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Turning tragedy into opportunity: water management solutions for flood-recession and dry-season agriculture in Nigeria

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Introduction

- On June 3rd – 9th, the IFPRI team – Hiro Takeshima & Ephraim Nkonya – conducted consultation meetings in Anambra, Benue and Kogi states with:
 - state agricultural development officials
 - Small and large-scale irrigators
 - Farmer groups
 - Project leaders
 - Technical staff in government and private companies conducting irrigation



Introduction (cont'd)

- The major research questions addressed
 - What irrigation projects/programs worked well in the past and which did not ?
 - Why some irrigation projects/programs worked or did not?
 - What are the returns to irrigation compared to rainfed agriculture?
 - What AWM solutions could be used to address constraints to dry season farming and recession farming?



Results

- Irrigation history
- 1970s-1990s – large irrigation schemes managed by River Basin Development Authorities (RBDAs) or by the States
 - A total of 162 dams were constructed by 1990 with capacity to irrigate 725,000 ha
 - Performance of large scale irrigation was low. FAO (2005) estimate only 32% of installed capacity was used for irrigation
 - Farmers were not involved in the planning and management of irrigation schemes



History of irrigation Nigeria (cont'd)

- Farmers have traditionally been practicing irrigation during the dry season in the flood plains (*fadamas*) using water manually drawn from shallow wells or streams of the Niger, Sokoto, Rima, Benue and Yobe rivers
- Government started supporting small irrigation thru Fadama I project in the early 1990s
- Small-scale irrigators account for ~70% of irrigated area
- **Both traditional & Fadama I irrigation systems have been working well**

