



Studying African
Farmer-led Irrigation

Governance responses to farmer-led irrigation development in the Kilimanjaro Region, Tanzania

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Studying African
Farmer-led Irrigation

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- Policy-oriented academic research project (2015-2017)
- Cases in Mozambique and Tanzania
- How can external agencies relate to farmers' irrigation initiatives more effectively?
- Study of the initiatives, the agencies and their interactions
- Both deepening understanding of processes and quantifying the outcomes



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Outline

1. A few words on FLID
2. Approach
3. Three types of FLID
4. Differentiated governance responses
5. Conclusions



“farmer-led”

not “unplanned” or “spontaneous”

not small-scale

not (only) individual

not (purely) private

Approach

3 types of farmer-led irrigation development:

1. Traditional hill-furrow irrigation systems on the slopes of Mount Kilimanjaro,
2. Informal paddy irrigation systems from springs at the foot of the mountain, and
3. Irrigation with petrol pumps from shallow wells in the dryland area downstream of the LMIS

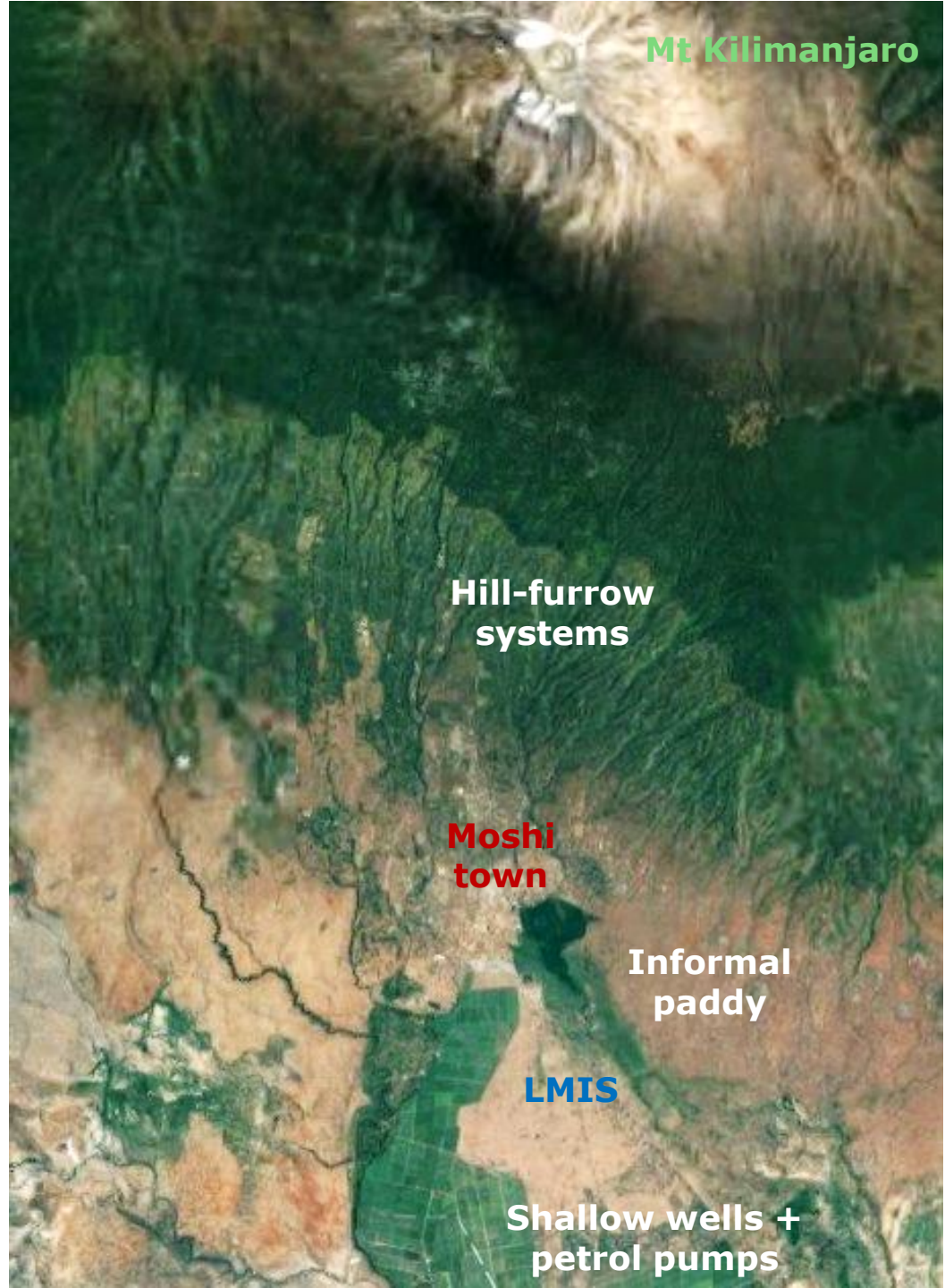
+ study differentiated government responses to them



