

# Co-creating an environmental water monitoring system using citizen science in Malawi

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## 1. Challenge - Groundwater Monitoring Network

- **Existing monitoring systems are not in working order**
  - Absent or malfunctioning equipment
  - Vandalism
  - Broken/missing parts
  - No data recording or 'uploading' mechanism
  - Lack of trained monitors
- **Financial resource challenge**
- In addition: technology-led solutions are often not viable alternatives (e.g. telemetry systems)



Figure 1. Image of a non-functional groundwater monitoring point in Machinga District. The monitoring point has been vandalised. (ND WASH Consultants, 2017)



Figure 2. Image of a non-functional groundwater monitoring point. The monitoring point has been vandalised by local community. (Government of Malawi et. al, 2022)

## 2. Why Citizen Science?

- **'Citizen scientists' are already engaged** in other water management practices in Malawi
- 88% of the monitoring wells are located on government operated sites (e.g. 54% on school sites)
- Challenges in monitoring go beyond equipment or technology provision – require community engagement
- Potential **co-benefits to citizen science** approaches for communities and institutions

## 3. Next steps - co-creating a monitoring strategy

- Bring together partners in Malawi to validate and discuss early research findings
- Knowledge exchange and co-creation workshops to **develop a citizen science informed approach to monitoring groundwater**
- **Pilot the citizen science approach**, alongside government institutions, at rehabilitated monitoring stations

## 4. What I am looking for - thoughts or experience...

- Institutionalising citizen science
- Monitoring and regulation using citizen science
- Co-creating with citizen science



*Please get in touch with any questions, comments or suggestions! I would love to hear from you!*