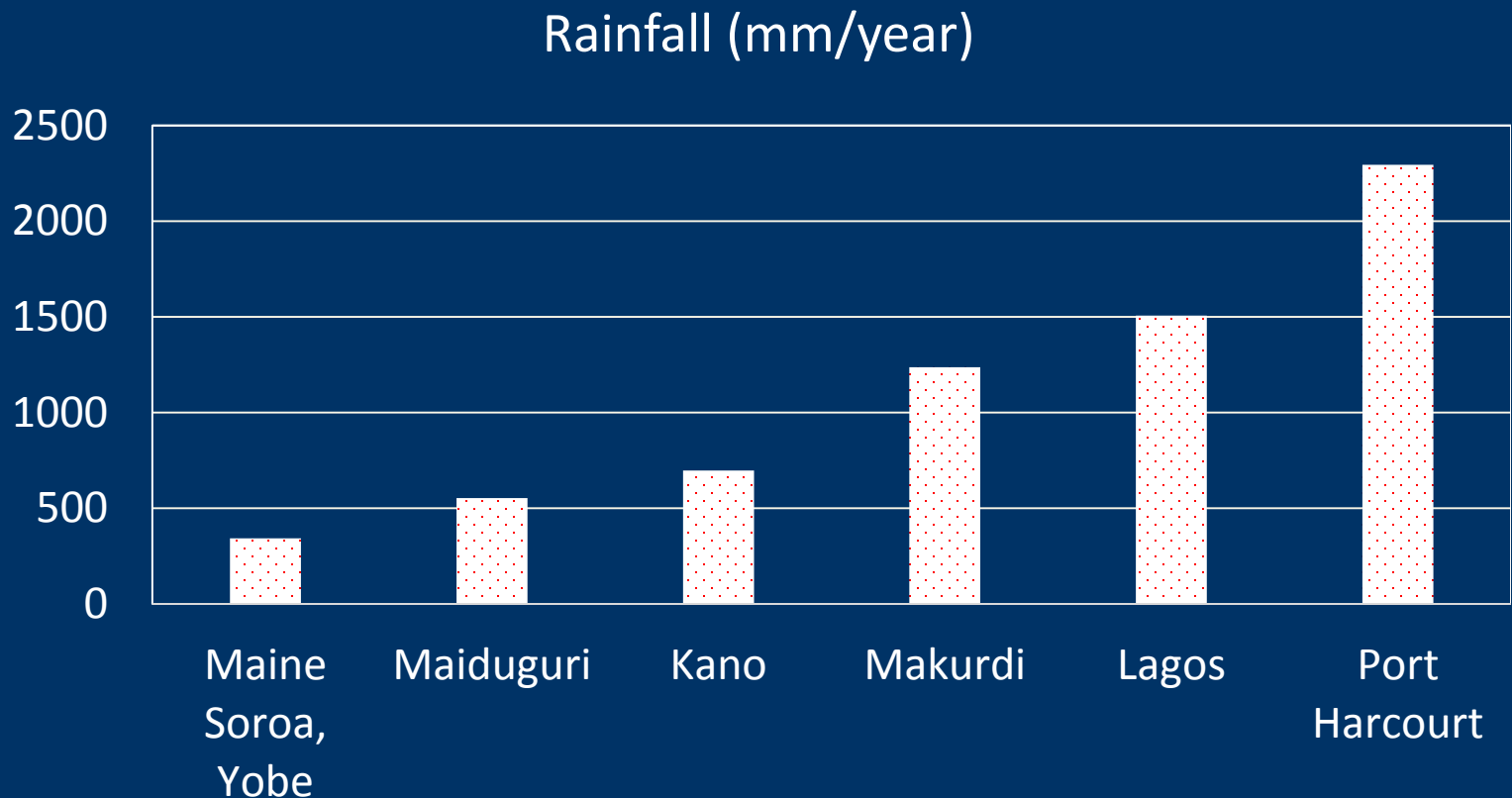


Irrigation opportunities in central & Southern Nigeria

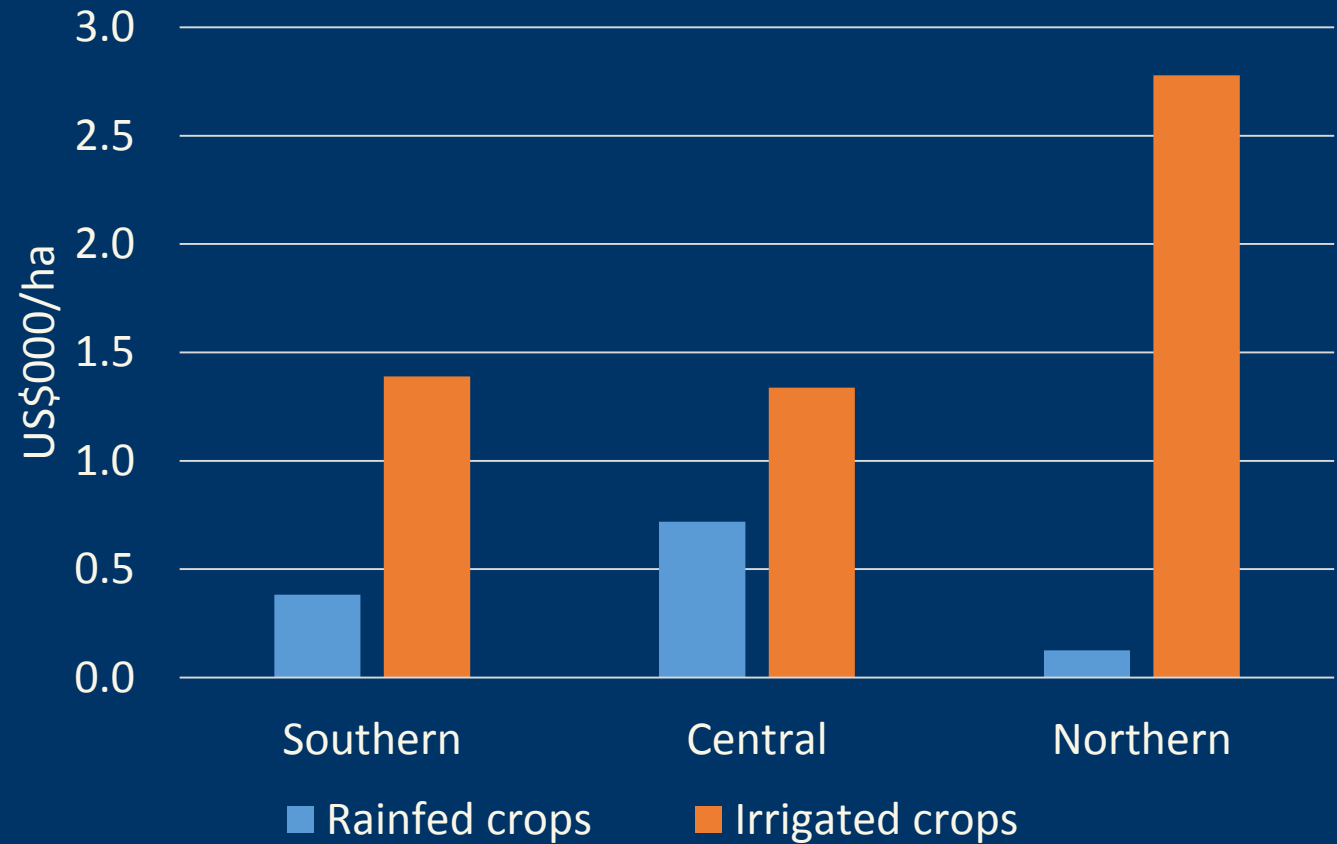


Irrigation opportunities in Central & Southern Nigeria

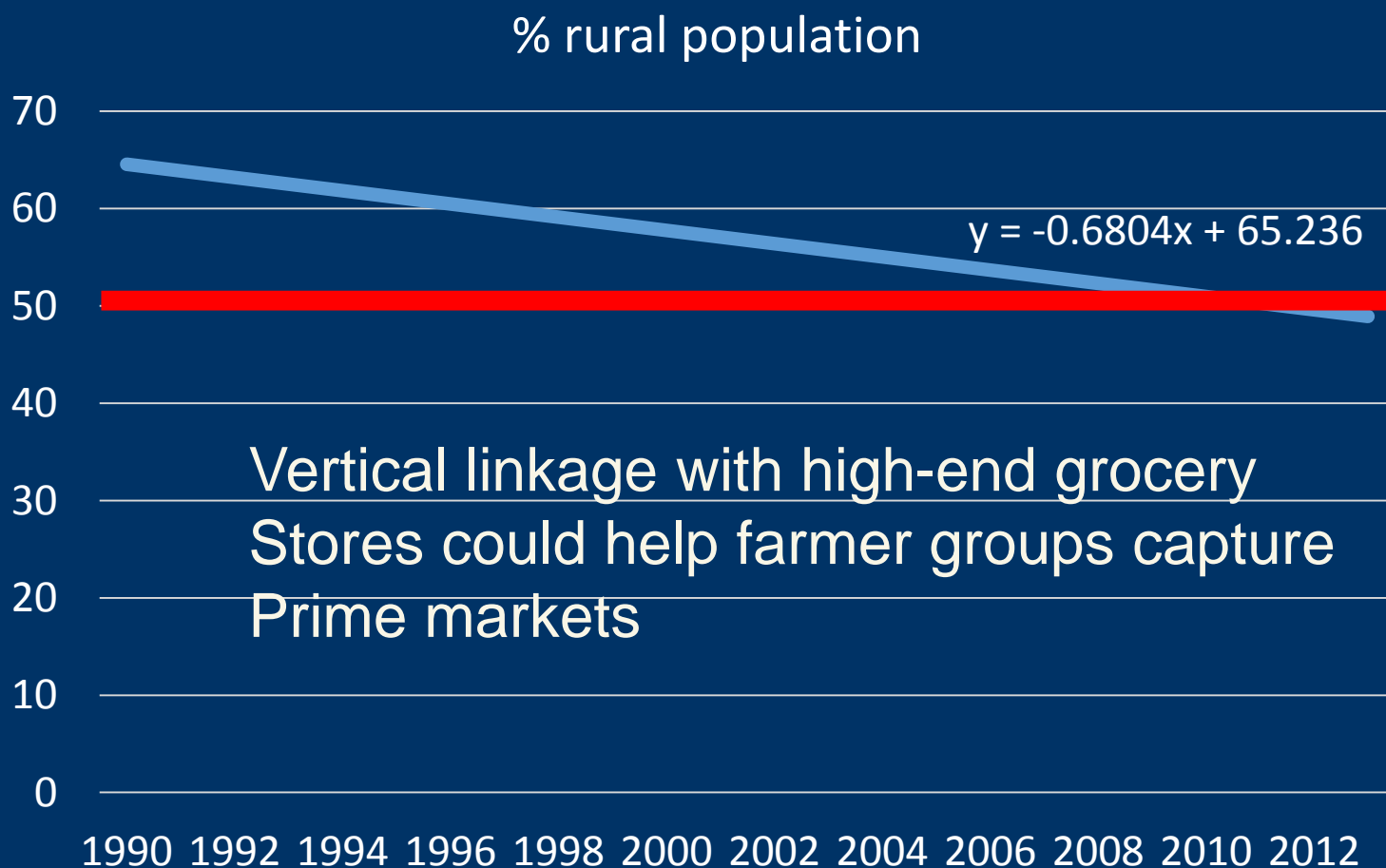
- High rainfall in Central & southern zone



Irrigated crops more profitable than rainfed crops



Increasing urban population → high domestic demand of ag products



High value crops are women crops

- Pepper, okra, tomato, etc were reported to be women crops
 - Due to their high labor intensity
 - Need for delicate handling
- Such orientation implies greater chance of irrigation lifting women out of poverty – even if they own small pieces of land



