Food insecurity in Karamoja: Is drought to blame?

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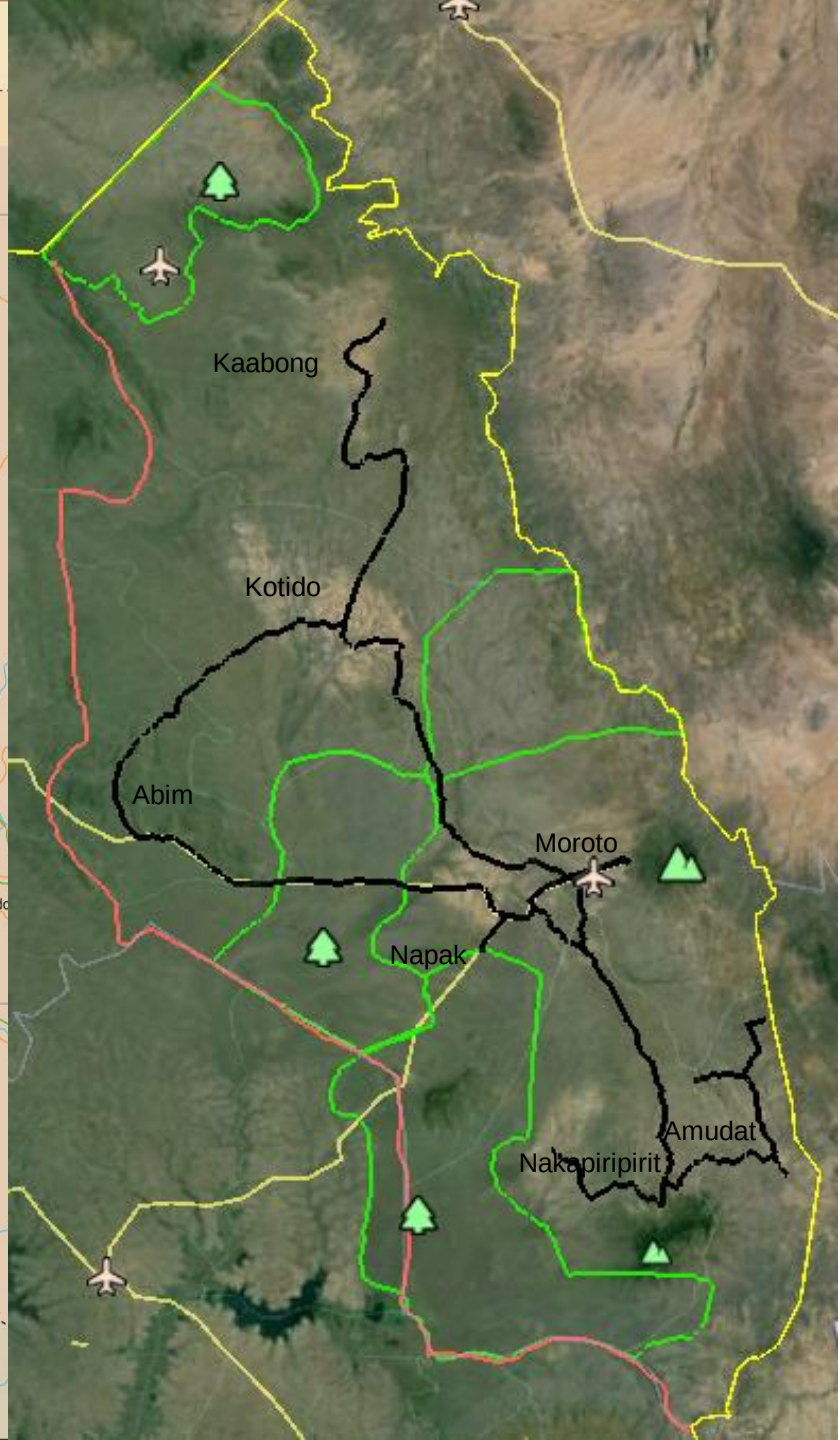
- General observations
- Observations per district
- Vulnerability assessment
- Coping capacity
- Drought Risk – Summary
- Conclusion and recommendations

Research Methodology

- Transect drive
- Observation
- Farmer groups
- Individual farmers
- Officials
- NGO’s and UN

