

Groundwater Relief

Technical advisors' term of references

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ABOUT GROUNDWATER RELIEF

Groundwater Relief (GWR) (<https://groundwater-relief.org/>) is a UK registered charity (No. 1167458) that provides technical expertise and services to organisations and government agencies responsible for developing and managing groundwater resources mainly across Africa, Asia and the Middle East.

Groundwater Relief's work is facilitated by a team of international groundwater professionals, comprising over 550 registered technical members. Their collective support has enabled Groundwater Relief to undertake over 130 projects in 27 different countries in the past 8 years.

Groundwater Relief has a small team of core staff who manage the technical membership, manage projects, and support the growth and development of the charity. To strengthen the quality of its technical programmes and strategic decision-making, GWR maintains a pool of volunteer Technical Advisors who provide independent, pro bono expert advice in their respective fields of expertise. Technical Advisors support GWR by reviewing technical documents, participating in discussions, providing specialist recommendations, and sharing their professional knowledge to help ensure that GWR's work is informed by best practice and the latest technical developments. The role is advisory in nature and offers an opportunity for experienced professionals to contribute their expertise in support of humanitarian and development objectives.

OPERATIONAL ARRANGEMENTS

The Technical Advisor shall be engaged through Groundwater Relief's Technical Advisor Pool and shall be bound by the terms and conditions set out in the applicable Service Level Agreement (SLA).

The Technical Advisor shall determine and communicate their preferred maximum level of availability for advisory support. This availability shall normally be expressed as a maximum number of hours per week and may be reviewed and adjusted periodically by mutual agreement between the Technical Advisor and GWR. GWR recognises that advisors may have different professional and personal commitments and will endeavour to establish working arrangements, communication methods and levels of engagement that best suit the preferences and availability of each Technical Advisor.

The advisory support provided under this role is intended to be flexible, remote and generally light-touch in nature. All support is expected to be provided remotely unless alternative arrangements have been agreed. Typical activities may include participation in calls or virtual meetings, provision of technical advice, review of concepts and proposals, discussion of technical challenges, interpretation of findings or results, and guidance on matters relating to the Advisor's area of expertise.

From time to time, the Technical Advisor may also be requested to undertake more substantial contributions, including the peer review of technical reports, assessments, studies, manuals, standards, guidance documents, or project deliverables. Such requests will be communicated in advance and will remain subject to the Advisor's availability and willingness to participate.

The level and frequency of engagement will vary considerably depending on GWR's portfolio of projects, funding opportunities, technical priorities, and operational needs. Advisors should therefore not expect a regular workload. There may be periods of several months during which no advisory support is requested. Conversely, specific projects, proposals, emergencies, or strategic initiatives may result in periods of increased engagement where additional advisory input is sought.

GWR retains full discretion regarding when and from whom advisory support is sought and may consult multiple Technical Advisors on the same topic where this is considered beneficial to the quality of technical decision-making. The Technical Advisor similarly retains full discretion to accept or decline requests for support based on their expertise, availability, and other professional commitments.

COMMON QUALIFICATIONS APPLICABLE FOR ALL TECHNICAL ADVISORS

- A university degree in a field relevant to the technical discipline covered by the advisory role.
- A minimum of fifteen (15) years of professional experience in the relevant technical field.
- Demonstrated experience providing strategic, technical, operational or advisory support on complex projects.
- Strong written and verbal communication skills in English.
- French, Arabic languages are an asset
- Ability to review technical documentation and provide constructive recommendations remotely.

- Commitment to Groundwater Relief's humanitarian mission and values.
- Willingness to support humanitarian and development activities on a pro bono basis.
- Ability to work respectfully with multicultural teams and stakeholders.

COMMON RESPONSABILITIES APPLICABLE TO ALL TECHNICAL ADVISORS

All Technical Advisors shall:

- Provide advice only within their fields of expertise.
- Clearly identify assumptions, limitations and uncertainties.
- Maintain confidentiality of information shared by GWR.
- Comply with GWR's Code of Conduct and safeguarding policies.
- Disclose actual, potential or perceived conflicts of interest.
- Respond to requests within a reasonable timeframe.
- Provide advice in good faith and on a best-efforts basis.
- Participate in meetings, calls and document reviews as mutually agreed.
- Recognise that final decisions remain the responsibility of GWR.

These TORs are intentionally broad so that each individual assignment can be accompanied by a short assignment-specific briefing. This keeps the advisor pool flexible while clearly defining each discipline's area of expertise.

TERMS OF REFERENCE

1. Managed Aquifer Recharge (MAR)

Purpose

To provide specialist advice on the planning, assessment, design, implementation and monitoring of Managed Aquifer Recharge initiatives undertaken or supported by GWR.

Areas of Support (such as, but not limited to)

- Assessment of MAR opportunities and constraints.
- Review of recharge concepts, feasibility studies, and designs.
- Guidance on source water quality and recharge risks.
- Advice on MAR monitoring frameworks and performance indicators.
- Review of operational and maintenance strategies.
- Advisory support during project conception, implementation and evaluation.

2. Integrated Water Management Planning (IWMP)

Purpose

To provide strategic and technical advice on integrated water resource management and water planning approaches supporting sustainable groundwater development and water security.

Areas of Support (such as, but not limited to)

- Water resource planning and allocation.
- Catchment and aquifer-scale management strategies.
- Water security and climate resilience planning.
- Multi-stakeholder water governance approaches.

- Integration of groundwater within broader water resource frameworks.
- Development and review of IWMP methodologies.

3. Geophysics

Purpose

To provide expert advice on the application of geophysical methods for groundwater exploration, aquifer characterization and water resource investigations.

Areas of Support (such as, but not limited to)

- Survey design and methodology selection.
- Electrical resistivity tomography (ERT).
- Vertical electrical sounding (VES).
- Electromagnetic (EM) methods.
- Seismic and other passive geophysical techniques.
- Down-the-hole (DTH) methods
- Data interpretation and reporting.
- Integration of geophysical results with hydrogeological assessments.

4. Hydrogeology

Purpose

To provide expert hydrogeological guidance to support groundwater investigations, development projects and water supply programming.

Areas of Support (such as, but not limited to)

- Geological and hydrogeological assessments.
- Remote sensing.
- Conceptual model development.
- Aquifer characterisation.
- Well siting and targeting.
- Groundwater monitoring.
- Pumping test interpretation.
- Groundwater risk assessments.
- Groundwater resource sustainability analysis.

5. Geochemistry

Purpose

To provide specialist advice on groundwater quality, hydrochemistry and geochemical processes affecting groundwater resources and water supply systems.

Areas of Support (such as, but not limited to)

- Groundwater quality assessment.
- Interpretation of water quality data.
- Geochemical characterisation of aquifers.
- Salinity, fluoride, arsenic, iron and other water quality issues.
- Contamination pathways and risk assessments.
- Sampling protocols and analytical programmes.

- Water quality monitoring strategies.

6. Drilling and Well Construction

Purpose

To provide expert advice on borehole drilling, well design, construction supervision and related groundwater infrastructure.

Areas of Support (such as, but not limited to)

- Borehole design and specifications.
- Contractor procurement and tendering.
- Borehole construction methodologies.
- Well design and completion.
- Contractor supervision frameworks.
- Borehole development and rehabilitation.
- Quality assurance and quality control procedures.