

Promoting Flood Based farming Systems for Improved Food Security in Malawi

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Malawi

- Malawi is a landlocked country situated in the southern central part of Africa with a land area of 118,480sqKm.
- One third of the country's land area is covered by Lake Malawi which is 585km long and 80km at the widest point.
- Malawi is estimated to have a population of 17million.
- This is one of the highest population densities in the sub Saharan region with an average area for arable land per capita of 0.23 ha, compared to Zambia 0.86Ha and 0.4Ha in sub Saharan Africa as a whole.

Geographical Perspectives



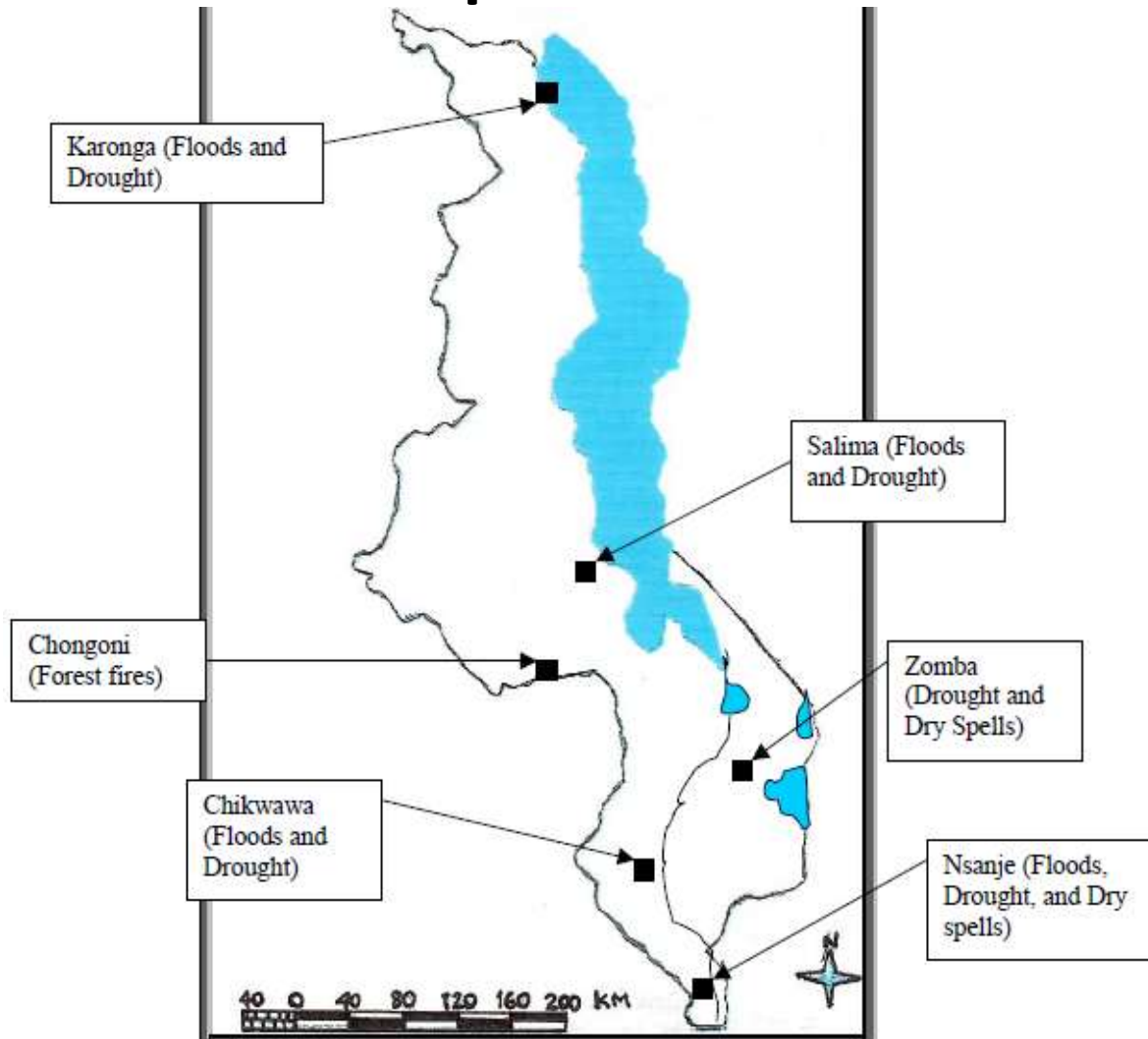
Floods in Malawi

- Floods are annual event – most recent in 2015.
- Over 200 people killed, thousands displaced and hundred of Ha of cropped land destroyed.
- Floods considered “disasters”
- There has been little effort to turn Floods into an opportunity.
- Mainly, FBFS has been confined to use of residual moisture in the floodplain

