Policy Briefing for Kwale County Government

Delivering Water Security and Welfare

22nd November, 2018

The Groundwater Risk Management for Growth and Development (Gro for GooD) project has identified four areas for action by Kwale County Government based on research findings from 2013-2018 conducted by a consortium of research partners consisting of the University of Oxford, University of Nairobi, Jomo Kenyatta University of Agriculture and Technology, Universitat Politècnica de Catalunya and Rural Focus Ltd.

1. Groundwater resources for growth and development

Significant groundwater resources have been identified for the first time in Msambweni sub-County. Detailed geophysical and geological studies indicate that there are two zones running North West – South East across Msambweni sub-County which will sustain high yielding boreholes that provide good quality groundwater. The larger of these palaeo-channels (ancient filled-in and buried river channels) is in the southern part in the Milalani area, and the smaller one in the Kinondo area (see map on page 4). Kwale County government can target these two palaeo-channels, as part of the sustainable stewardship of the County's groundwater resources, to provide sustainable water supplies for its growth and development. Our study recommends that:

a) The palaeo-channels can make a significant contribution to local water supplies.
b) Groundwater recharge areas must be protected.
c) Unregulated groundwater use may lead to saline intrusion near the coast.
d) Investing in groundwater studies can avoid costly investment mistakes.
e) Modelling the groundwater system allows sustainable allocation of the resource.

2. Drought resilience

Severe drought in late 2016 and early 2017 affected much of Kenya, with parts of Kwale badly impacted. In collaboration with the National Drought Management and Authority and the Kenya Meteorological Department, the County Government can improve drought resilience by:

a) Ensuring inter-agency collaboration on data collection and sharing to improve drought early warning.
b) Initiating a programme of deepening hand-dug wells which are at risk of going dry during drought periods.
c) Ensuring emergency water supplies are available to reduce communities' reliance on expensive vended water during droughts.

3. Rural welfare

A three-year (2014-2016) longitudinal survey of 3,500 households was conducted in Kwale County on socio-economic development. The results have revealed that welfare can be improved through four key interventions:

a) Increase household energy access.
b) Promote higher education attainment.
c) Improve rural drinking water services.
d) End open defecation.

These findings support the County's Transformation Agenda highlighted in the Annual Development Plan 2017/2018.

4. Rural water maintenance services

A performance-based water maintenance programme can guarantee handpump repairs in less than three days ensuring access to water services. As of November 2018, 13,000 people and 4,000 school children are registered with this service. The performance-based

maintenance programme has now been successfully replicated in Kitui County. Kwale County Government needs to coordinate, plan and manage rural water by:

a) Supporting performance-based maintenance service providers through investing in a Water Services Maintenance Trust Fund.
b) Convening all rural water supply stakeholders (government, NGOs, donors, private sector) on a quarterly basis to coordinate activities, promote accountability and increase efficacy of investments.
c) Ensuring that all new infrastructure development is accompanied by a sustainably-funded maintenance plan and service providers working in Kwale commit to providing sustainable services to 2030.

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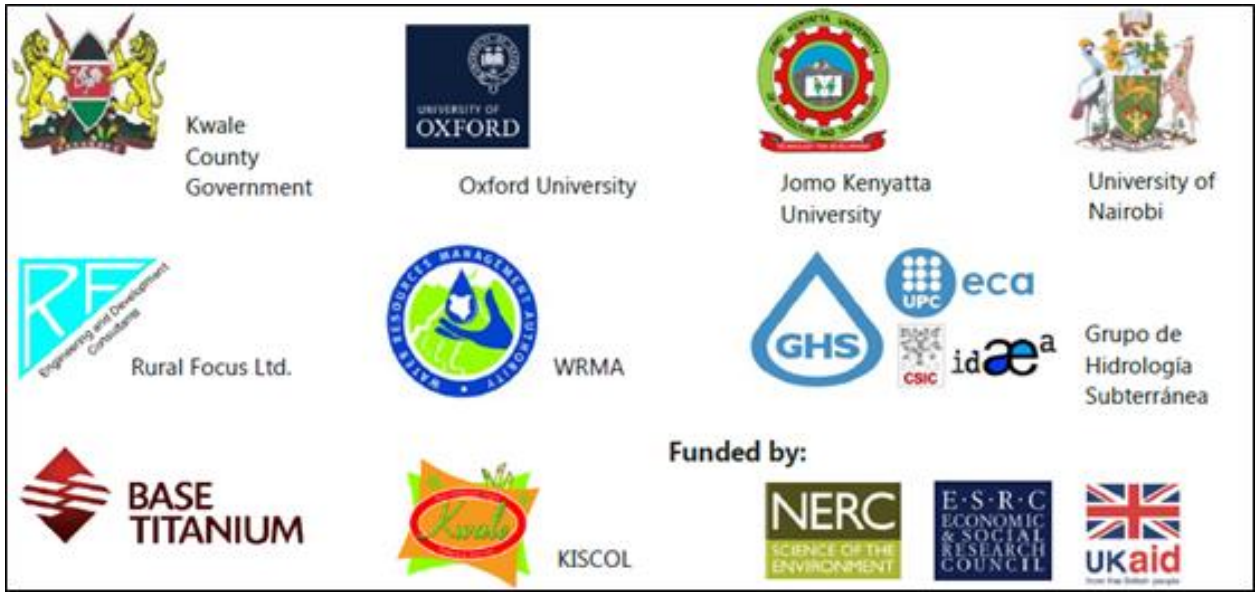

