stressed areas	• Treat available rainwater before use • Harvest and store surface runoff water • Collect and store roof-top rainwater • Closely track local weather information
Dry Surface Runoff	Positive Impacts	Negative Impacts	Recommendations
Ogaden, Middle & Lower Wabe Shebelle, Genale Dawa	• Zero risk of flooding or sedimentation	• Decreased surface water flow • Reduced water levels in natural & artificial reservoirs • Depletion of groundwater resources	• Ensure water supply accessibility in water-scarce areas • Manage available water sparingly and efficiently • Utilize existing surface water resources wisely



• Increased surface evaporation





Number
of
station



[EMI]

