UP Gro Unlocking the Potential of Groundwater for the Poor

Gro for GooD

NERC SCIENCE OF THE ENVIRONMENT

E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL

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ssee SMITH SCHOOL OF ENTERPRISE AND THE ENVIRONMENT

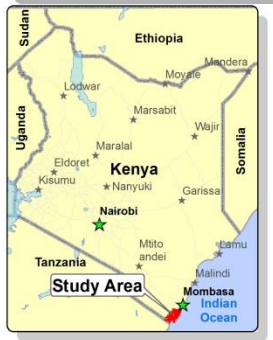
UNIVERSITY OF OXFORD

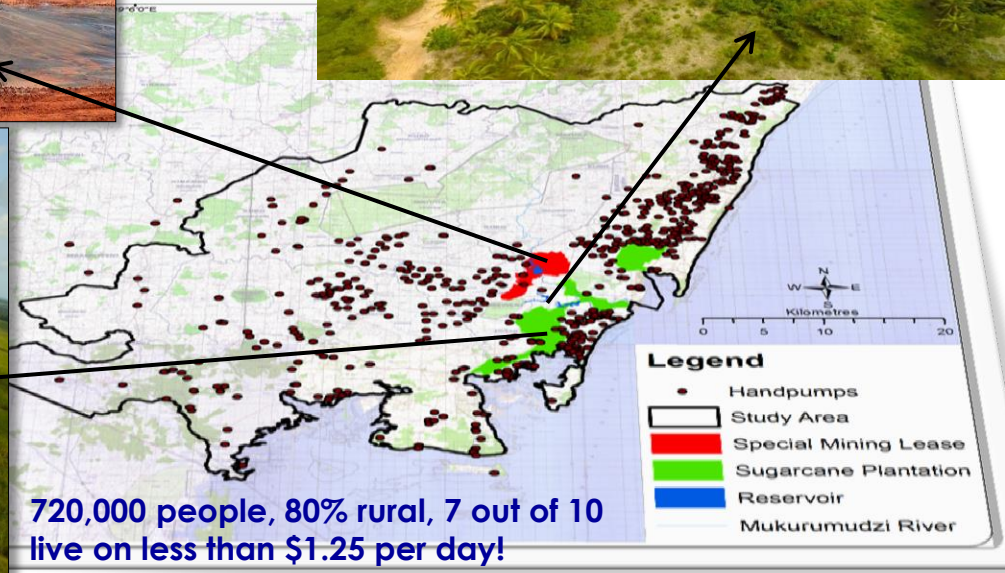
Poverty Transitions and Links to Groundwater

Evidence from Kwale County, Kenya, East Africa

Jacob Katuva, Johanna Koehler, Patrick Thomson and Rob Hope
University of Oxford, UK

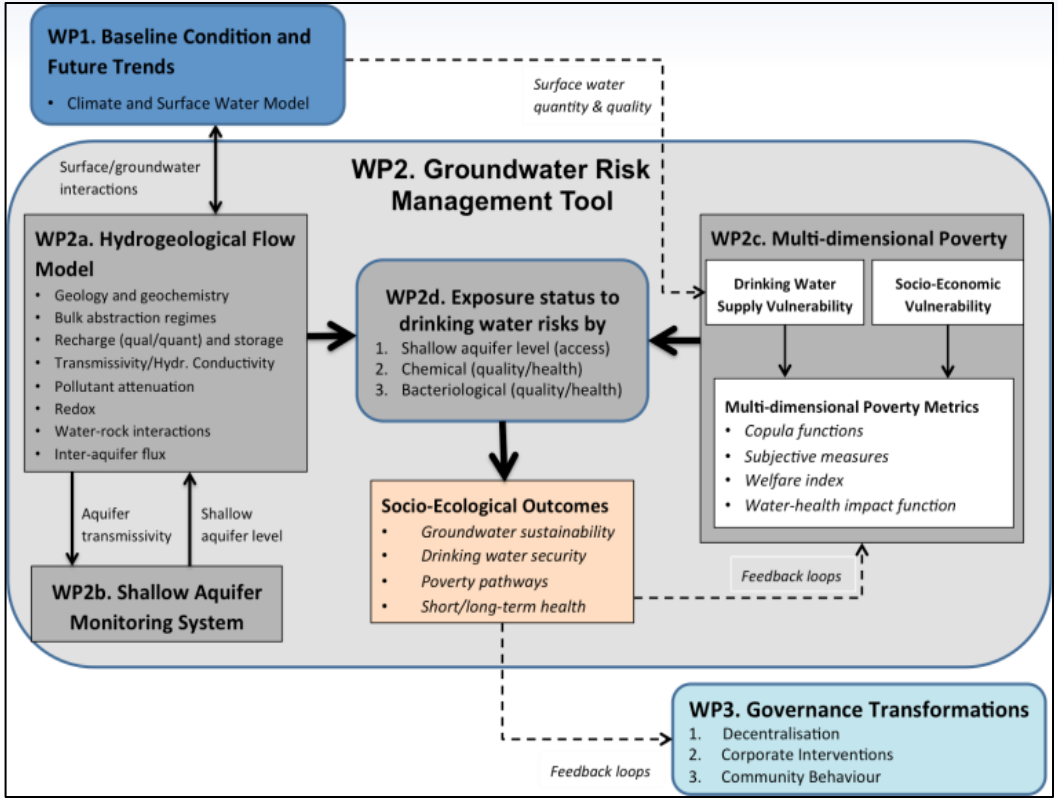
Why Kwale County, Kenya?

