

THE ROLE OF LOCAL INSTITUTIONS IN ADAPTIVE PROCESSES TO CLIMATE VARIABILITY

The case of southern Ethiopia

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OXFAM

Study area



- Study conducted in Yabello (Dida Hara) and Moyale (Maddo) woredas of the Borana zone.
- The location of the study area has an impact on livelihood options and adaptation to droughts



Study area

- The Borana traditionally have rangeland and livestock management systems
 - Herd splitting;
 - Mobility;
- These systems have been weakened due to:
 - Conflict over resource use
 - Drought
 - Expansion of farming
 - Land loss to neighboring groups
 - Unsupportive policy environment
 - Erosion of property rights over pastures and water;



The Pastoral/agro-pastoral System in Ethiopia

- Pastoral and agro-pastoral communities in Ethiopia constitute 10 to 12 % of the total population;
- In Ethiopia, pastoralism is widely practiced in the Somali, Oromia and Afar Regional States, and to a lesser extent in other regions of the country;
- About 30-40 % of the country's livestock population is found in pastoral and agro-pastoral areas;
- Small scale farmers and pastoralists are more vulnerable to changing climatic conditions;



Drought Related Problems

- **The 2011 Drought**

- Triggered by La Nina; affected an estimated 12 million people in the horn of Africa, and 4.5 million in Ethiopia (mainly Borana and Somali)
- In Borana hagayya short rain failed in October and November, and long rain season failed.
- Affected the study (had to change one of the study sites as the people had migrated)

- **Effects**

- **Water**—ponds cisterns dried; some destroyed by 2010 flooding in Yabello;
- **Pasture**—too many livestock; no pasture; little hay distribution;
- **Health**—no or poor health service available;
- **Food**—no milk; households unable to sell livestock and buy food; no timely emergency response from the government and NGOs;

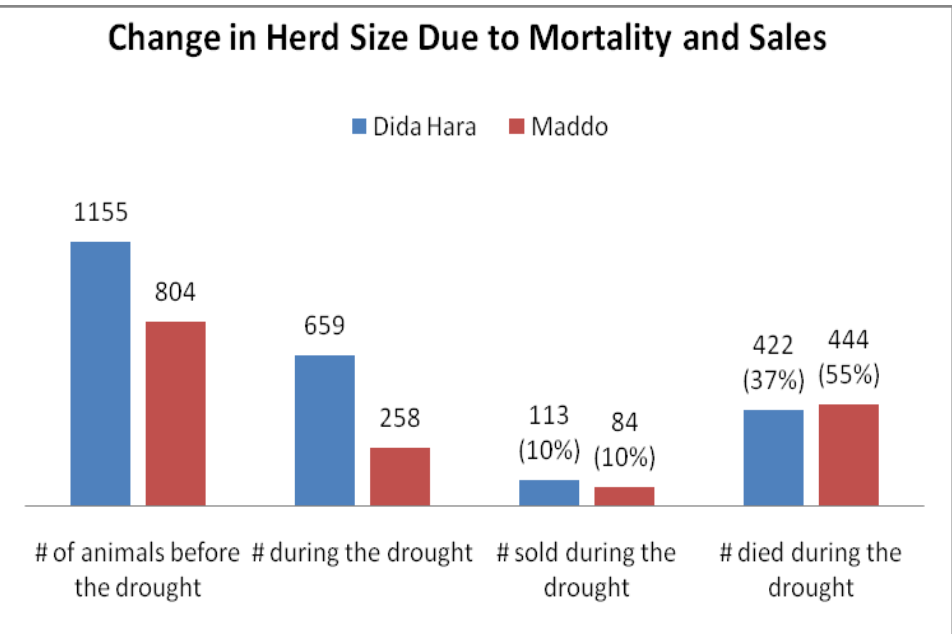


Drought Impacts on Assets and Livelihoods

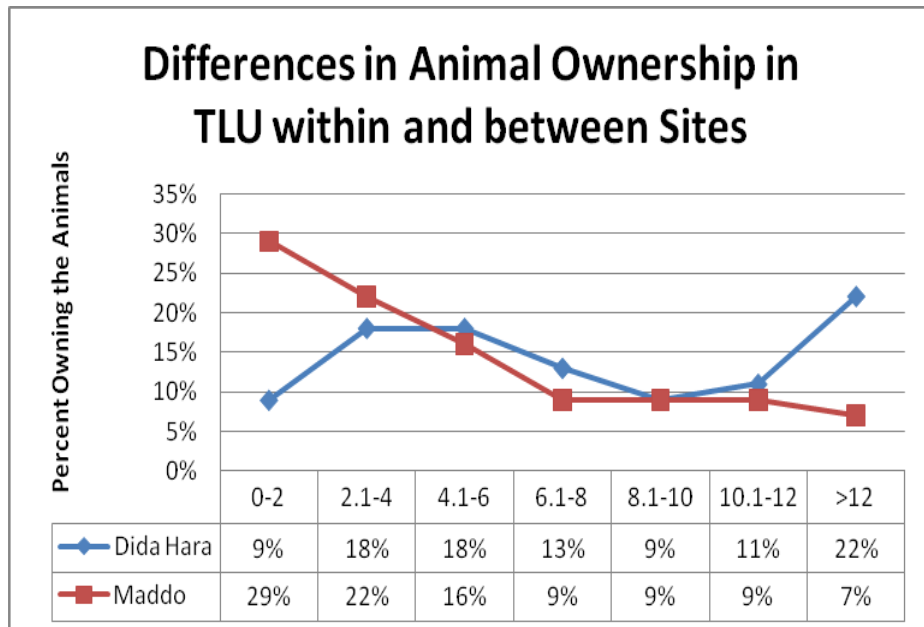
- Frequent Drought put stress on livelihoods
 - Makes recovery impossible
 - Desperate sales and death affect animal assets
 - Animal body condition deteriorates
 - Milk production declines
 - No of impoverished pastoralists increase