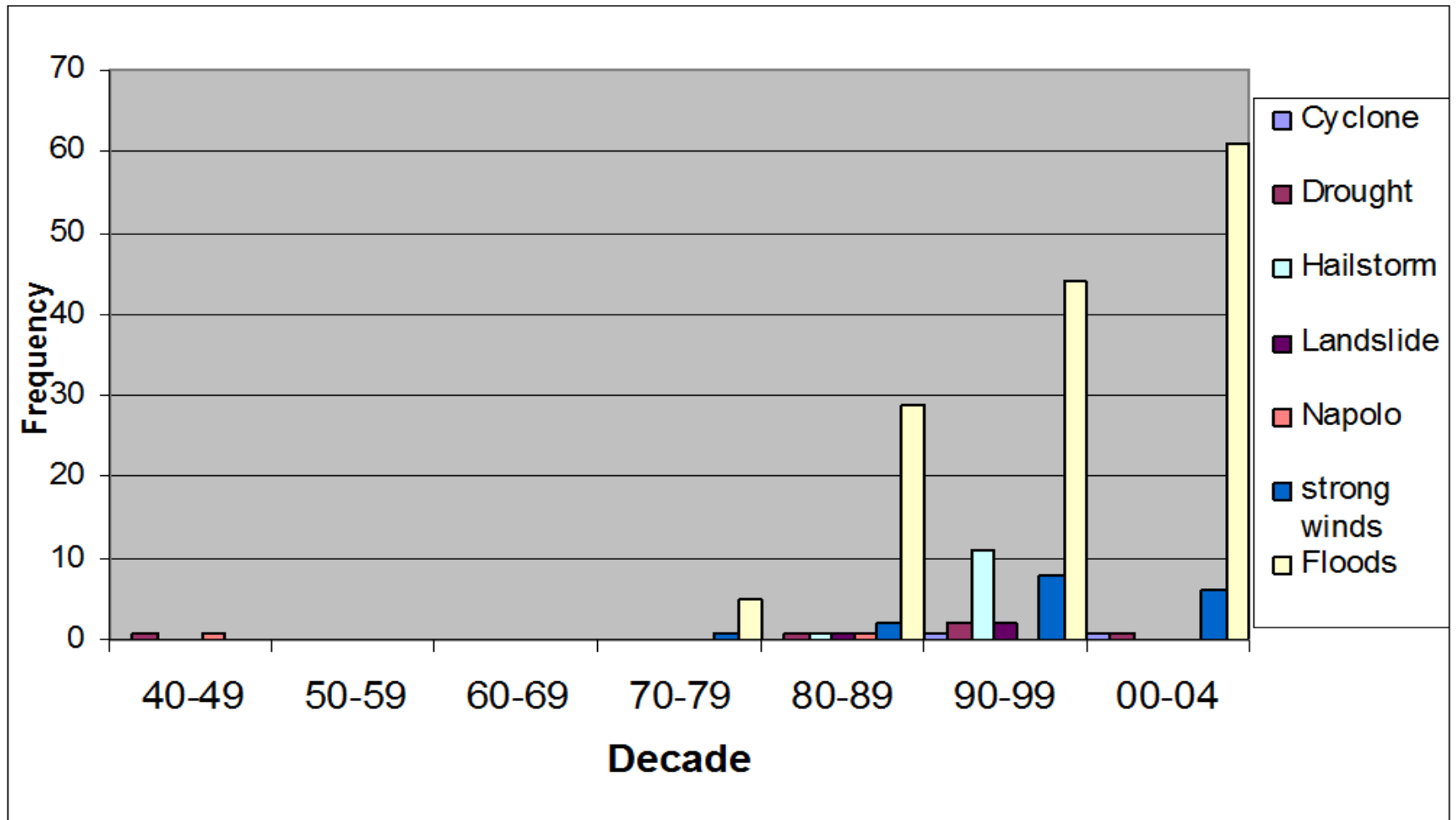
Flood Prone areas in Malawi

- Karonga
- Salima
- Mangochi
- Dedza
- Nsanje
- Chikwawa
- Chiradzulu
- Balaka
- Lilongwe
- Blantyre

Flood prone areas



Trends



Agriculture - current challenges

- Smallholder farmers depend on agriculture
- Climate change - increase in incidences of prolonged dry spells, erratic rainfall and flash floods
- Environmental degradation – people destroy their own environments as a way coping to climate change shock - Charcoal

Land Degradation



FBFS – a potential for increased agricultural production

- Rainwater harvesting is one of the key farming practices that would help smallholder farmers to mitigate the effects of climate change.
- The application of spate irrigation (floodwater harvesting) can be used to turn floods into an opportunity

FBFS – a potential for increased agricultural production

- Although the extent of spate irrigation has not been fully assessed, the potential is quite huge
- It represents a unique option for the management of scarce water resources in support of agricultural production and rural livelihoods in many arid regions

Current drought



2016



Past and Current Initiatives

- Rainwater Harvesting Association funding from UNDP implemented the Best Practices Climate Change Mitigation Project (2012 – 2015)
- Small holder Flood-plains Development Programme - The project was aimed at supporting irrigation development for smallholder farmers and to reduce the over-dependence on rain fed agriculture.
- Apart from crop development, the project focused on capacity building on how farmers can efficiently management water resources and the protection of catchment areas.
- IRLADP – followed the Floodplains Programme
- World Vision, Christian AID and other NGOs