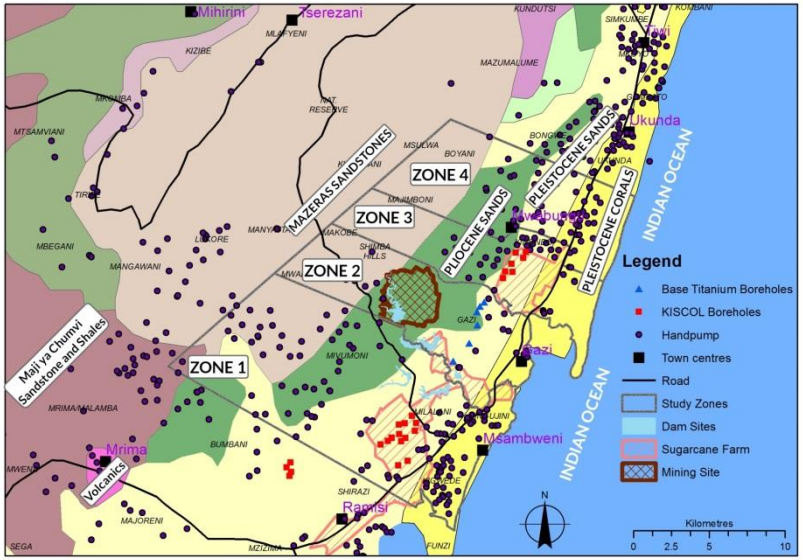




Conceptual framework

- environmental and social monitoring system
- multi-dimensional risk indices to inform governance responses





Household Socio-Economic surveys

Training Field Teams

Communities and Water Usage

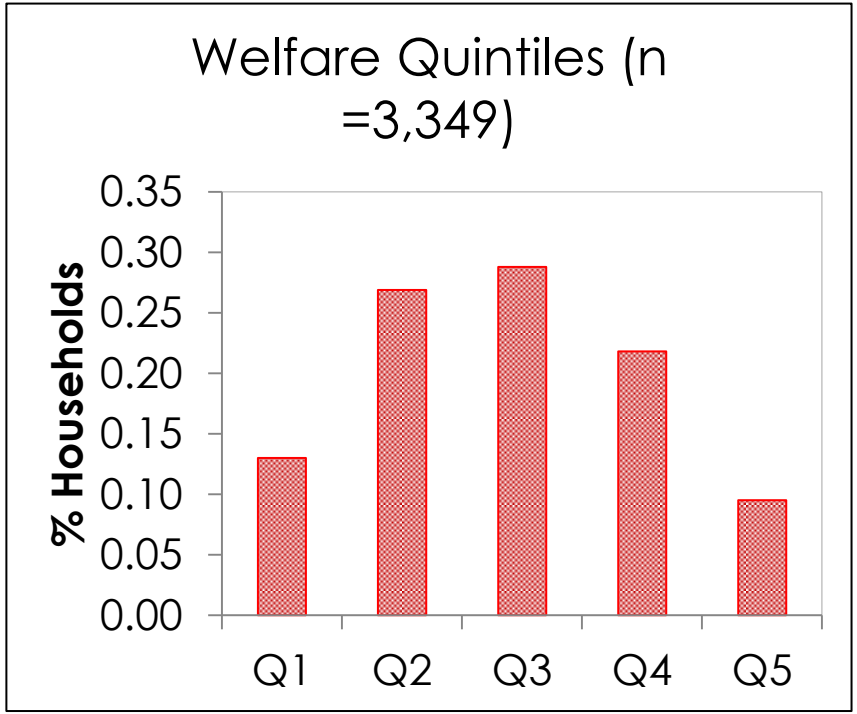
Household sampling and Survey

- Data collected during the survey: *Demographic; socio-economic status of the household (eg. Livelihood, Concerns, Subjective, Welfare, assets, HH/dwelling characteristics); household health status; main and secondary household water sources; waterpoint management; water payment; water resources management; governance and political engagement for each household;*
- Data used to construct welfare index; household composition, dwelling characteristics, asset ownership, sanitation and health, and drinking water
- Principal components analysis used to develop weights for the welfare index