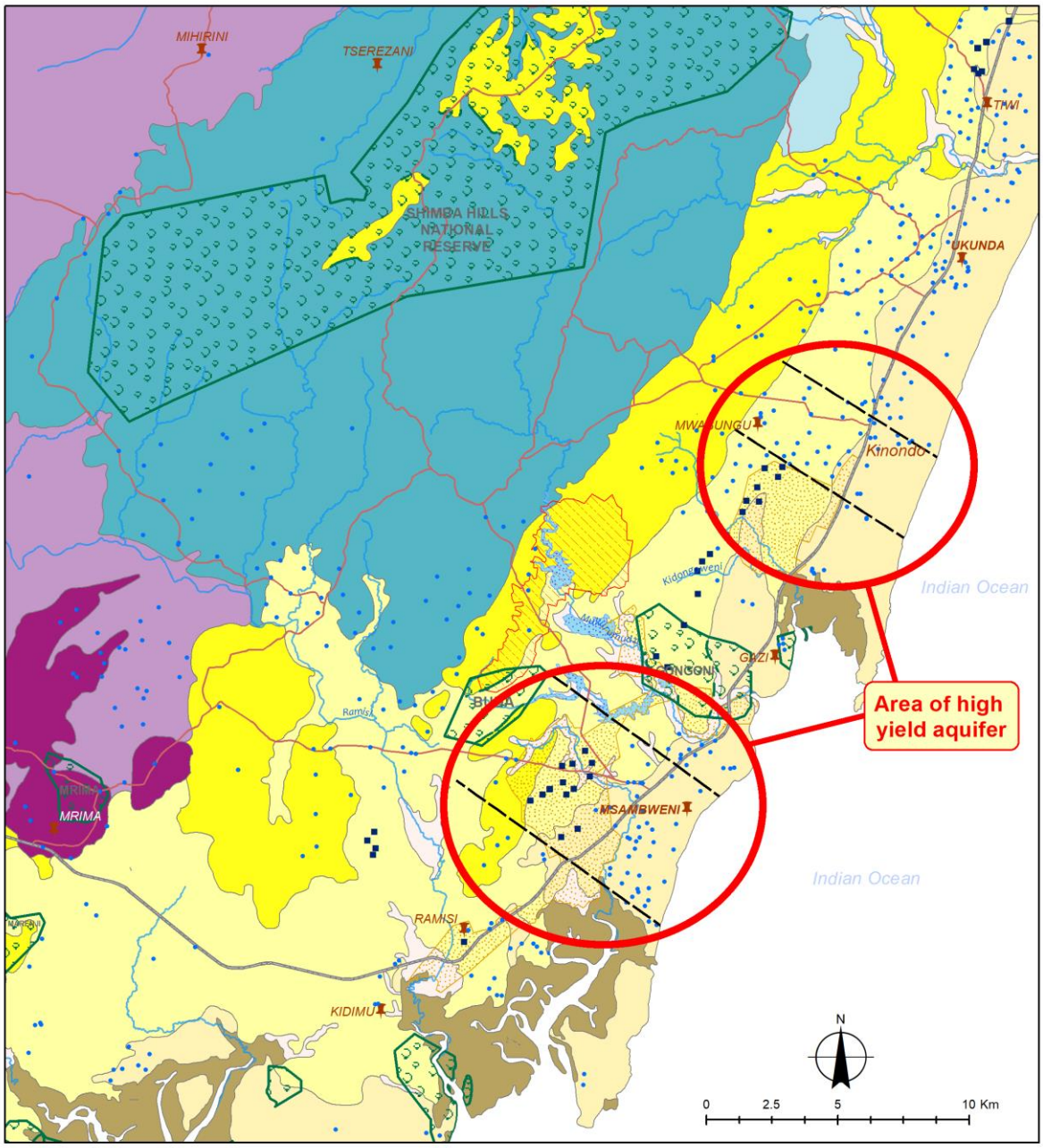

Legend

- Palaeochannel
- River
- Deep Borehole
- Handpump
- Town'Centre
- A14 Road
- Other Roads
- KwaleForests
- Special Mining Lease
- KISCOL Sugar Fields
- Dam

Geology

- Holocene
- Holocene Marine Deposits
- Pleistocene Coral Limestones
- Pleistocene Sands
- Pliocene Magarini Sands
- Lower Jurassic Shimba Grits and Mazeras Sandstones
- Permo-Triassic Mariakani Sandstones and Maji-ya-Chumvi Beds
- Alkaline Intrusives (Cretaceous)
- Kambe limestone
- Lower Maji-ya-Chumvi beds
- Lower Maji-ya-Chumvi beds/Taru grits
- Taru grits
- Upper Jurassic shales
- Various parent materials soils in minor valleys
- Various parent materials soils in the bottomlands