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# **EMERGENCY** WATER SOURCES

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GUIDELINES FOR SELECTION AND TREATMENT

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Loughborough University UK



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The authors would like to hear from anyone who uses the guidelines in the field with comments on their usefulness and areas which require adaptation or improvement. Please forward comments or suggestions to Bob Reed at the address given overleaf.

## **ABOUT WEDC**

The Water, Engineering and Development Centre (WEDC) is one of the world's leading institutions concerned with education, training, research and consultancy for the planning, provision and management of physical infrastructure for development in low- and middle-income countries.

WEDC is devoted to activities that improve the health and well-being of people living in both rural areas and urban communities. We encourage the integration of technological, environmental, social, economic and management inputs for effective and sustainable development.



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UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES

Many individuals have made useful contributions and are acknowledged in Section 1.



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## ACRONYMS

ARRA	Administration of Refugee and Returnee Affairs (Ethiopia)
CEU	Construction Enterprise Unit
DFID	Department for International Development
GPS	Global positioning system
HCR	Shortened version of UNHCR
ICRC	International Committee of the Red Cross
IFRC	International Federation of the Red Cross and Red Crescent Societies
MSF	Médecins sans Frontières
NGO	Non-governmental organisation
NTU	Nephelometric Turbidity Units
O&M	Operation and maintenance
RAEWS	Rapid Assessment of Emergency Water Sources
REDR	Register of Engineers for Disaster Relief
RSF	Rapid sand filtration
SRS	Sanitary risk score
SSF	Slow sand filtration
THM	Trihalomethane
TU	Turbidity Units
TDS	Total dissolved solids
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNPROFOR	United Nations Protection Force
UNIDO	United Nations Industrial Development Organization
UTM	Universal Transverse Mercator
WEDC	Water, Engineering and Development Centre
WHO	World Health Organization



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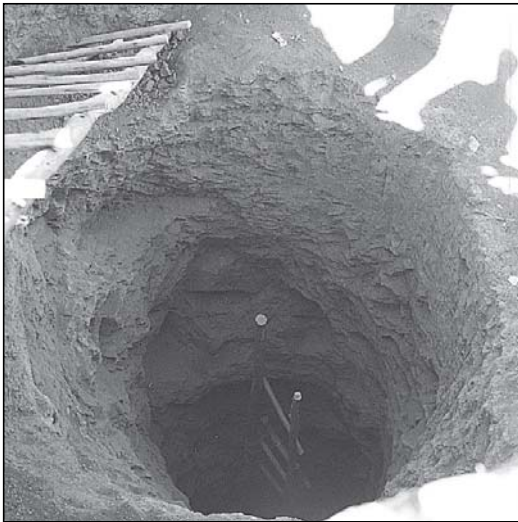
Lungutu River, Eastern Zaire

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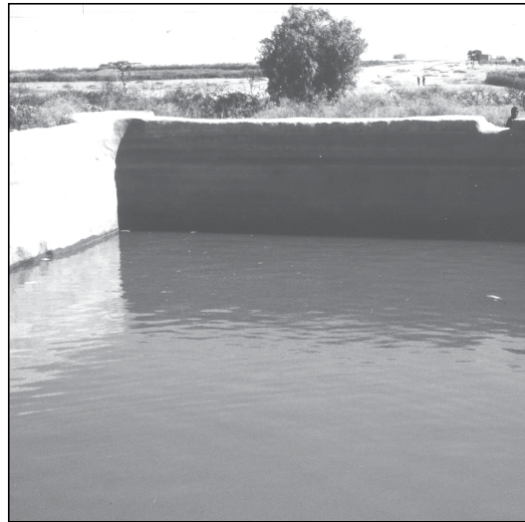
Shallow groundwater, Teferi Ber, Eastern Ethiopia

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Shallow well under construction, Teferi Ber, Eastern Ethiopia

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Rainwater stored in *birka*, Kebri Beyah, Eastern Ethiopia

## Water sources