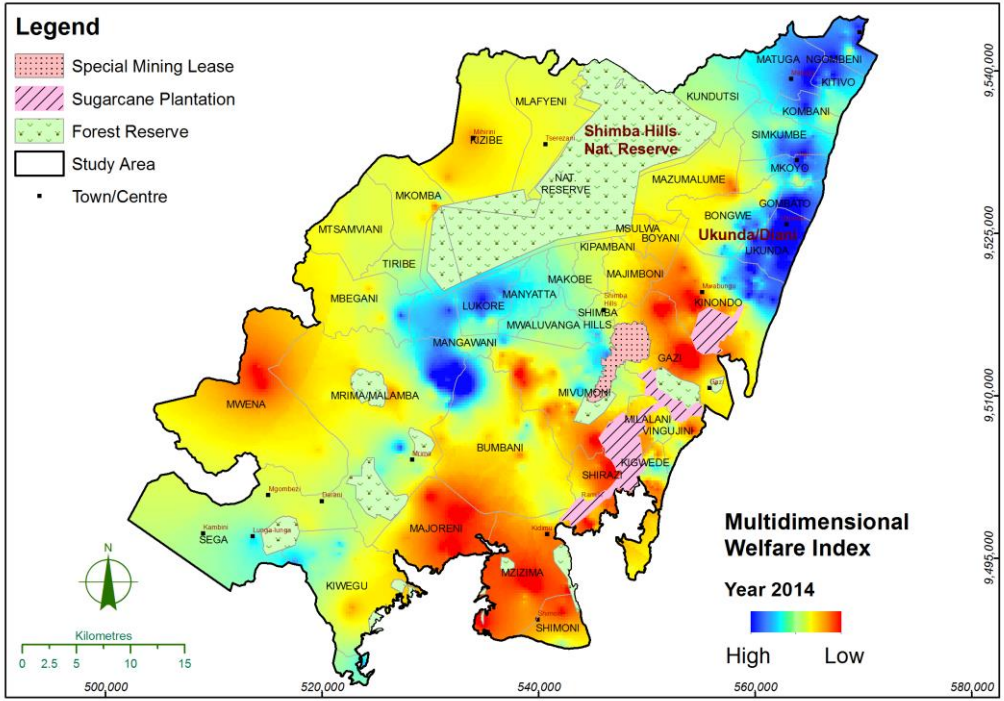
3 longitudinal surveys, 3,700 HHs followed by a Mobile Survey for 2,000 HHs