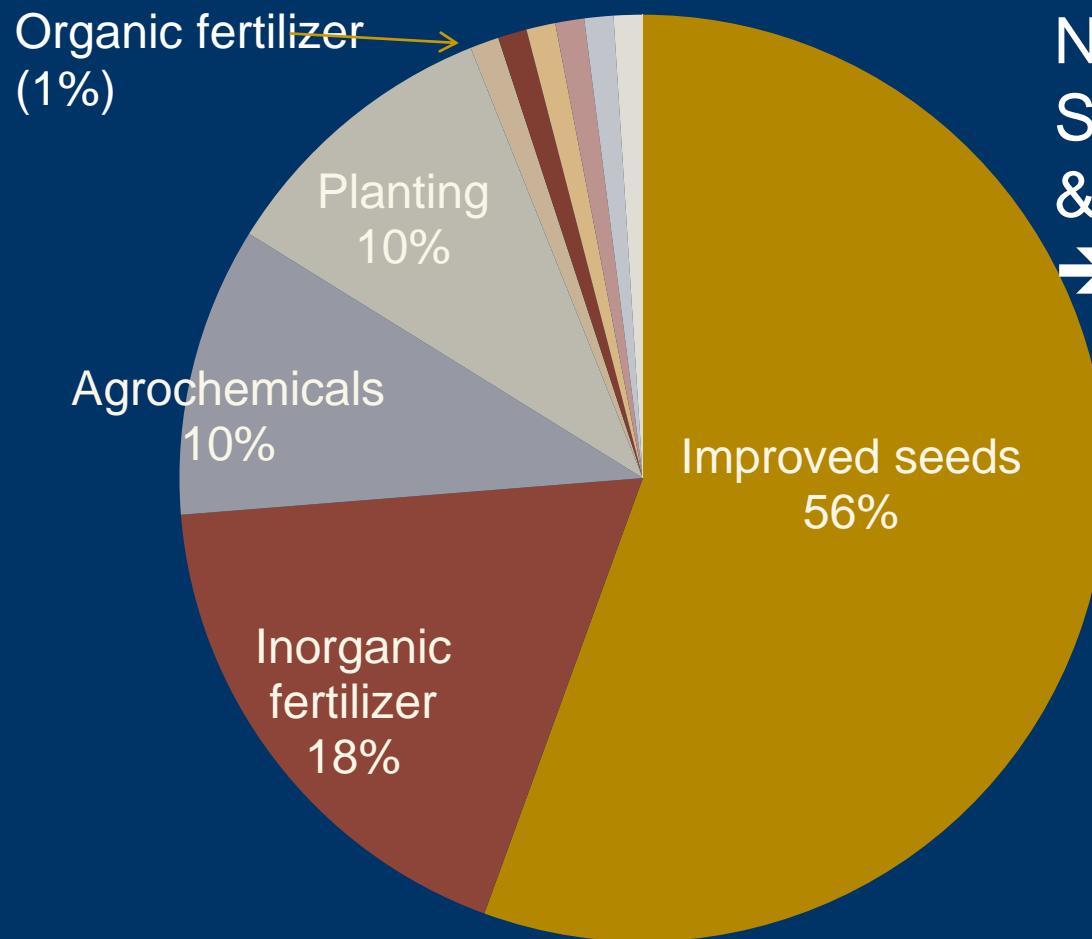
Challenges of irrigation & flooding in Central and Southern Nigeria



Low irrigation experience

- Dry season irrigation is limited in all three states largely due to **lack of tradition & experience to use irrigation**.
- “there is no water shortage in Southern Nigeria, instead there is shortage of agricultural water management skills”, Matthias Moro – retired irrigation officer, Benue state.