- An offtake rate of 10% may not be too high
- Before 1983-84 drought years, 19% offtake rate (Coppock, 1994)
- Possible reasons for low offtake rate:
 - Diversification of livelihoods (e.g., cultivation of crops);
 - Availability of food aid and PSN programs.
 - High grain prices;

Animal Asset Decline Due to Mortality and Sales in Dida Hara and Maddo in 2011



Wealth Differentiation



Role of Local Institutions

- Focus: Gada System
 - age-grade system
 - cyclical
- Role:
 - Land management
 - Water management
 - Drought Early warning
 - Support systems
- Impacts on institutions
 - Buusa gonnofa support system weakened over recent decades as a result of repeated drought



Community Adaptation Mechanisms: Strategies to Reduce Risk Exposure

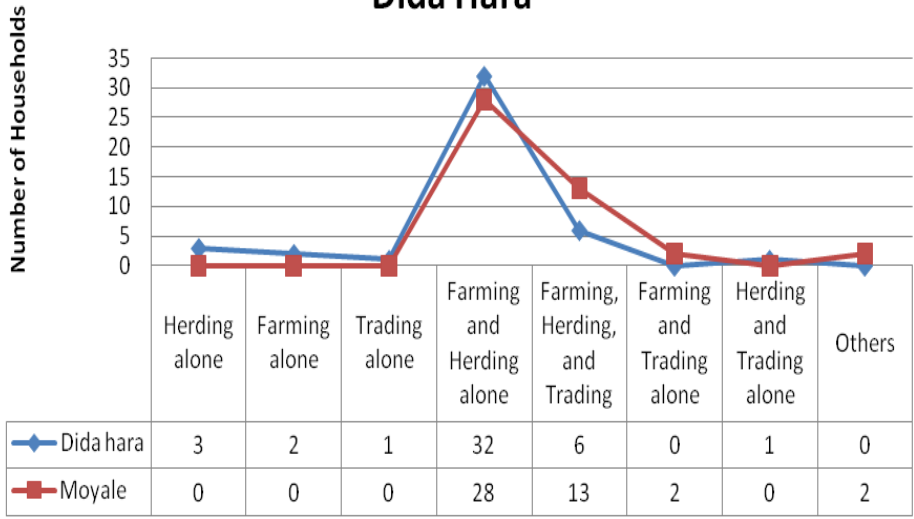
Short-term	Long-Term	Conventional and Emerging Adaptations
<ul style="list-style-type: none"> • Livestock Sales • Petty Trade • Restricting Consumptions and Skipping Meals • Charcoal and firewood sales 	<ul style="list-style-type: none"> • Mutual Support Systems • Mobility and Rangeland Management • Herd Accumulation • Herd and Livelihood Diversification • Education • Saving and Credit Groups • Storing Hay 	<p>Conventional Adaptations</p> <ul style="list-style-type: none"> • Mobility • Keeping Large Size Herds • Herd diversification • Crop cultivation <p>Emerging Adaptations</p> <ul style="list-style-type: none"> • Credit and Saving Associations • Storing/buying Hay • Businesses in towns



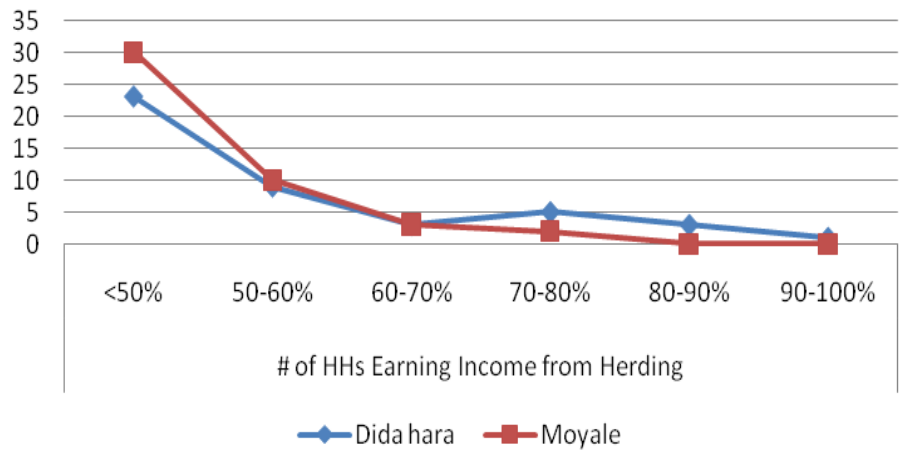
Household Livelihood Options in Maddo and Dida Hara