Welfare Distribution, 2014

Univariate Welfare Statistics

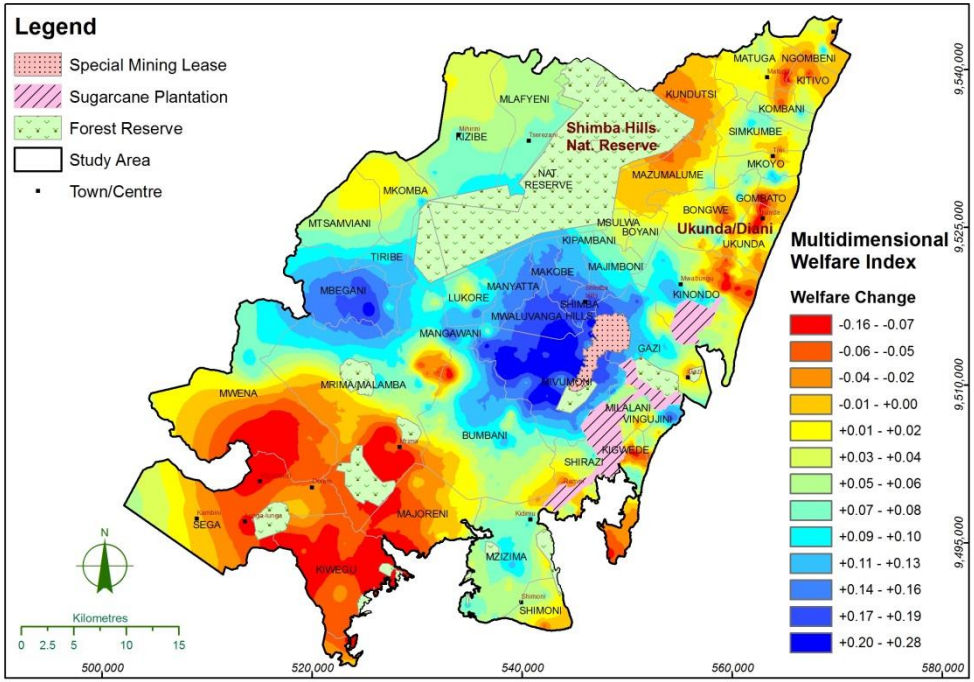


Spatial Welfare Statistics



Welfare Transitions, 2014/2015

OBJECTIVE SPATIAL WELFARE CHANGE

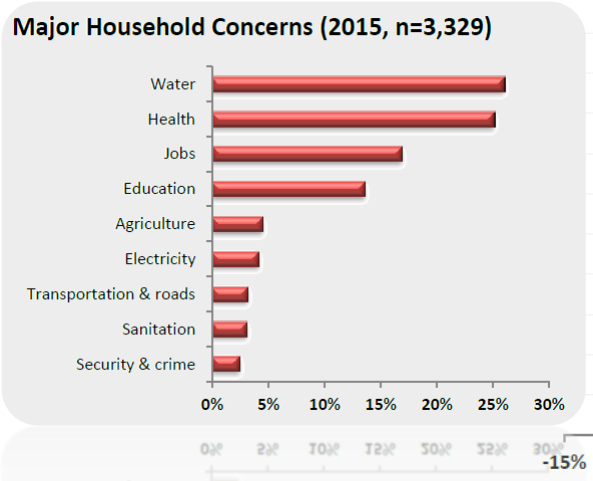


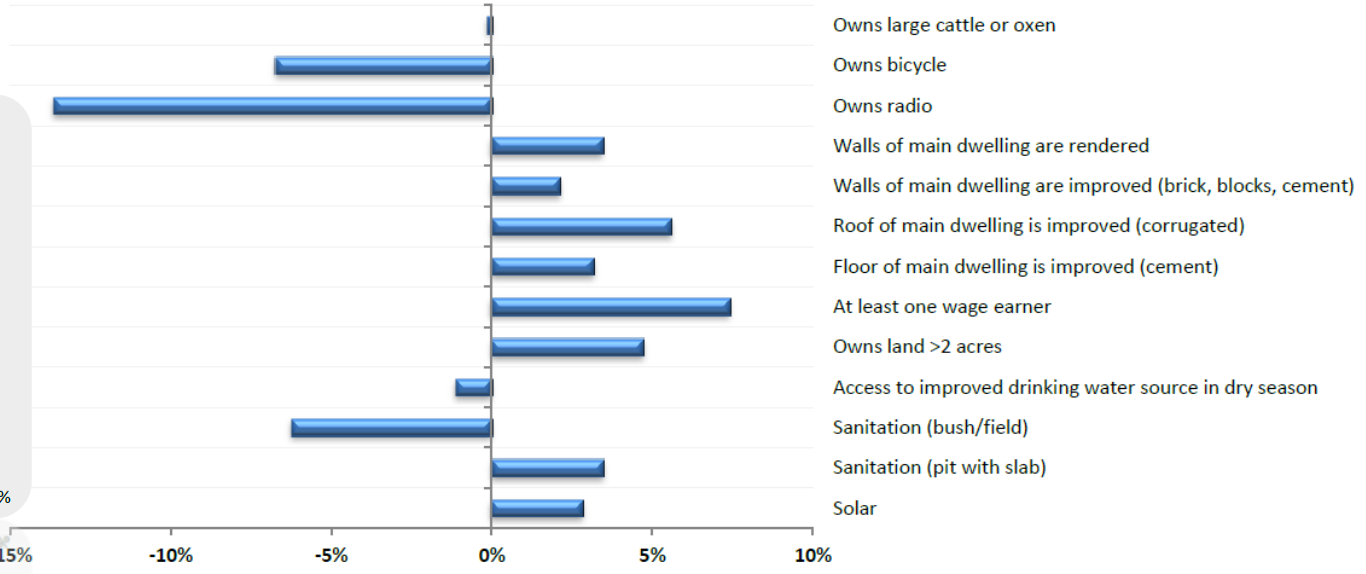
SUBJECTIVE WELFARE BY GENDER

		2015		
		Not well-off	Average	
2014	Not well-off	74%	26%	**Female**
	Average	50%	50%	
		Not well-off	Average	
	Not well-off	66%	34%	**Male**
	Average	46%	54%	