UGANDA MAP

30°
34°
Jubá
Torit
Lokichokio
Yei
Aba
Faradje
Moyo
Kaabong
Kenya
Nile
Atiak
Kitgum
Arua
Karamoja
Ora
Gulu
Northern
Moroto
Pakwach
Okok
Okere
Lira
Zaire
Lake Kwania
Butiaba
Lake Albert
Masindi
Soroti
Lake Bisina
Bunia
Lake Kyoga
Kapchorwa
Hoima
Kafu
Eastern
Victoria
Nkusi
Mbale
Namasagali
Busoga
Kitale
Western
Fort Portal
North Buganda
Mbulamuti
Busembatia
Tororo
Kyenjojo
Mubende
Bombo
Nile
Iganga
Beni
Eldo
Mityana
Kampala
Jinja
Butere
Kasese
Central
Lake George
Ntusi
Entebbe
South Buganda
Kisumu
Lake Edward
Masaka
Sese Islands
Southern
Lyantonde
Kisii
Mbarara
Gucha
Ntungamo
Kabale
Kyaka
Bukoba
Lake Victoria
Musoma
Ruliengeri
Lac Muhazi
Rwanda
Tanzania
Kigali
Ukerewe Island


Kaabong
Kotido
Abim
Moroto
Napak
Amudat
Nakapiripirit

Important questions…

- Why is Karamoja food insecure?
- Why low levels of agricultural production?
- What is the role of drought?
  - Is drought to blame?
  - What are the indicators for drought risk?
  - Why are farmers vulnerable to drought – some more than other?
  - What are the best coping mechanisms against drought?
  - Can we blame climate change?

Risk Assessment Framework

Hazard
- Probability
- Intensity

Vulnerability Economic
- Crop yields
- Cultivation
- Bio mass
- Animal Diseases
- Markets

Vulnerability Social
- Culture
- Gender participation
- Literacy level
- Knowledge
- Security

Vulnerability Environment
- Bush encroachment
- Over grazing

Coping capacity/adaptation/prevention
- Diversification
- Alternative income sources
- Alternative land
- Reseves

Hazard

Vulnerability

Coping Capacity/adaptation/prevention

Risk

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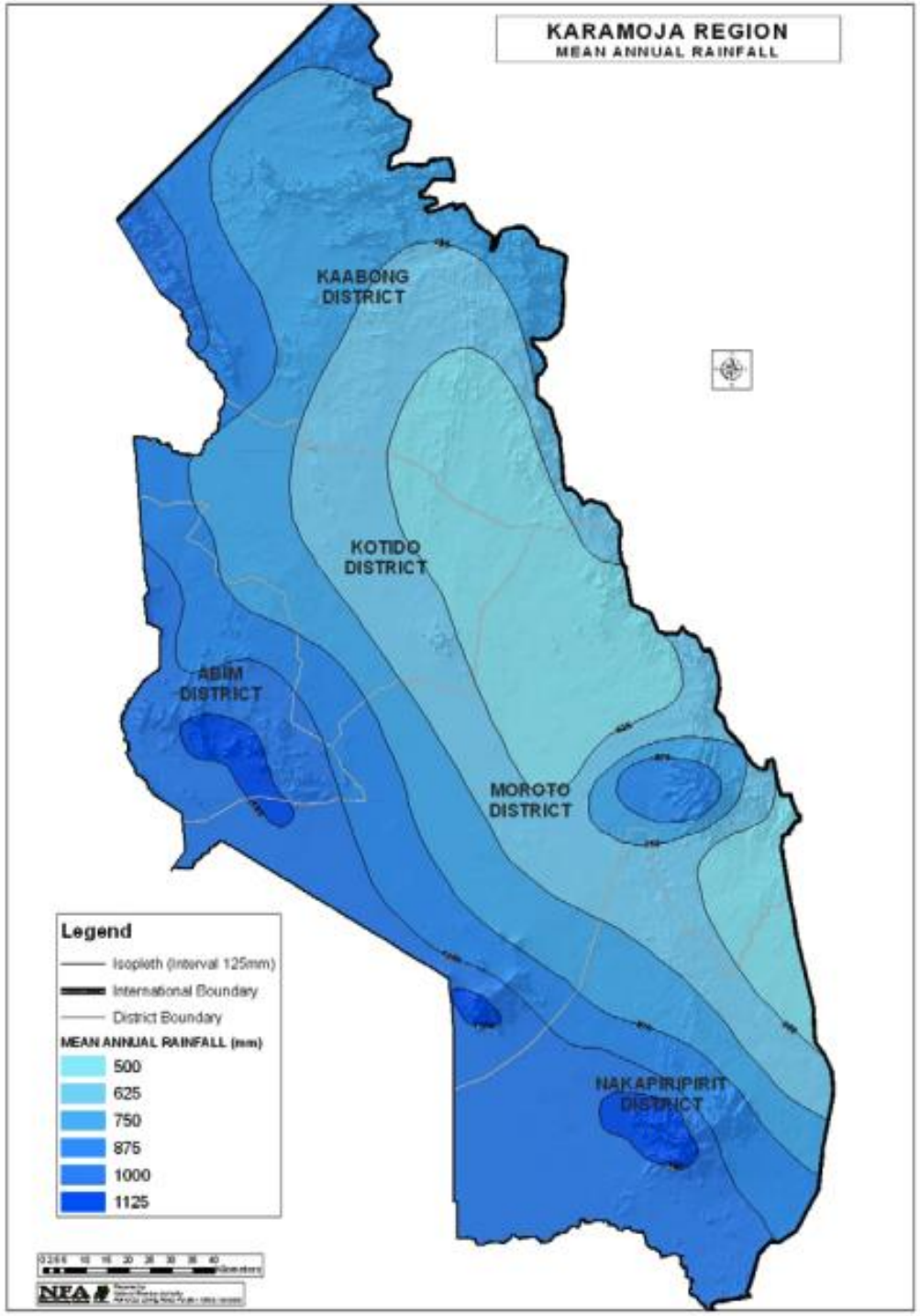
Hazard Assessment

