

Integrated Aquaculture-Agriculture (IAA): mitigating the impacts of HIV and AIDS.

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This Presentation

- Background to aquaculture in Malawi
- Integrated Aquaculture-Agriculture (IAA)
- Adapting IAA to HIV/AIDS affected households

Malawi – Background



- Total area of 119,140 km²
- Water covers 20% of the surface area
- >13 million people
- 90% is agriculture
- Fish production abt 60,000 tones capture fisheries and aquaculture 1200 tones (<2% of total production)

Fish consumption in Malawi

- ❑ Fish important in rural livelihoods.
 - Fish provides 70% of the animal protein
 - Fish vending 3rd dominant MSE

- ❑ Consumption reduced from 12kg (1970s) to about 5 kg currently.

- ❑ Unsatisfied fish demand is forecasted to be 17,000 tones by 2025.

Aquaculture in Malawi

■ Purpose

Income generation

Food security

Nutrition enhancement

■ Brief history

1906 Trout farming – Zomba Plateau

1960's Domasi Centre (now National Aquaculture Centre) established to supply fingerlings of tilapia

1970's A series of external funded projects

1988-89 Mzuzu Centre (Northern Malawi) established

1990 12 government stations operational

■ Status

>6000 farmers (with >10000 ponds)

Total production 800 tones from smallholders

Aquaculture practices

POND CULTURE

- Earthen Ponds 250m² and 1m deep
- 1 to 2 ponds per household
- Indigenous tilapia and catfish mostly farmed
- Most of the fish grown under polyculture
- Stocking density of 2 -3 fish/m²
- Inputs - manuring with supplements of brans (maize & rice)
- Pond yield: 900 – 4000 kg/ha/year with averages of 1200kg/ha/year.



CAGE CULTURE (Commercial)

- Main operation by MALDECO Company – plan to produce 3000 tones/year when in full operation
- SME pilots – cage designs and feeds