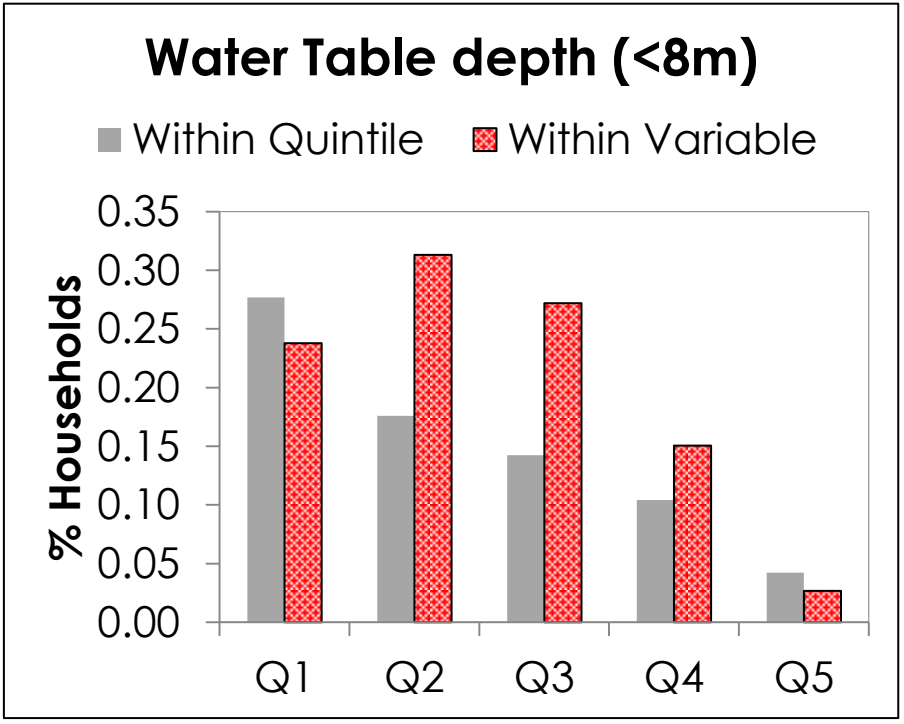
What Changed?

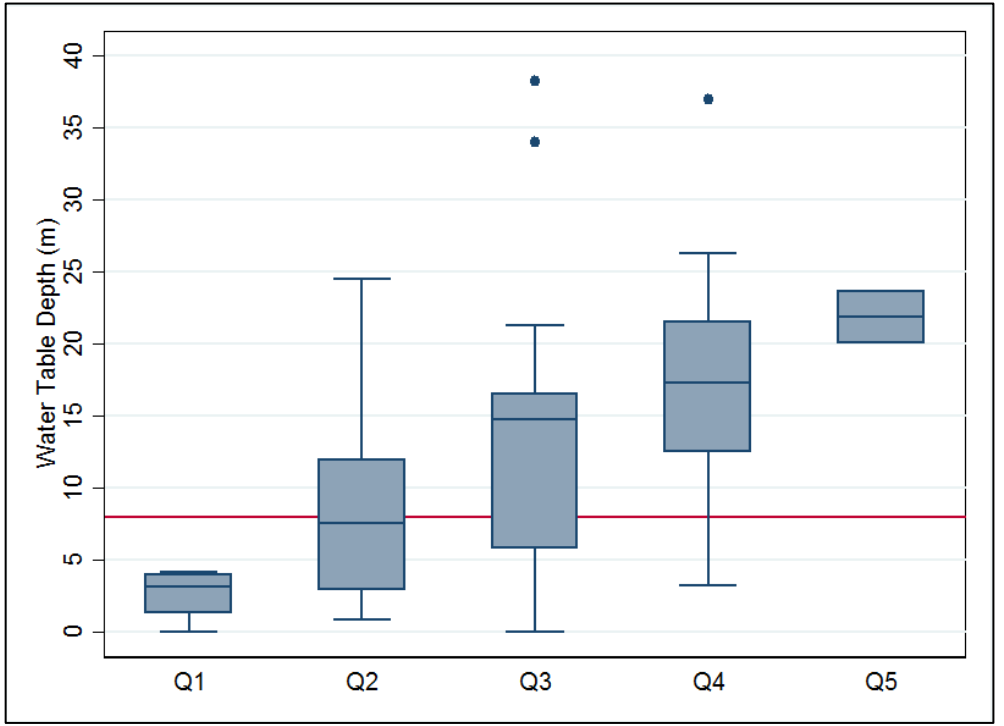
- Between 2014 and 2015, 7% more households found wage labour.
- Sanitation access improved by 4% with the number of people using bush/field decreasing by 6%.
- People's dwellings saw a modest rise in improvements including 3% more households installing solar panels.
- There was slight decline in the number of people with improved access to water during the dry season.