- Historical precipitation data
- Exceedence probability
- Intesity
- Severity
- Seasonal anomaly



Annual Precipitation: Karamoja

Kaabong:	600 – 800 mm
Kotido:	500 – 700 mm
Abim:	800 – 1000 mm
Moroto:	500 – 700 mm
Napak:	700 – 1000 mm
Nakapiriprit:	800 – 1000 mm
Amudat:	500 – 700 mm

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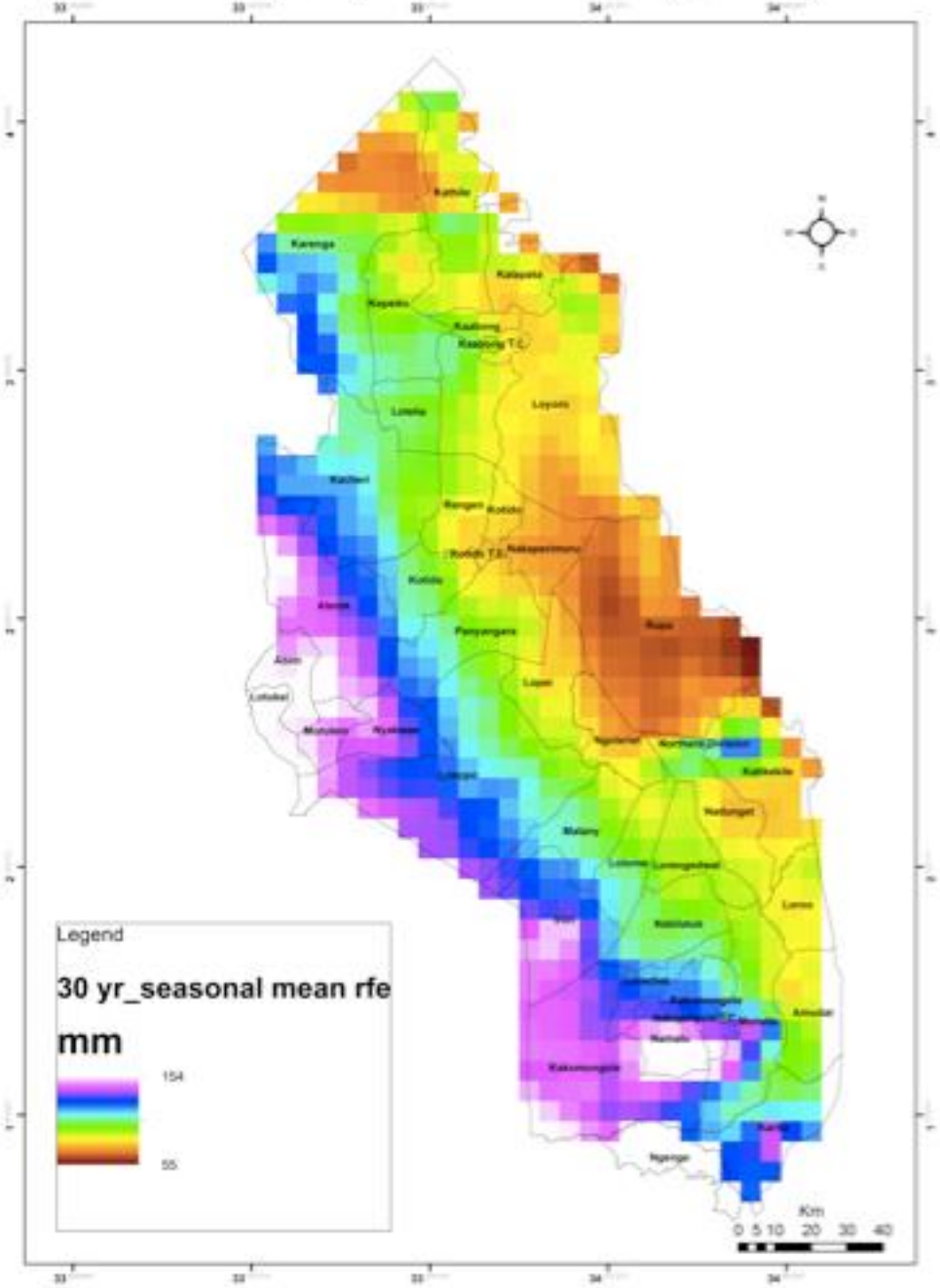
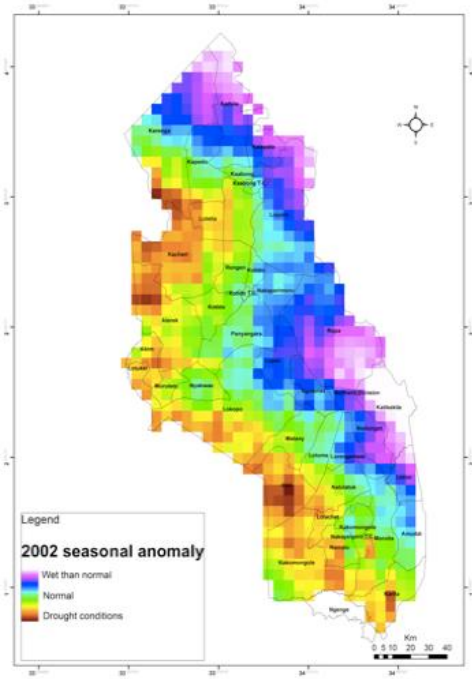
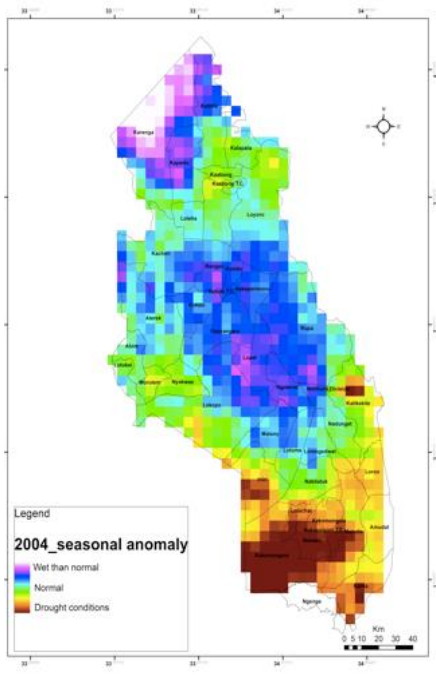
Karamoja 30yr seasonal mean(Apr-Oct)



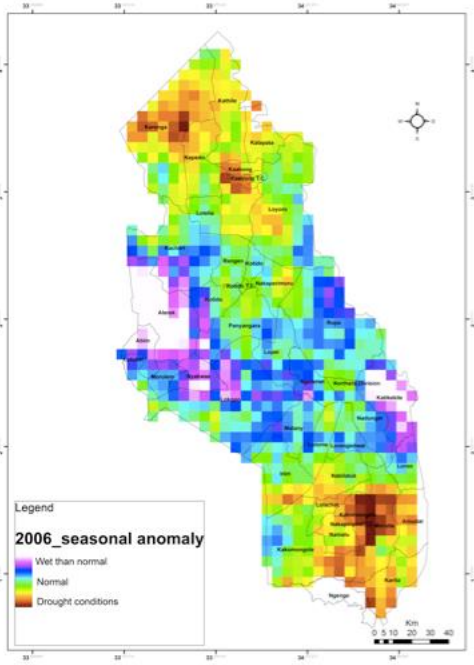
Karamoja 2002 seasonal anomaly(Apr-Oct)



