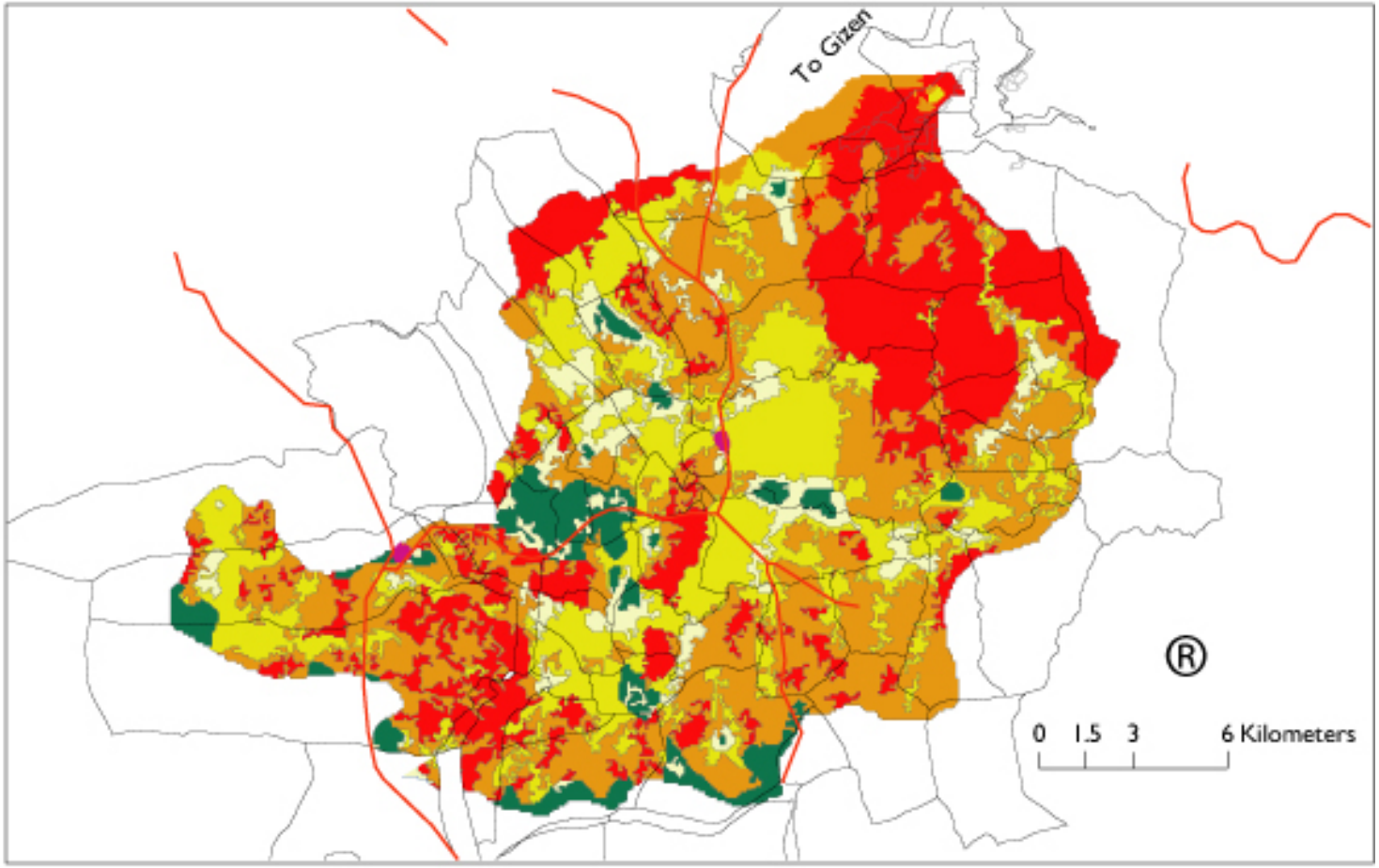
Groundwater Potential of Upper Tumet catchment: A Guide for Planners

This is one of three fliers produced to illustrate how, based on the same information, different types of maps can target different types of users. We have three different users in mind: map developers such as GIS specialists, deep users such as hydro-geologists who have a good technical understanding of the input data and shallow users (this present map) such as planners who do not necessarily understand input data but need to use groundwater information for planning purposes.

This map shows the relative abundance of groundwater in Upper Tumet catchment, which straddles Menge and Komosha woredas in Assosa Zone, Benishangul-Gumuz Region. It shows areas where groundwater can easily be found and developed, and areas where it is difficult to get groundwater, by dividing the catchment into five classes of groundwater potential. The map also shows kebele and woreda boundaries, towns and the all-weather roads in the districts.

Groundwater is not available in equal amounts everywhere. The table overleaf explains how easy it is likely to be to develop groundwater supplies in each area class, and what kind of technologies are likely to be appropriate.



Legend

- All weather road
- Towns
- 1
- 2
- 3
- 4
- 5
- Menge Kebele
- Komosha Kebele

This flier was produced by Gezahegn Lemacha based on his MSc work in Upper Tumet catchment, Menge and Komosha woredas, Benishangul-Gumuz region, Ethiopia for WaterAid Ethiopia and RIPPLE.

RiPPLE is a DFID-funded Research Programme Consortium. You can find out more about RiPPLE's work, including more guidance on using maps to support WASH, from the RiPPLE project, via the website (www.rippleethiopia.org) or by email (info@rippleethiopia.org).

RiPPLE

WaterAid

Developing groundwater resources for water supply

Groundwater potential class		Description	Technology
	1-2	Areas where groundwater can usually be easily exploited for village supplies all year-round. In the best areas, machine-drilled wells can provide much larger supplies, for more than 1,000 people.	Hand-dug well excavation for small village supplies (up to 250 people). Occasionally, machine-drilled shallow wells may be needed even for village wells. Machine-drilled shallow or deep wells are needed for larger supplies.
	3	Areas where it is possible to get small supplies of groundwater but which are often not sustainable throughout the whole dry season	Deep or shallow machine-drilled wells, which need to be carefully sited using geophysical survey methods.
	4	Areas where it is possible to get small supplies of groundwater but which are often not sustainable throughout the whole dry season.	Hand-dug well excavation for small supplies (up to 250 people) but they often dry up during the dry season.
	5	Areas where it is only possible to get very small supplies of groundwater and only during the rainy season.	Hand-dug well excavation for very small supplies (up to 100 people), which often are dry throughout the dry season.

This table explains how easy it is likely to be to develop groundwater supplies in each area class, and what kind of technologies are likely to be appropriate. In some areas, it is relatively easy to develop sustainable year-round groundwater supplies. In other areas groundwater is usually absent during most or all of the dry season, and alternative sources for water supply are likely to be needed. Alternatives could include rainwater harvesting, or sand dams