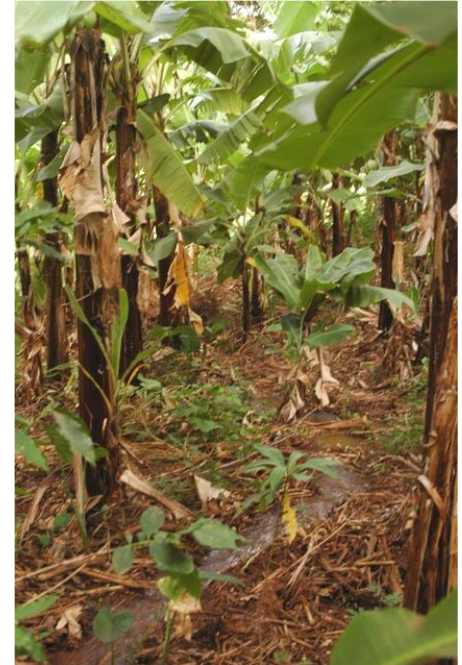
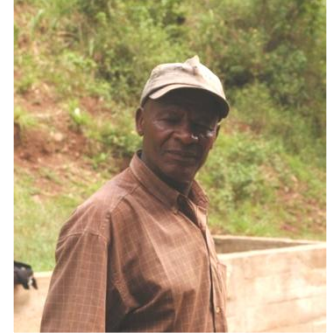
Situation

1 sub-basin

Lower Moshi Irrigation Scheme (LMIS):
2,400 ha "rice factory"