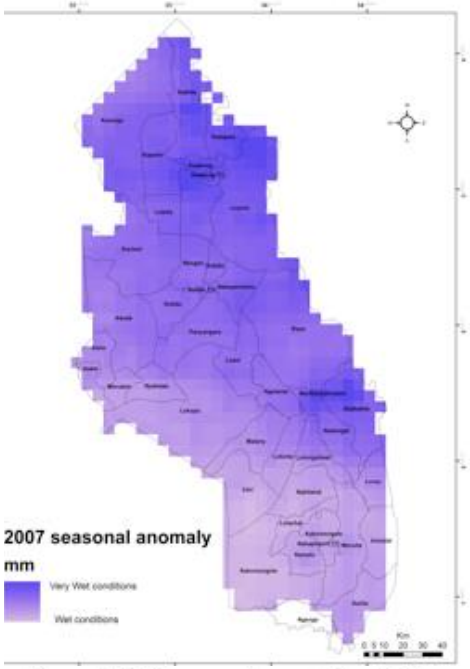
Karamoja 2004 seasonal anomaly(Apr-Oct)

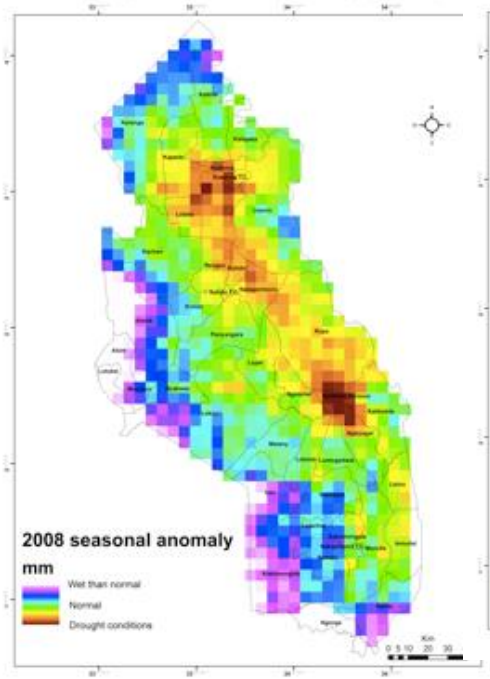


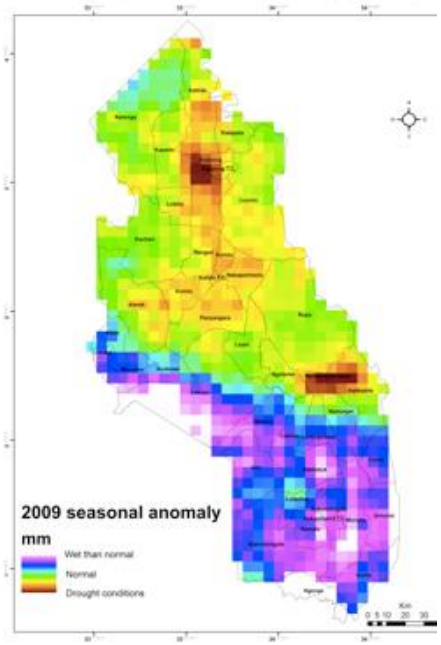
Karamoja 2006 seasonal anomaly(Apr-Oct)



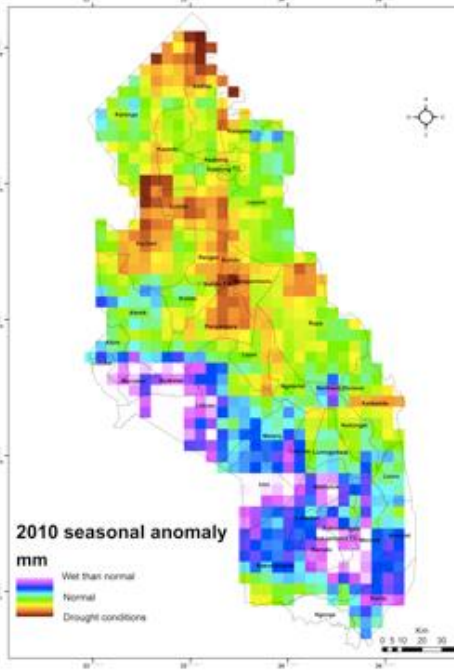
Karamoja 2007 seasonal anomaly(Apr-Oct)