Extension messages by AEA in Nigeria

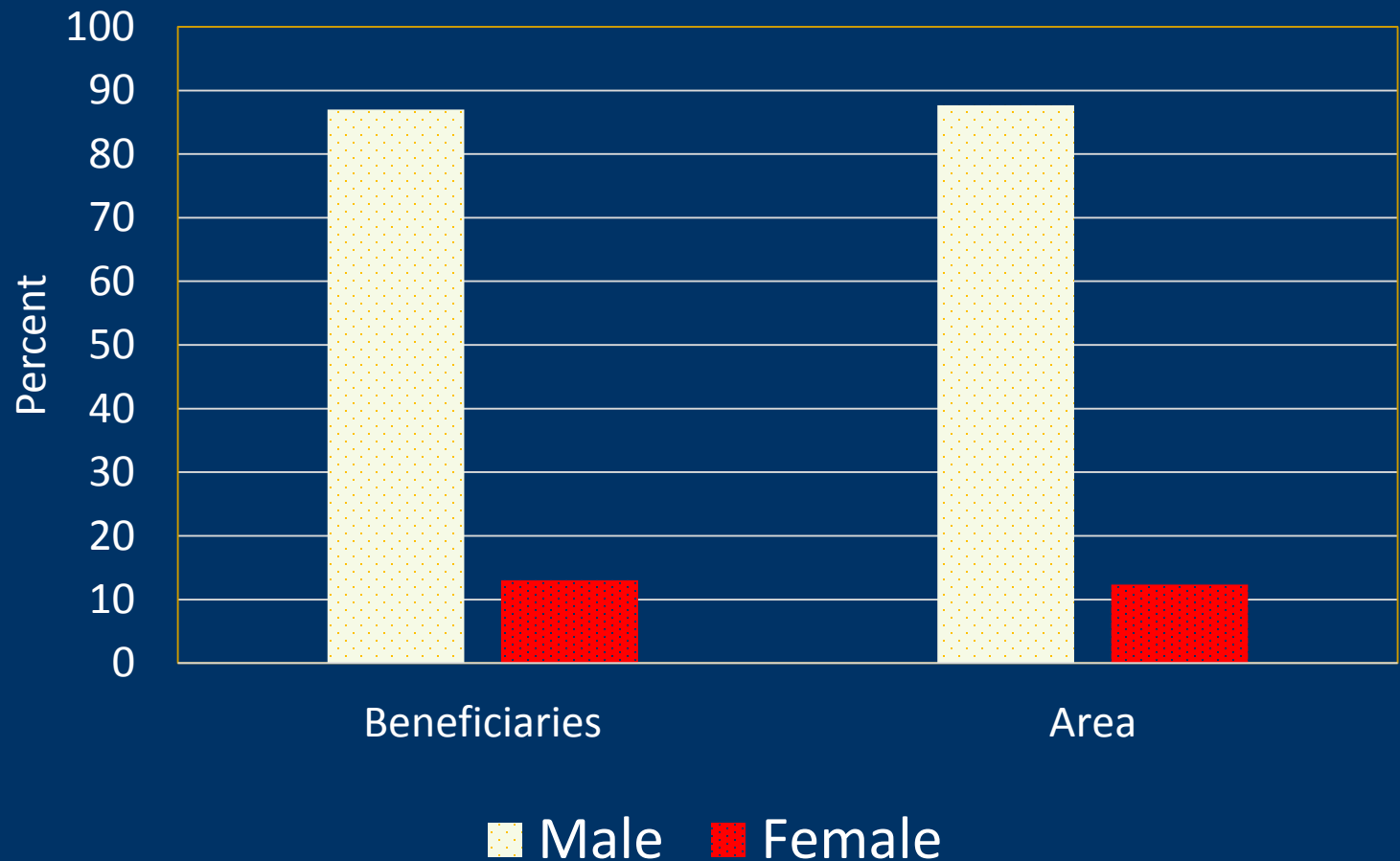


Note: No advisory Services on mkts & irrigation
→ Send back to

Weak capacity for collective action on irrigation

- In each of the three states (Anambra, Benue & Kogi), there are groups of irrigators. The groups have the following challenges:
 - **Amount of money** contributed for irrigation development and maintenance is either zero or small.
 - **Advisory services on AWM & marketing** is very weak in all three case study states. In each there is only one irrigation engineer, **no mkt advisory service**
 - Participation of women – even for government supported projects is limited. Example Benue

Distribution of 292 pumps in Benue & irrigated area of beneficiaries



State government investment in irrigation development & flood control

- In all three case study states, focus of investment in irrigation development is on small-scale irrigation
- **Limited investment in flood control.** The limited budget to flood control is mainly for urban population and allocated following serious flooding – “*fire brigade investment*”
- Existing dams constructed in locations not meant to control flooding.



The way forward

- More data collection required. We are working with:
 - Albert Odukwe – Anambra state
 - Thomas Edeh – Benue state
 - Engr Joseph Ogbe – Kogi state
- To collect LGA-level data on:
 - **Socio-economic data:** population, ag prod'n, labor, farming practices, access to credit & extension services, farmer typologies, inventory of irrigation implemented in each LGA
 - **Biophysical data:** rainfall, salinity, siltation, etc



Way forward (cont'd)

- Analyze secondary data to better understand irrigation & flooding aspects
- Consultation with policy makers on country strategies to turn flooding tragedy into dry season irrigation

C'est à votre tour



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