

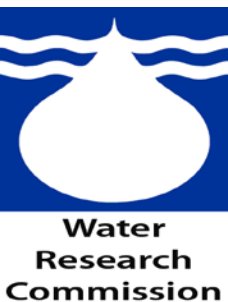
THE WATER-ENERGY-FOOD NEXUS AS A TOOL FOR TRANSFORMING RURAL LIVELIHOODS IN SOUTHERN AFRICA

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Workshop**

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Introduction

- ▣ The water-energy-food nexus is being championed as a tool for integrated resource management at international, regional and national levels
- ▣ The majority of southern Africa's populace reside in rural areas
- ▣ Limited access to clean, safe water, as well as energy for domestic and agricultural purposes
- ▣ Food insecurity still persists in these areas
- ▣ The promise of a better life for all??

What to do?

- ▣ There is a need for research, development and innovation continuum that links the WEF nexus
 - improving rural livelihoods, and
 - addresses the sustainable development goals (SDGs)
- ▣ We assessed challenges and opportunities for adopting the WEF nexus to address water, energy and food insecurity in rural areas in southern Africa
- ▣ Ongoing work

What we have found so far....

- ▣ Water insecurity largely persists across rural areas
 - No access to safe and clean drinking water
 - Traditional water sources are fast being depleted
- ▣ Biomass (firewood) remains a major source of energy
 - Massive deforestation and land degradation
 - Loss of grazing lands
 - Poses serious environmental threats
- ▣ Food insecurity is on the increase
 - Majority of rural households face food insecurity
 - Availability and access to nutritious foods
- ▣ Climate change has a multiplier effect
 - Increasing frequency and severity of droughts



What we have found so far....

- ❑ Complex decision making
 - ❑ People in rural areas constantly juggle how to allocate scarce water, energy and food resources to meet household needs
- ❑ Competition for household resources
 - ❑ A disproportionate amount of labour and income is spent on water, energy and food for the household
- ❑ Exacerbating inequalities
 - ❑ Women and children bear the brunt
 - ❑ They spend a significant amount of their time sourcing water, fuelwood and tending to food gardens
- ❑ Implications for human health and well-being
 - ❑ The procured water and energy are often of poor quality, further exposing people to other environmental and health risks



How can the WEF Nexus assist?

- ▣ The WEF nexus approach offers **opportunities to sustainably address rural development and livelihoods**
 - For example, the use of biodigesters for energy generation and the use of bioslurry by-product as a source of nutrients and water in crop-livestock systems, highlights opportunities for practical applications of the WEF nexus
- ▣ The promotion of biofuels requires an understanding of trade-offs between biofuels production, water availability and food security
- ▣ The use of solar powered boreholes could address access to water for domestic and food production without creating new energy demands
- ▣ With proper research, development and innovation, the WEF nexus could be a tool for **transforming rural livelihoods**
- ▣ It is recommended that the WEF nexus has a strong positive covariance with human wellbeing thus linking it to SDGs 2, 6 and 7.