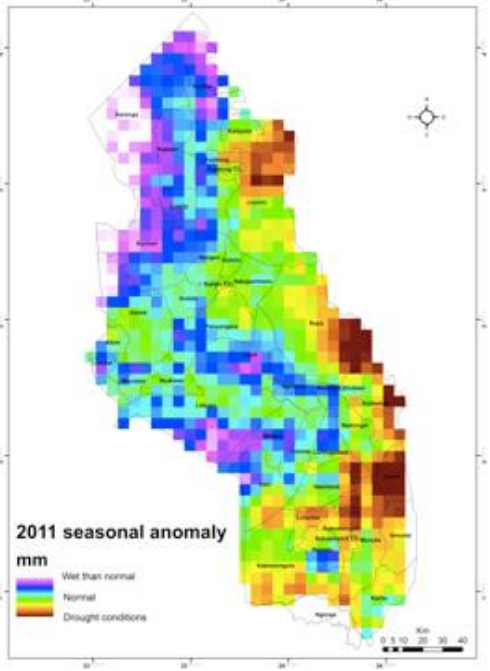




Karamoja 2010 seasonal anomaly(Apr-Oct)

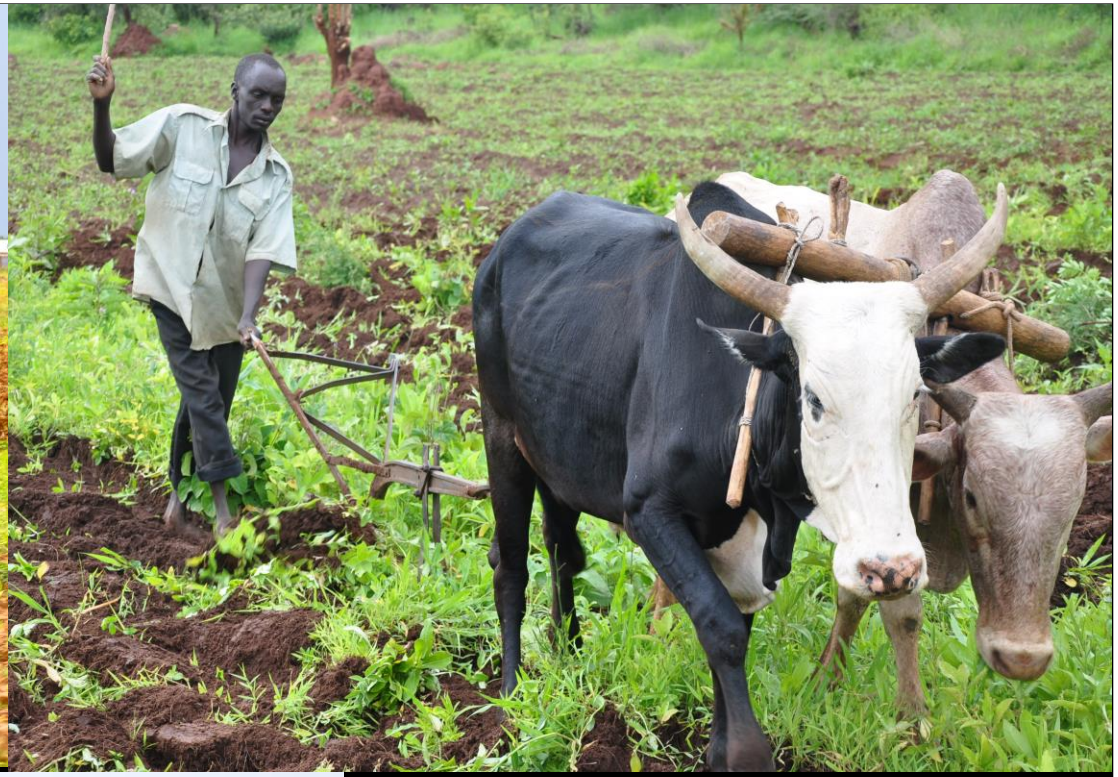


Karamoja 2011 seasonal anomaly(Apr-Oct)



Crop production

- Cultivation
  - Too late – wait for rains
  - Seedbed not supporting good germination
  - Shallow and same depth every year – Limit root forming of maize in sandy soils
  - Green manure is good practice but N negative period (40 days) cause N shortage in young plants
  - Hoes and oxen – “ richer” farmers
  - Mainly women (hoes) but practice is changing
  - Not enough resources, man power to increase land size – Men and women are weak



Cultivation and weeding; (Seed bed)

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Crop production

- Weeding
  - Too late – Wait until appr. 500 mm - Competition for young plants
  - Mainly women
- Seeding
  - Broadcasting instead of planting; Equal distribution of plants more important than rows
  - Unequal distribution of plants
  - Plant density too high
  - Poor germination
  - Drought resistant seeds in lower rainfall zones
  - Higher yield seeds adapted to higher rainfall zones