Hill-furrow systems



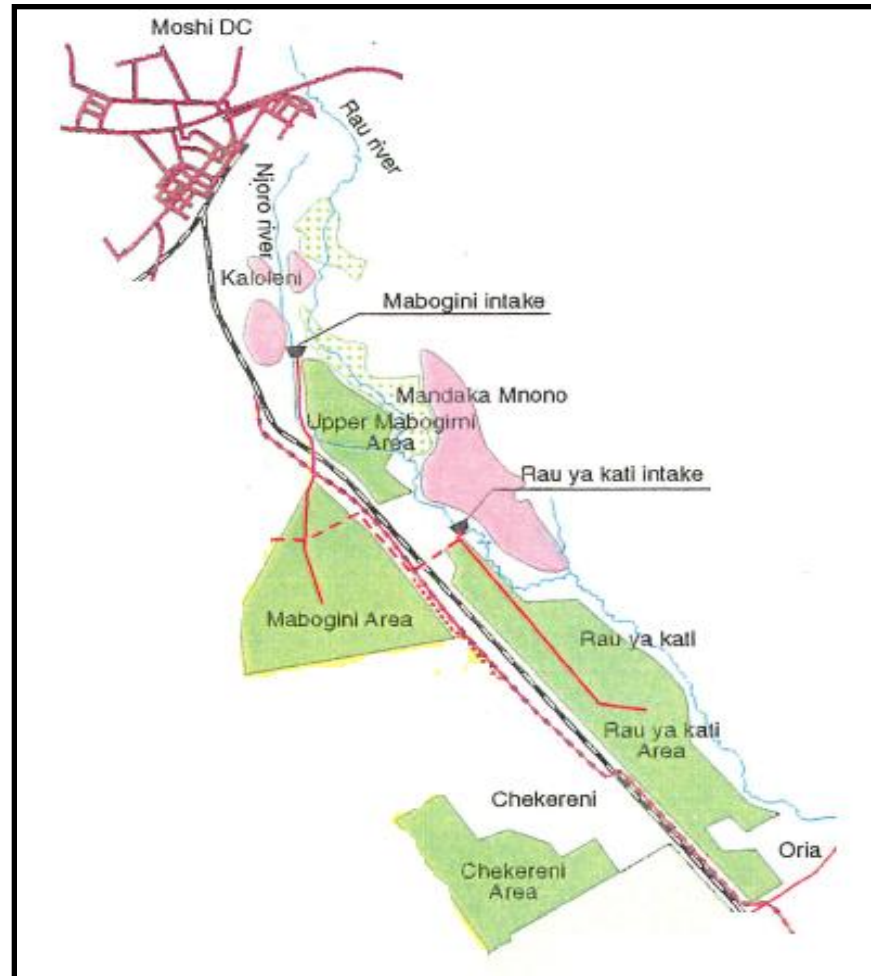
Lower Moshi Irrigation System



Informal paddy irrigation

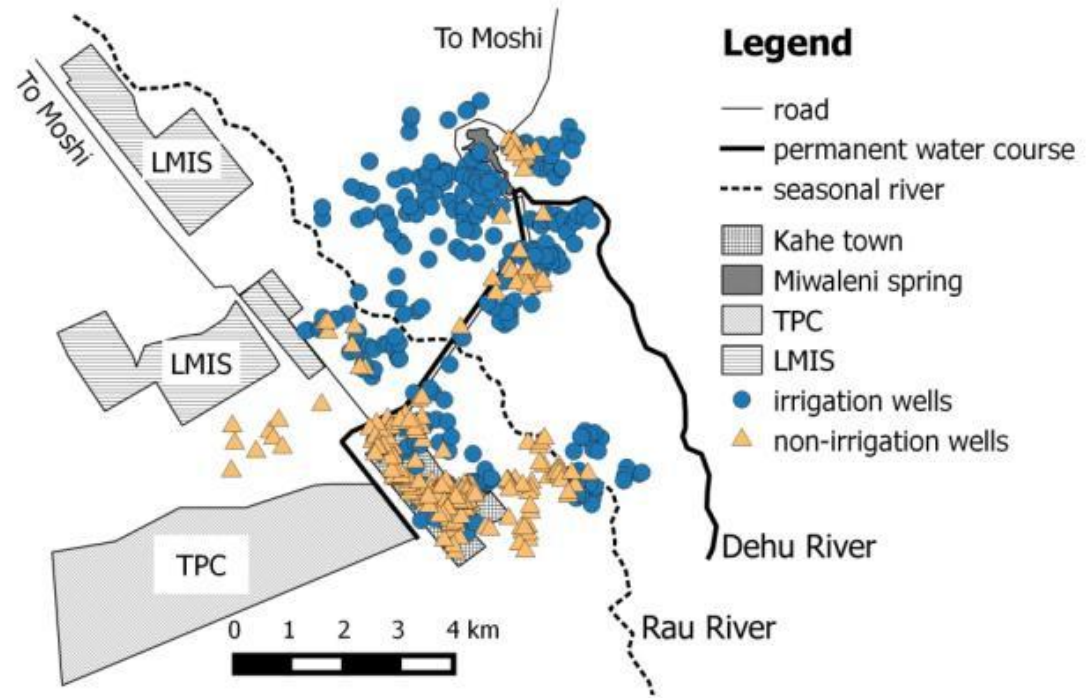


LMIS & informal paddy irrigation



Petrol pumps on shallow wells

- > 500 irrigation wells
- > 800 hectares



Source: De Bont et al., forthcoming



Governance/policy domains

- 1) Irrigation development – irrigation department, district irrigation officers, etc
- 2) Community development – churches, NGOs
- 3) Agricultural development – ministry of agriculture, NGOs
- 4) Natural resources management – catchment management/basin authorities, ministry of energy, ministry of tourism
- 5) Formal politics, democratic representation – members of parliament, governors, etc



Modes of engagement

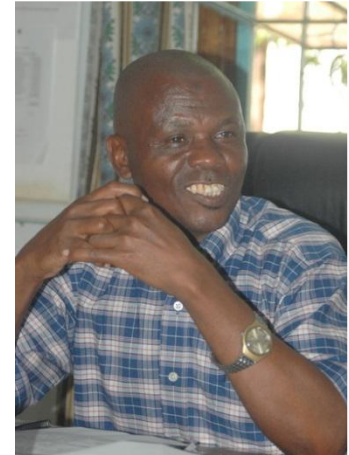
1. Shut down
2. Overhaul / replace
3. Ignore / disengage
4. Support to develop / extend
5. Support to restrict / limit / contain



Hill-furrow systems

District water engineer:

“Furrows often use more water than is allocated to them, which in the dry season creates water problems for downstream farmers. It is difficult to control the intake of water by these furrows, as most of the traditional off-takes are not gated.”



Irrigation development	Ignore/Support to develop
Community development	Support to develop
Agricultural development	Support to develop
Natural resources management	Support to contain
Formal politics	Mixed

Informal paddy irrigation

Zonal Irrigation Officer:

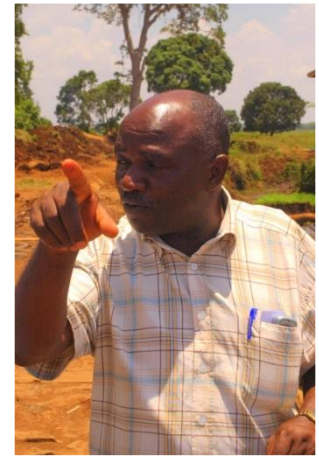
“We used to call these water users outside the irrigation scheme ‘intruders’, but as they are also citizens of Tanzania, and as the resource passes through their area, we have thought that they should be included in The Lower Moshi Irrigator’s Association. The recently established WUA also includes people from the areas outside the original project area”.



Informal paddy irrigation

Scheme Manager:

“Supply to this area is failing due to a shortage of water caused by upstream water use. Those upstream water users were not considered in the design of the scheme. (...) Frankly speaking we have a big crisis at the moment because we are not able to supply the area intended to be irrigated”.



Irrigation development	Shut down => Support to contain
Community development	Support to develop
Agricultural development	Ignore
Natural resources management	Shut down => Support to contain
Formal politics	Mixed

Petrol pumps on shallow wells

- No attempts to regulate the construction or use of wells
- No support or promotion
- Zonal Irrigation Office and Basin Office do not even acknowledge their existence



Irrigation development	Ignore
Community development	Ignore
Agricultural development	Ignore
Natural resources management	Ignore
Formal politics	Ignore

Conclusions

Governance responses are shaped by mixture of:

1. perceptions of contributions to development and 'having a future'
2. perception of possible detrimental effects on public schemes (such as LMIS and downstream hydropower generation), and
3. a recognition of historical claims mixed with local politics.

Government agencies sometimes align, but sometimes also operate in contradictory directions