



What do WMAs hope to do for women?

“The main objectives of the WMA process are to:

- increase the **participation** of local communities in the management of wildlife resources;
- enable local communities to derive **benefits** from wildlife resources; and
- enhance the **conservation** of wildlife resources.”

WWF-USAID WMA status report 2014 p. 13

WMAs’ theory of change for women:

“Increased women’s participation in WMAs needs to be pursued through **women-led income-generating projects and encouragement to participate in AA governance bodies ... training opportunities to enhance their skills as active members in AA governance and to be employed in ... tourism enterprises in the WMAs.**”

WWF-USAID WMA Status report 2014:41

Women and WMAs

- Rural women
 - Main and frequent collectors of wild products (Sunderland et al 2014)
 - natural conservators? (pro: Agarwal 2008; con: Mwangi et al 2011)
 - benefit from environmental interventions? (Salerno et al 2015; Pailler et al 2015)

BUT

- Rural African women
 - often disadvantaged by environmental initiatives
 - Land tenure (Kevane 2012)
 - Participation (Cleaver 2000)
 - NRM/ CBWM (Khumalo and Yung 2015)

Women and WMAs

- Competing predictions:
 - WMA theory of change
 - Development experience
- **PIMA RQ: What is the impact of WMAs on women?**
 - On female-headed households?
 - On married women?
- Total women’s sample:
 - 187 Female heads of household:
 - Focused on Burunge + Enduimet + controls (n=137)
 - Multi-level regression models
 - 937 Married women:
 - 3N + 3S WMAs + controls
 - Bayesian analysis

Results

- *Female heads of household*
 - Livestock
 - Land
 - Wealth rank
- *Married women*
 - Assets
 - Resource access
 - Income generation
 - Security
- *Women’s participation*
 - WMA governance

Female heads of household

- Assets /wealth: Female HH < Male HH

Effect of being female-headed	Multilevel model coefficient	± SE	Significance
Livestock TLU/AE	-3.34	0.966	**
Land owned/AE	-1.30	0.316	**
Land farmed/AE	-0.67	0.192	**
Wealth rank trajectory 2007-2014	-0.54	0.117	**

- No WMA (BACI) effect

In slides that follow:

- **Black text:**
 - Significant findings, but no WMA effect
- **Red text:**
 - Weak evidence for WMA effect
- **Bold Red:**
 - Good evidence for WMA effect

Married women: access to assets

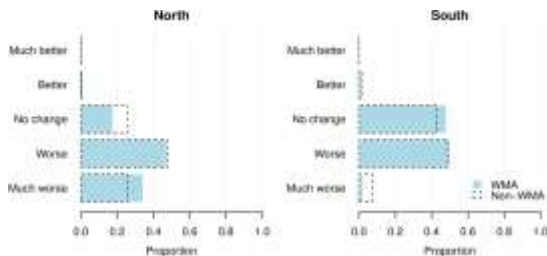
- ~100% wives: household has shamba/ bustani
- 90%N + 60%S: household has livestock

Independent access for consumption/ sale:

- shamba crops : <50% wives
- bustani crops : 50% S + 80% N
- livestock products : ~90% N+ 60% S

Married women: access to land to settle and/or farm

- Increasing problem for most women
- No WMA effect



Married women: access to NRs

- non-village water-point water
 - most women: no change
 - ~25%: access is worse, especially
 - South women
 - Poor wives
- firewood + construction materials
 - ~50% : increasingly hard to access,
- **Negative effect of North WMAs on access to**
 - water
 - construction materials

Married women: Income generation

- Sale of home produce
 - North:
 - ~50% sell livestock products
 - ~33% sell crops.
 - South
 - ~50% sell crops
 - ~33% sell livestock products
- **Kibaru**
 - ~33% women
 - Inversely related to wealth rank
 - **WMA effect: more Very poor wives in WMAs undertake kibaru**

Married women: trade

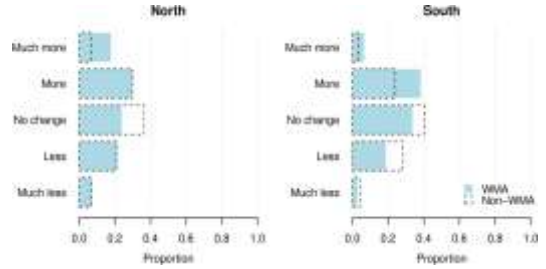
- Petty vending
 - 19% women
 - 33% North
 - Average/ Rich wives: **positive WMA (BACI) effect.**
- Sale of cooked foods
 - 15% women
 - **negative WMA (BACI) effects on South and on Poor wives.**
- NTFP sales
 - 11% women
 - **Negative WMA (BACI) effect**
 - **Negative WMA effect in the North.**

