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Session B – 4 thematic discussions

Block 1 – Definition of FLID

Block 2 – Spread and drivers of FLID

Block 3 – Consequences of FLID

Block 4 – Engagement with FLID
Block 1: Definition of FLID
Farmer-led irrigation development

not “unplanned” or “spontaneous”
not small-scale
not (only) individual
not (purely) private
Framing / definition

We re-frame to focus on the **process** of development driven by farmers

Variety of developments not studied before as different **instances of 1 and the same process**

Definition of “farmer-led irrigation development”?

- Rather loosely, as in practice **hybrids**
- **Avoid categorisation** on basis of tech, size, crop, etc.
- Avoid question on whether **truly farmer-led**
In your view how does FLID compare to and differ from corporate agriculture and state-planned irrigation?
Block 2: Spread and drivers of FLID
Some examples of FLID

1) hill-furrow systems
2) petrol pumps
3) re-appropriation of small dams
4) intensification of inland wetlands/valley bottoms
5) ‘bucket irrigation’/backyard farming
6) use of waste water in (peri)urban agriculture
7) ‘rain-fed’ paddy rice cultivation
Economic activity

Irrigation is a **core economic activity**:

- In 78% it is head and(/or) spouse that is the main responsible to irrigate
- For 84% of irrigators it makes-up for about half or more of their income
- Irrigators have strong market-engagement
Agricultural intensification

Irrigation comes with **broad agricultural intensification**; of the irrigators:

- 38% use **improved seeds** (v. 11% for non-Irrigators)
- 44% use **pesticides** (v. 9% for non-Irrigators)
- 37% use **fertilizers** (v. 5% for non-Irrigators)
Land arrangements

Dynamic land arrangements:

- In Tanzania, 39% of irrigated plots is rented and 14% purchased.
- Of the irrigators, 60% hires employees (vs. 26% for non-Irrigators).
Drivers of development

“islands” of intensification

- Water
- Institutions
- Land
- Markets
- Funds
- Labour
- Knowledge
- Technologies
Exchange block 2

1. If these are the drivers, what are the barriers that are limiting FLID to happen elsewhere?

2. If this is intensive high-input agriculture, then what enabling environment is needed to make it even more profitable?
Block 3: Consequences of FLID
Downstream water effects?

● Efficient? Water **losses mostly become available** further downstream

● Water diversions frequently **precede licensing** laws

● **Accusations by downstream uses** (hydropower, national parks), not always founded on evidence

● Within cases: **more conflicts with increasing numbers** of water users.
Gendered access

Strongly gendered pattern of access to irrigation:

- Female-headed household (FHH) underrepresented among irrigators (16% FHH v 26% non-Irrigators)
- Irrigating FHH have on average 0.6 ha less irrigated land than MHH
Poverty and wealth

Strong correlation between irrigation and wealth;

Irrigators have:

- More assets (18.2 v 11.9 on an asset index)
- More livestock (0.24 v 0.13 TLU)
- Better houses (6.3 v 5.6 on a housing index)
- More months with enough food (10.6 v 9.8)
- Children with more education (+ 6 months)
1. What is the contribution of FLID for (local) economic development?

2. What are the risks of FLID?
Block 4: Engagement with FLID
Governance domains

1. Irrigation development
2. Community development
3. Agricultural development
4. Natural resources management
5. Formal politics, democratic representation
Diverse governance responses

1. Shut down
2. Overhaul / replace
3. Ignore / dis-engage
4. Support to develop / extend
5. Support to restrict / limit / contain
LMIS & informal paddy irrigation
Informal paddy irrigation
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”.

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LMIS & petrol pumps on shallow wells

> 500 irrigation wells
> 800 hectares

Source: De Bont et al., forthcoming
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

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Source: De Bont et al., forthcoming
On basis of what criteria would you decide which FLID cases to prioritise for support?