Path of Floods



With Local leaders



Path of floods/Live fencing



Spate fields



The yield – October 2015



Up stream/ Degraded watershed



Deep Gullies



Current Initiatives – flood diversion weirs



Infiltration pits



Capacity building



Pits



Eye brow basins















Staff training









Road run off for Rice Production



challenges

- Lack of policy declaration
- Limited capacity among technical staff and farmers
- Lack of integration with other sectors

Way Forward

Africa - Asia Programme

- Need for leadership and Champions – Host Organization, Rainwater Harvesting Association of Malawi
- Raising awareness on FBFS
- Conduct a comprehensive review i.e. baseline study including mapping the potential for FBFS
- Appropriate techniques need to be identified for particular areas within the country.
- Development of a communication strategy
- Need to identify the list of crops that can be grown under spate irrigation in Malawi.

- Mainstreaming of SI in curriculum of education
- Development of databases of ;
 1. *Farmers practising FBFS*
 2. *Farmer groups (cooperatives, CBO)*
 3. *Experts in various fields related to FBFS*
- Organise and conduct meetings with key stakeholders and Policy makers on rolling out SI in Malawi
- Organise the 1st National Workshop on the FBFS in Malawi

Key Stakeholders

- NGOs
- Academic Institutions
- Research institutions
- Government Departments (Env't, Forest, Agric, Irrigation)
- Cooperatives/CBOs

Conclusion

- Although the potential for FBFS have not been fully assessed, this potential is probably quite large in Malawi where food security is major concern.
- Flood Based Farming Systems have high potential for improving food security and reducing over-dependency on food aid.