Married women: external income

- remittances
 - 24% wives in 2014.
 - **negative WMA (BACI) effect among Poor wives.**
- external aid
 - 7% overall
 - Very poor women < others
 - **positive WMA effect in Very poor households.**
 - **positive WMA (BACI) effect Overall + in South.**
 - philanthropic support in S. WMAs (eg. Mbarang'andu: Noe 2011, 2013).

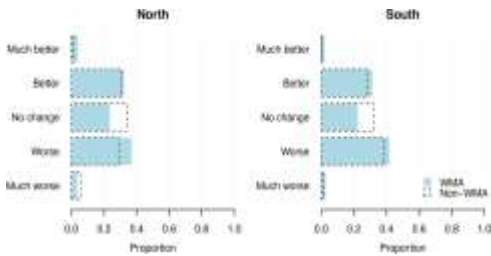
Married women: crop damage

- **More WMA than non-WMA women report damage ↑**
- **~50% attribute changes in crop damage to WMA**



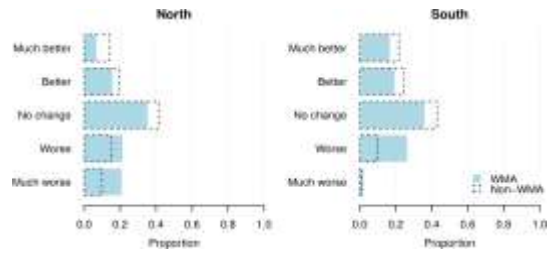
Married women: food security

- No increase/decrease overall
- No WMA effect
- Few attributed any change in food security to WMA, but
- **More did so for perceived decreases.**



Married women: Worry over wildlife hazard

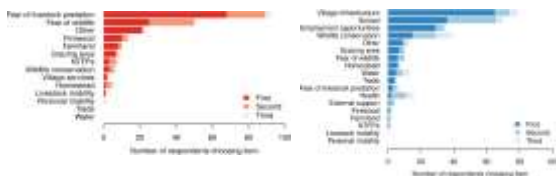
- **WMA wives worry > non-WMA.**
- **Wives perceiving safety as worse attribute to WMA.**



Main perceived costs and benefits

WMA Costs

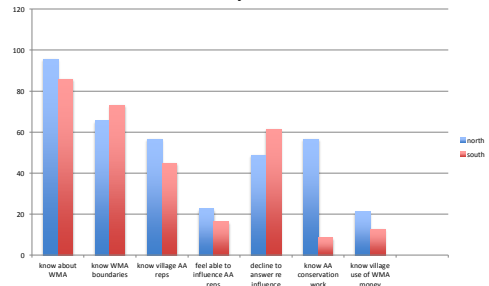
WMA benefits



Institutional/ governance impacts:

Women's participation:

"Do you..."



Female HHs, wellbeing and WMAs:

- Compared to Male HH, Female HHs have lower
 - Livestock holdings
 - Land owned / farmed
 - Wealth trajectory
 - Knowledge of governance
 - Wives < FHH < MHH

Married women, wellbeing and WMAs:

- positive WMA (BACI) effect on
 - % external aid
 - overall and in S (not N) ↑
 - Very poor ↑ (though still < others)
 - % Average/ Rich wives engaging in petty vending ↑
- Adverse WMA (BACI) effects:
 - % South and Poor wives selling cooked foods ↓
 - % Selling NTFPs in the North ↓
 - % Very poor *kibarua* ↑
 - % Poor wives receiving remittances ↓
- Adverse effects of WMAs on
 - N WMAs: access to water and NTFPs ↓
 - crop damage ↑ reports WMA > non WMA
 - Perceived ↓ food security attributed to WMAs,
 - wildlife hazard worries ↑ WMA > non WMA

Women, wellbeing and WMAs:

- WMAs:
 - Few positive effects on Female HHs/ married women
 - Some negative effects on women's wellbeing:
 - Assets
 - Wealth rank
 - Access
 - Income generation
 - Security
 - Participation
- Opportunity to reconsider WMA
 - Theories of change
 - Delivery of benefits

