

# Dekedal Hydro Meteorology



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## 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 December 21-31 2024-month climate condition and its impacts over the river catchment across the country and highlights the January 1-10, 2025 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.*



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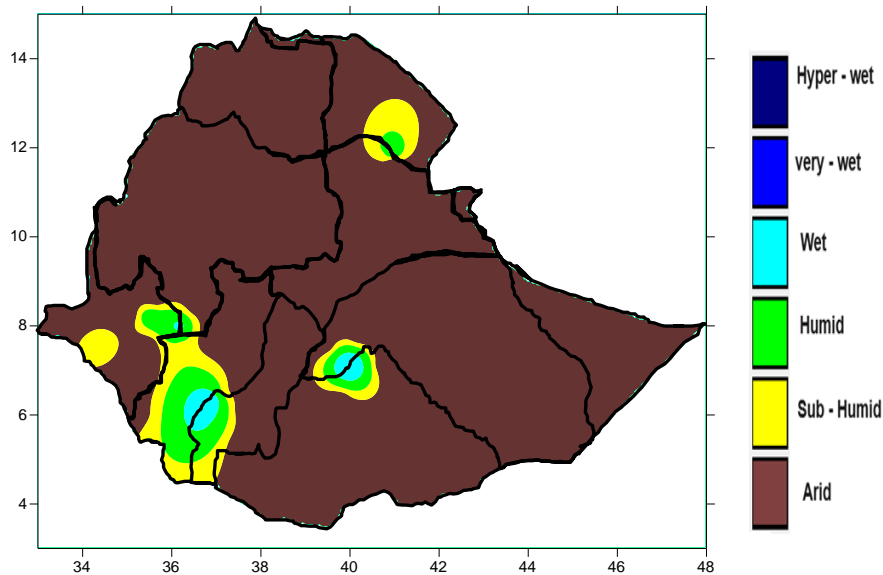
## 1. *Introduction*

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 December 21-31, 2024**

During December 3<sup>rd</sup> ten days most basins was under dry weather conditions, such as bay, Awash, Omo Gibe, central Rift valley, wabi shebele, Ogaden, Tekeze, Afar Danakil, Mereb Gash, Baro Akobo, and Aysha. Therefore reduce their Amount of water flow according to hydro meteorological analysis. In line to this, dam and another man-made and natural water reservoirs are included. On the other hand some basins were sub humid to humid moisture conditions such as middle and lower Omo Gibe, lower rift valley, few place of upper Baro Akobo, and few divided place of wabi shebele and Genale Dawa and few place of upper Afar Danakil.





*Figure 1 Dekedal Hydro Meteorological Assessments from December 1-31, 2024*

## 1.2 Hydro Meteorological Impact Outlook for January 1 -10, 2024

The next 10 days of January most of the river basins will be dry weather condition. Such as Genale Dawa, Omo Gibe, Wabi Shebele, Tekeze, Afar Danakil, Aysha, Mereb gash and central Rift Valley. This situation will be reduce the flow of water body, it is recommended to proper water utilization and also keep water from unnecessary wastage and water pollution.





