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## Instrumentation in Chemoga and Jedeb catchment

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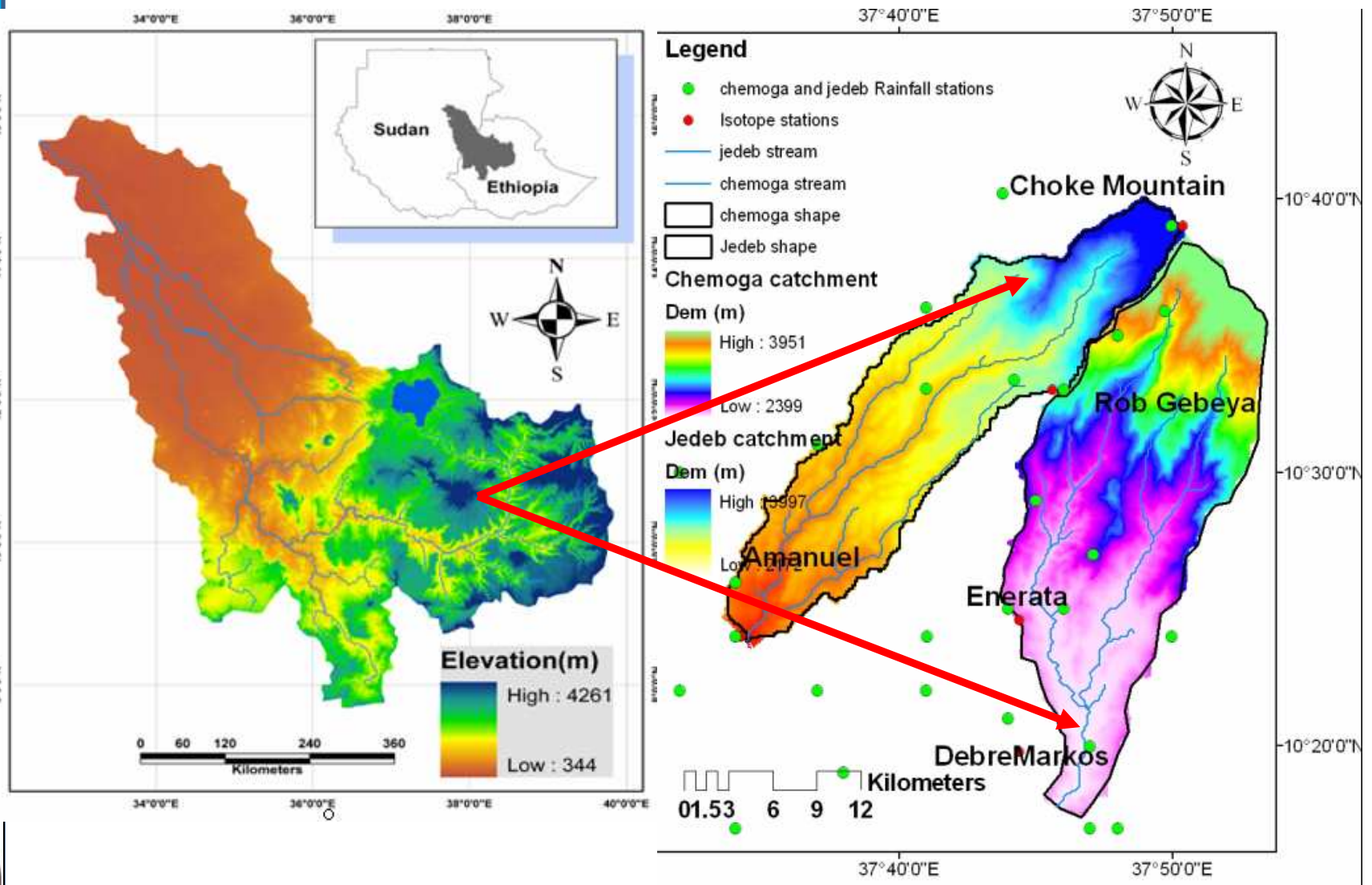
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**Field equipment setup**

**Oct. 2009**



# New climate stations to measure rainfall and new sites to collect water samples for isotope



# Field equipment setup

- Manual raingauge
- Isotope sample sites
- Automatic Hobo weather station
- Data logger ( Divers) for stream flow measurement

- 34 Manual rainguages have been installed
- 5 Isotope sample sites spatially located at different altitude (Ranging from 2220 -4000 m a.m.s.l)
- 1 Automatic weather station installed at Enerata
- 2 Data logger (Divers) in Chemoga and Jedeb Rivers





# Rainfall sample collector for isotopic analysis



➤ Sample collector installed at five different locations at different altitude

Table: Isotope sample station

Date established	Station name	Longitude	Latitude	Altitude (m)	Remark
22/08/08	Debre Markos	37.74	10.33	2439.00	Rainfall & spring
2/05/09	Enerata	37.74	10.41	2517.00	Rainfall & spring
10/10/2008	Rob gebeya	37.76	10.55	2952.00	Rainfall & spring
3/06/09	Fana Choke	37.84	10.65	3999.00	Rainfall
2/06/09	Yewla	37.57	10.40	2219.00	Rainfall & spring



Collected samples



# Automatic Hobo weather station



Five sensors were configured @ 1 minute interval and sampled every 10 minutes

Sensors: Rainfall, solar radiation, wind speed measured @ 3m, Temperature, & Relative humidity



# Manual rain gauge



➤ 34 manual rain gauges  
measuring the rainfall on  
daily basis

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University Of Khartoum  
جامعة الخرطوم



UNESCO-IHE  
Institute for Water Education

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# Jedeb river during flood season Sept.. 2009





# Chemoga river water level measurement



➤ Diver configured at 15 minutes to measure the water level

➤ Diver installation  
Cooperating with Ministry of Water Resources Ethiopia staff in Chemoga river



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**Thank you!**