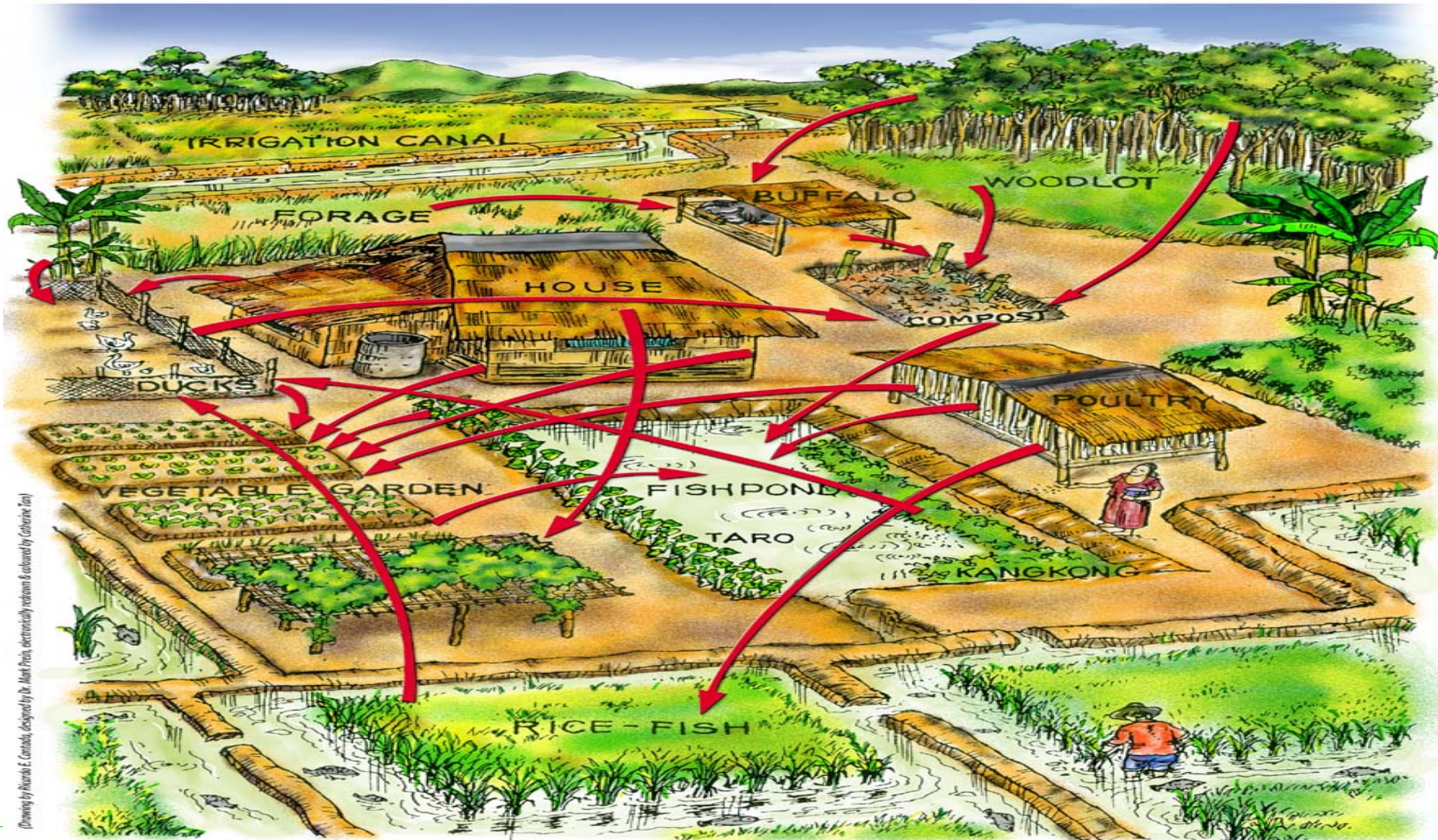
Common cultured species



- The commonly cultured species are the indigenous tilapias and catfish
- *Oreochromis shiranus*
- *Tilapia rendalli*
- *Oreochromis karonage*
- *Clarias gariepinus*

Integrated Aquaculture Agriculture (IAA)

The IAA model





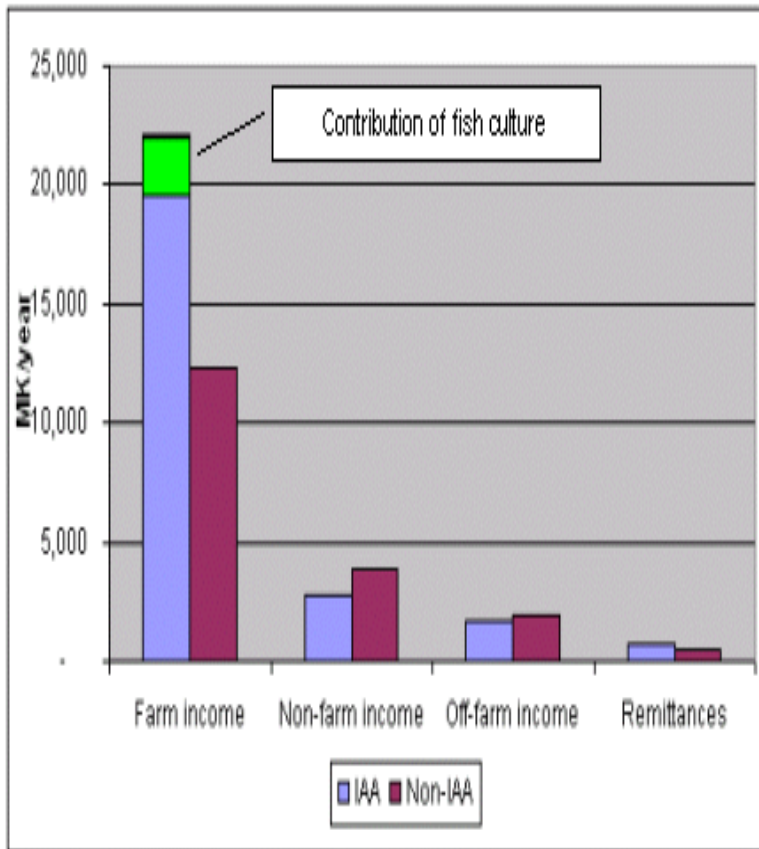
IAA Benefits

Food & Nutrition Security

- A cost-effective supply of protein, with significant increases possible.



Economic benefits



- Improves overall profitability of farm and farm community.
- Open areas to wider markets and enhances market opportunities.
- Provides employment opportunities.
- Creates economic multiplier effect.
- Adds diversification and spreads risk.