Crop production

- Harvesting
  - Sometimes too late – losses on crop field
  - Selection of seeds for next season on crop fields
  - Men also involved
- Storage
  - Graineries
  - Losses 30% - 60% (Weevils, rats, termites, rotting)
- Free movement of animals onto crop fields after harvest
- No reserve storage of crop residues

Grainaries and storage on crop fields

General – Crop production

- Cultivation virgin soil
- Migrate temporally to favorable climate zones during drought
- Men become more involved in all processes
- No efforts of irrigation
- No indication of water harvesting
- Practices not focused on moisture conservation
- Infrastructure such as roads might limit markets with increased production

Cultivate virgin soil

Men more involved

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Livestock

- Large reduction in livestock numbers
- Condition in general no too bad
- Very small
- So many bulls – Bull to cow ratio?
- No breeding program, but…farmers select
  - Large frame
  - Bulls that breed cows with more milk
- High mortality rates – 60% for calves, lambs
- Weaning percentage only 20% - 30%

Livestock

- Security is key indicator
  - Limited mobility – over-exploitation some areas; under-exploitation other areas. Available grazing and water far away (not safe)
- Diseases the main reason for high mortalities - more important than drought –
  - CBPP - cattle
  - CCPP - goats
  - Ticks
  - Foot & Mouth – currently 5 district

Livestock ….continue

- Less vulnerable to droughts than crop production
- Nomadic system is best coping mechanism –
  - Alternative grazing to the west during dry periods
  - No conflict over grazing – even Pokot and Turkana
  - Land is currently available - but is time bomb that will explode with population growth for both people and animals
- Men in charge of livestock production
- Boys from >10yrs are herding
- When migrating families remain

Manyatta.

Security for family and assets

Kraal – providing security…..

Kaabong, Kotido

Kraal system

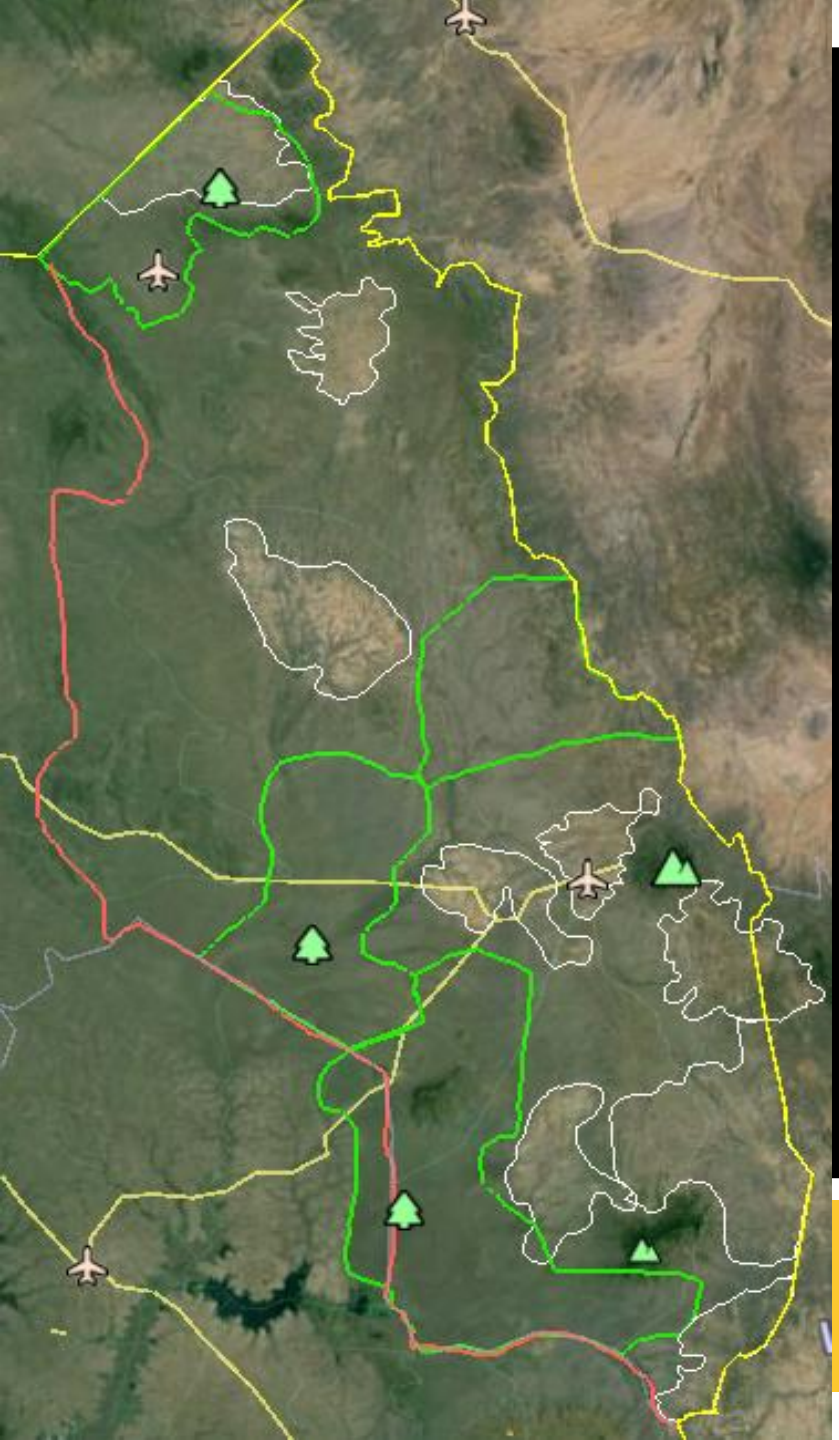
- Disadvantages
  - Animals have to walk long distances – waste energy
  - Overgrazing in vicinity
  - Animal foot paths - erosion
  - Spread of diseases
  - Uncontrolled breeding
- Advantages
  - Secure
  - Group cohesion
  - Disease detection
  - Extension opportunity