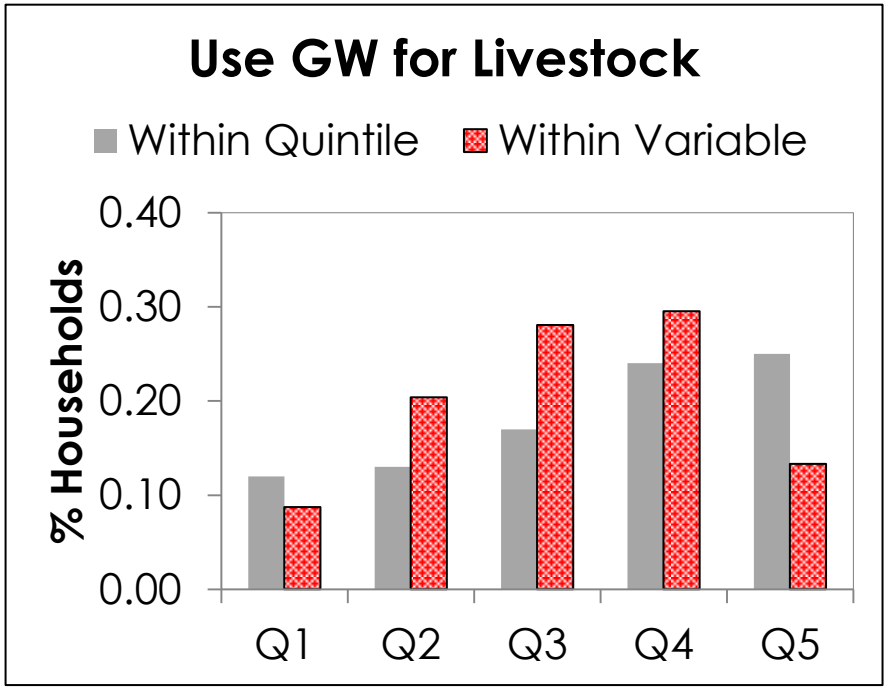


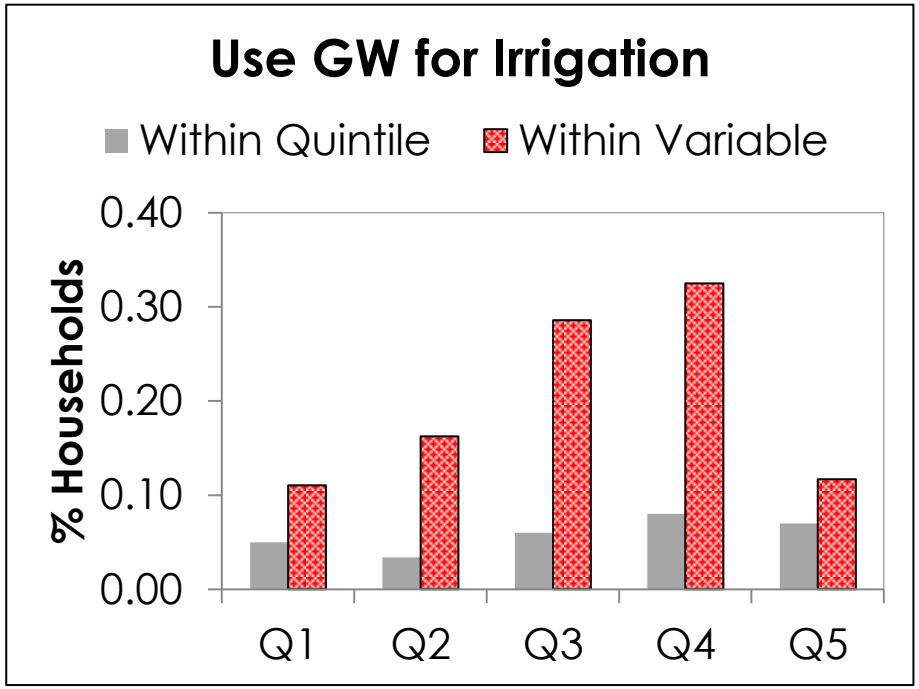
Water Table Depth and Welfare



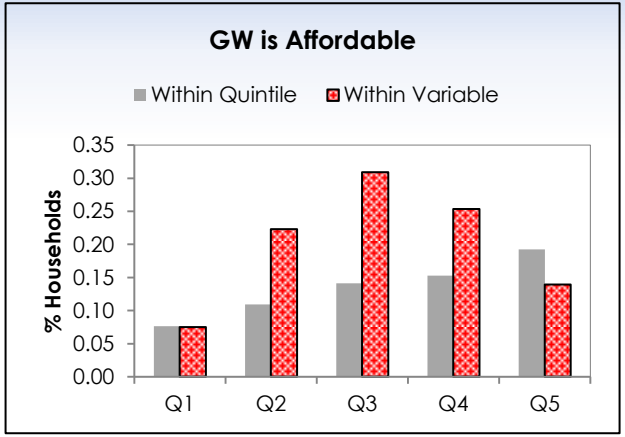


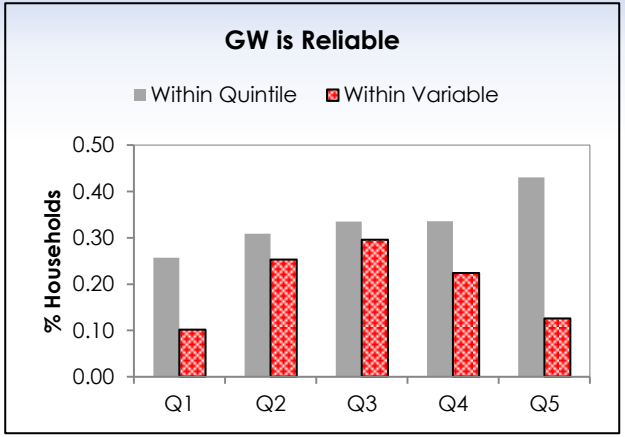
Productive Use and Welfare

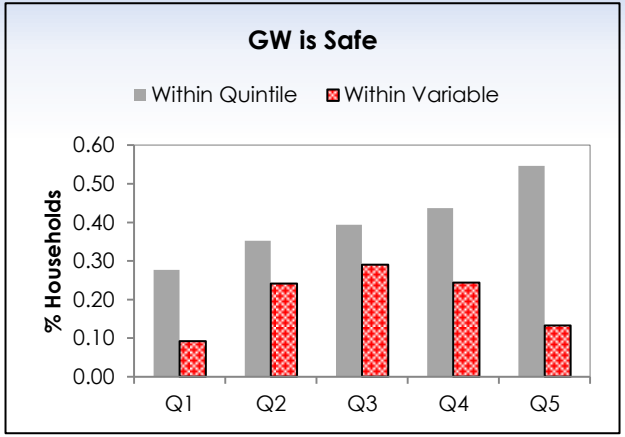


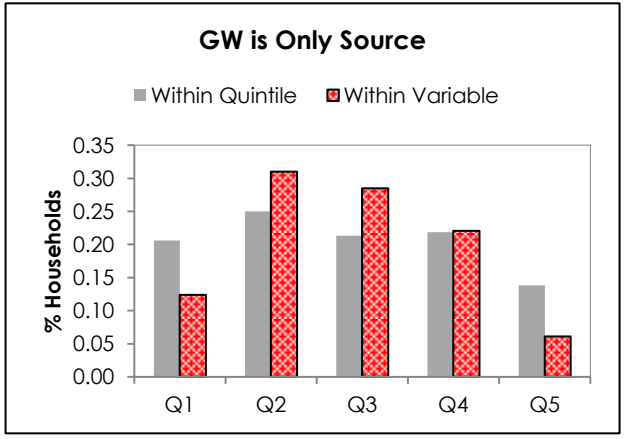


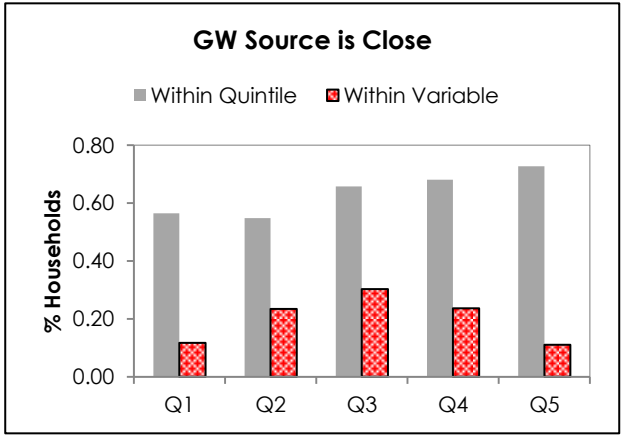
Drinking Water Services and Welfare

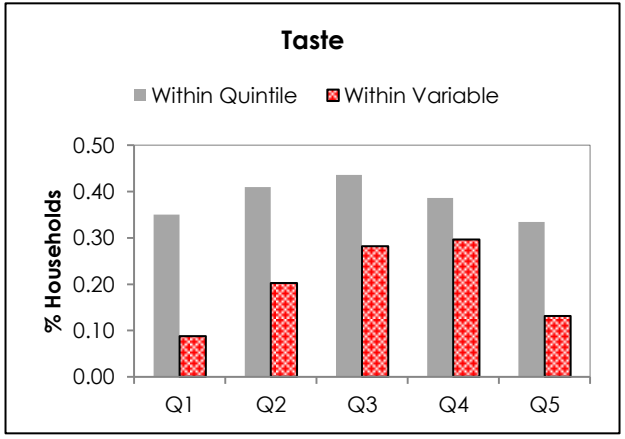






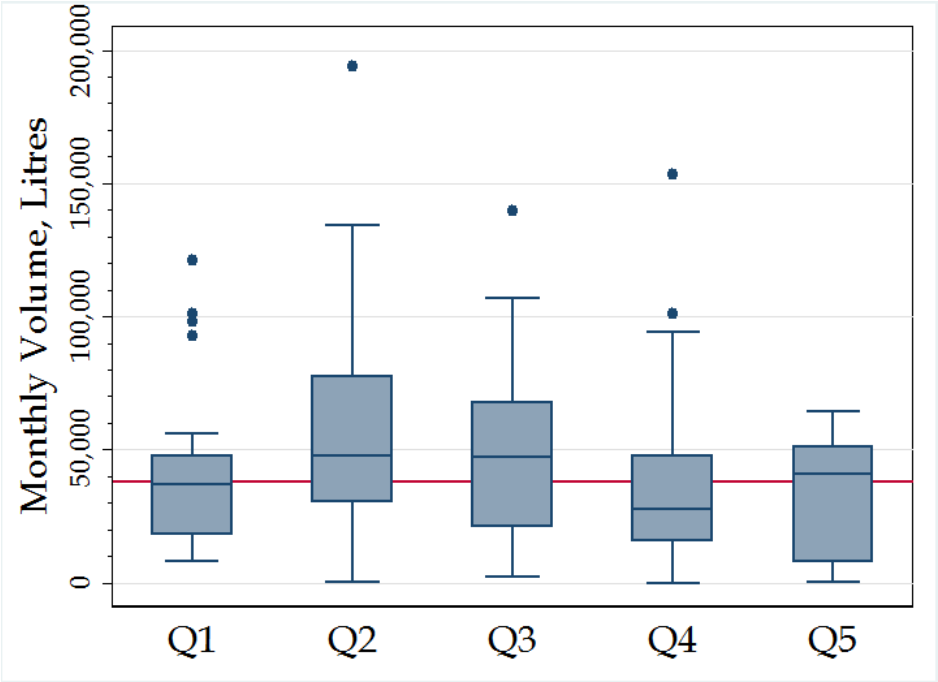




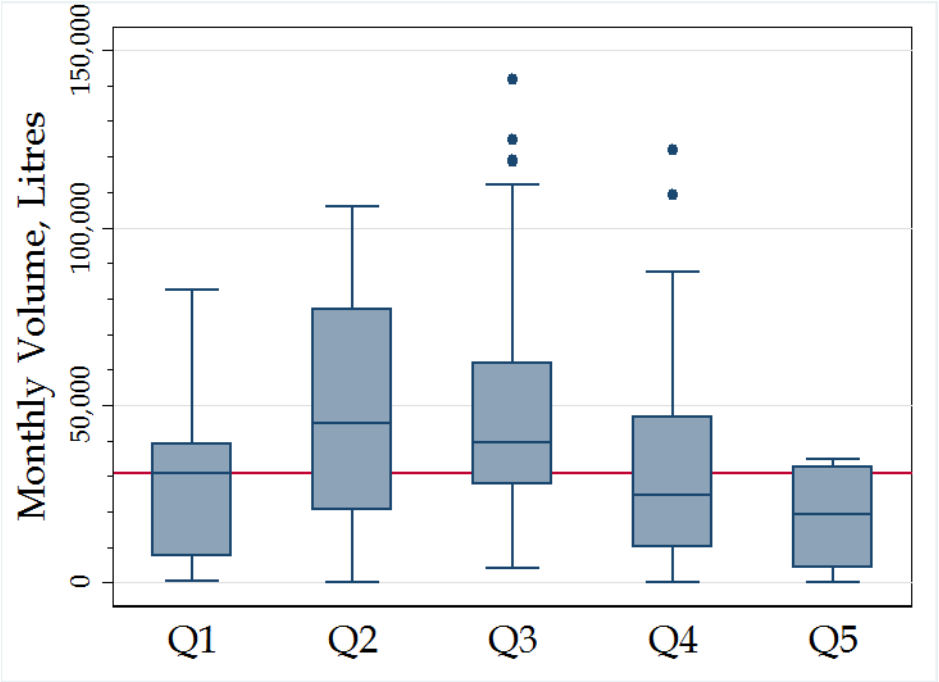


GW Dependency and Welfare

2014



2015



Conclusions

- The bottom welfare group is characterized by greater dependency on shallow groundwater, less acceptable drinking water services by taste, reliability, affordability or accessibility but not quantity.
- Productive use of groundwater for livestock accrues to the middle welfare quintiles with the bottom and top quintiles by choice or exclusion having little engagement.
- Overall productive uses of groundwater is modest for livestock (18% of households) or for small-scale irrigation (6% of households) in this particular context.

These results provide insights for **planning, budgeting and policy on poverty reduction programmes in Kwale, Kenya**. They provide credible information on **where the poor are**, which regions have experienced positive/negative welfare changes as well as starting **discussions on community investment priorities. For example, water, health, job and education** being cited as the top four priorities. Poverty reduction strategies should be **focused on 'leaving no one behind'**. **Monitoring and mapping** of welfare should be conducted more **frequently** to evaluate **impacts** of different **poverty reduction** strategies.


THANK YOU