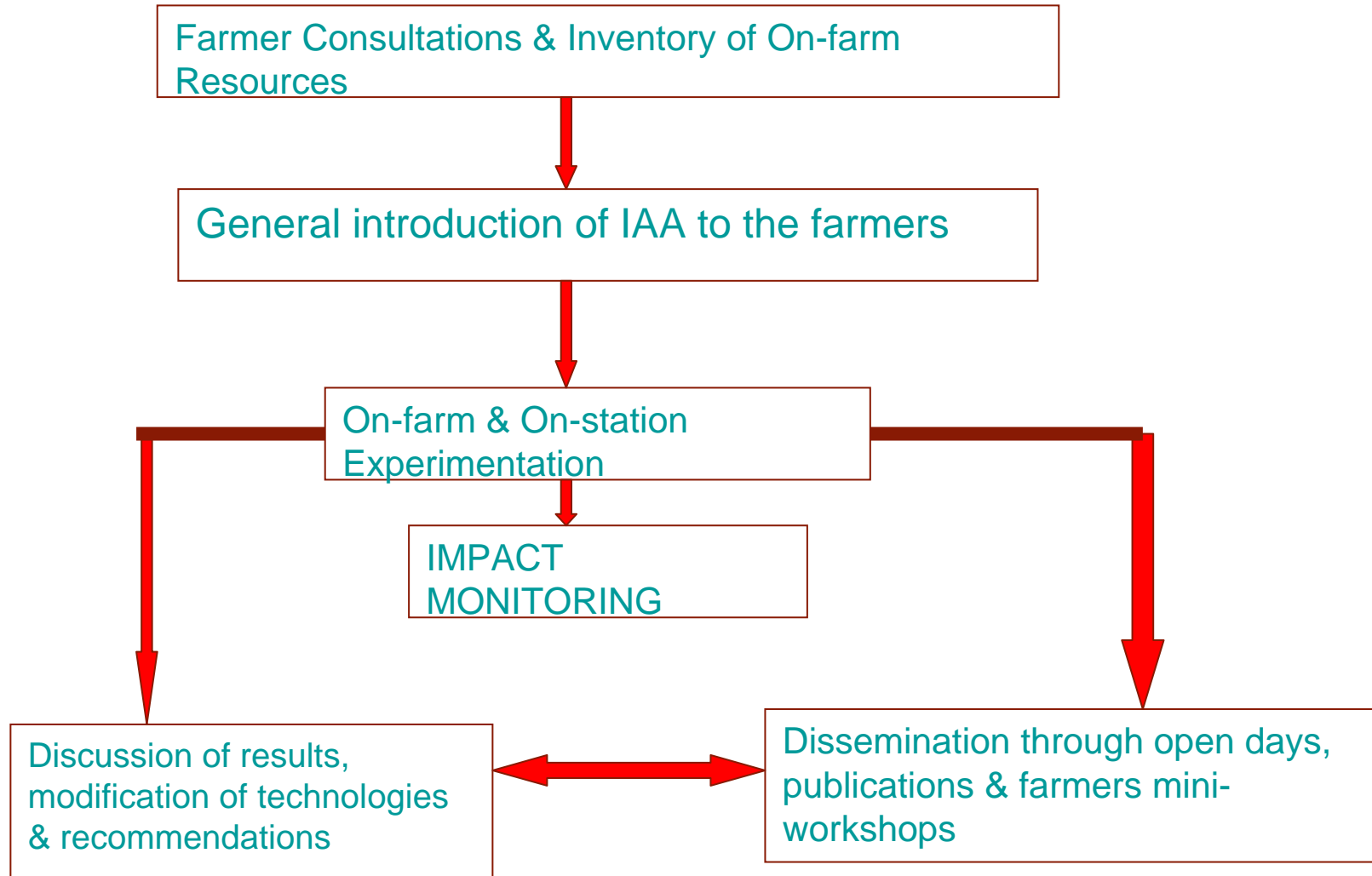
Social benefits

- Provides opportunities for vulnerable groups especially elderly women



Adapting IAA to HIV/AIDS affected Households – Zomba (Chingale)

Approach



Implementation Strategy

- Sensitisation of local leaders on HIV and AIDS and IAA.
- Formation of field teams for fostering research & dissemination of IAA called Research & Extension team (RETs) formed.
- Establishing Community-Based Monitoring, Evaluation (CBM&E) and mainstreaming systems

Key players in the RETs

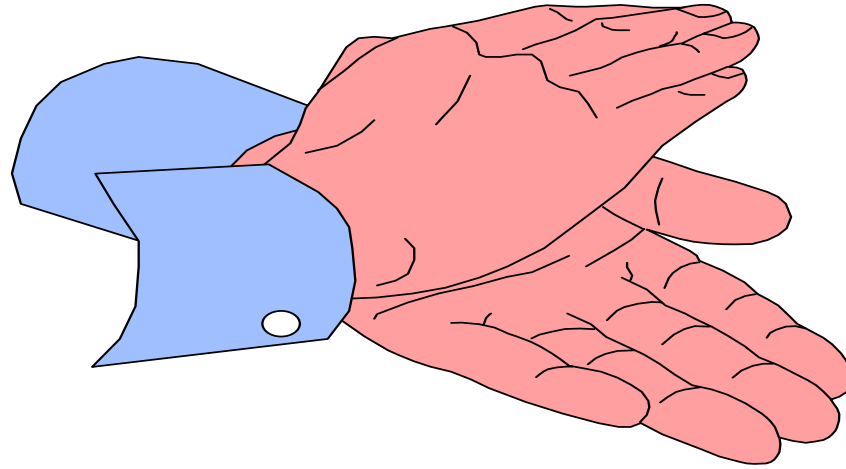
- Researchers both from government (NAC) and WFC
- Frontline Extensionists
 - DFO – Zomba District
 - NGOs – World Vision
 - CBOs – CIAFFA/HIV Youth Groups
- Lead “Contact” farmers

Strong Motivations

- Incomes of affected households doubled from sales of fingerlings
- Per capita fresh fish consumption of the 1200 targeted households increased by 150% from about 1kg. (1.5t/ha average productivity)
- About 300 tones of winter maize from irrigation through integration – enough to supplement energy food for 3 months for the 1200 households; increased vegetable production
- World Vision nutrition survey in the area indicated a reduction in severe malnutrition (0.67%) moderate malnutrition (1.8%) and oedema (0.44%) in under-five children

Way Forward

- Developing customized technologies are critical in setting an all-inclusive strategy for economic growth among HIV/AIDS affected families
- need to develop a common understanding of the importance of integrating aquaculture in farming systems and the challenges ahead.
- Can the Chingale (Malawi) experience be scaled up?



Zikomo

Thank you for your attention

Merci