Natural resources - water

- Groundwater main source of water
- Valley tanks positive contribution
- Dams
- Need to provide water points at strategic places
- Good distribution of water points will limit drought risk and better utilization of grass
- More water points will limit long walking distances and wasting of energy

Natural resources - grazing

- Overgrazing around bigger towns/centra/villages
- Bush encroachment especially west of Moroto – Lower thorny bushes and shrubs the result of continuous over-grazing
- Excellent grass cover in higher rainfall zones even under utilized at some places
- Excellent grass cover in parks
- Reduction in animal numbers allowed recovery of grazing



Vegetation cover: Oct 2013

- Overgrazing
- Crop fields after harvesting
- Lack of grazing for animals
- Migration to west
- Note Kenya overgrazing

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General - vulnerability

- Security increase vulnerability
- Farmers do not receive early warnings
- Indigenous knowledge based on indicators when already onset of dry period
- Many farmers destitute and few resources
- Low knowledge levels
- In general people are physically weak
- Extension support is weak – most farmers report at most 1 visit per year – no extension program
- Infrastructure and markets not well developed
- Market distortions

Increased vulnerability

- Lack of knowledge
- Safety and security
- Dependency
- Destitution (warrior to beggar – men)
- Gender issues
- Cultural beliefs
- Motivation to change own environment

Infrastructure and markets

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Coping capacity

- Community cohesion –support each other
- Migrate temporally to higher potential regions – to the west
- Coping/Survival - livelihoods
  - Cut number of meals
  - Eat wild fruits and leaves
  - Charcoal burning
  - Casual labour
  - Migration
  - Selling small animals
  - Selling cattle

External factors

- So many “partners”(NGO’s & UN)
- Excellent programs and work but….each do own thing…not sure about proper coordination?
- All working toward one Karamoja strategy with principle of competitive advantage ?
- How active is NGO Forum? Efforts of coordination at districts but not well supported
- Food supply could have negative impact on motivation to produce?
- Measurement of success? Not individual projects but on Karamoja society in total.

Conclusions

Dry spells and droughts are not to blame for chronic food insecurity in Karamoja – neither has climate change anything to do with current food insecurity

Conclusions….continue

- Pastoralist system more resilient against drought
- Short term dry periods can have devastating effect on crop production
- In contrast to what is commonly propagated, the communal land use system assist in resiliency against drought – for now
- Most droughts are is probably “man made” because of poor agricultural practices, low agricultural output and social factors

Resiliency to drought

- Land-use system – migratory patterns and option to use alternative land
- Warning! Current Land use system is not sustainable – Human and animal population growth as well as increased crop production will threaten current system of movement.

Recommendations

- Ensure mobility through a secure environment *(Gov & security programs)*
- Introduce animal health program *(Livestock improvement program)*
- Improve agricultural practices *(Agricultural production improvement program)*
- Determine grazing capacity per region and manage animal numbers accordingly *(Gov)*
- Find solution for land use – Do not wait until the problem arises *(Gov)*

Chronic support is short term solution but in long term people become too dependent and have no motivation to build own resiliency – must break the cycle of chronic relief and support.

Karamoja will experience chronic droughts, even in normal years if status quo is maintained.

Thank you.