Household Income Earning from Herding

Household Livelihood Options in Maddo and Dida Hara



of HHs Earning Income from Herding

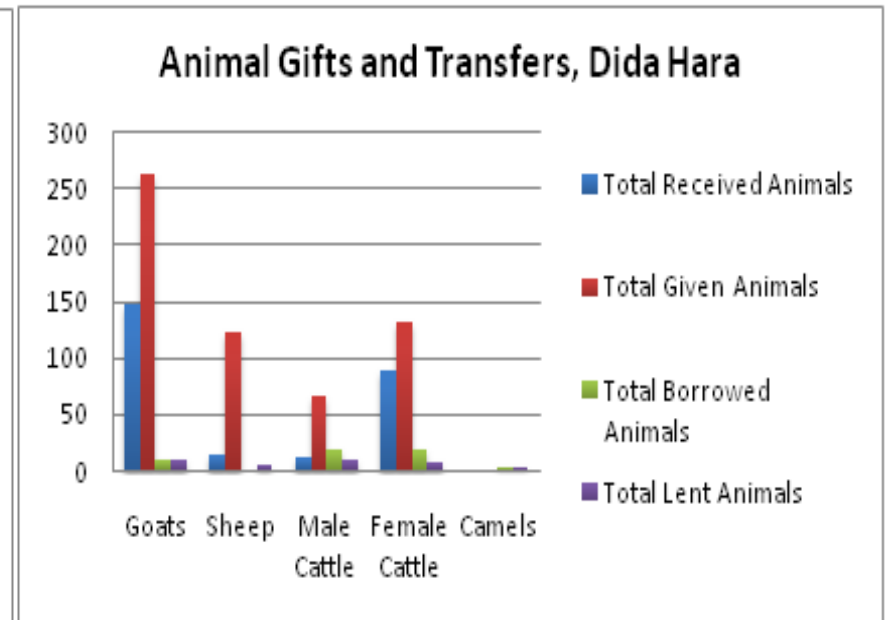
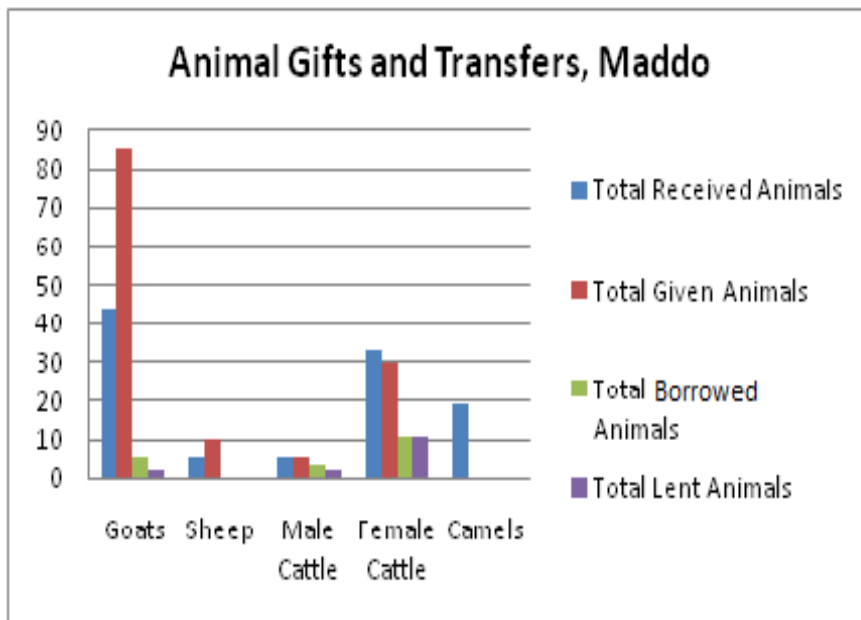


The sample size is 45 from each district



Social Support Systems

- Support Systems
 - Households and Gosa members support each other
 - During droughts:
 - Grains
 - Milk
 - Animal gifts
 - After droughts
 - Restocking (buusa Gonnofa)



Customary Resource Management

- Rangeland Management
 - Weakening Customary Rules
 - Local authorities attempt to revitalize customary range management by villagizing pastoralists
 - Not clear if it is part of the government plan to resettle pastoralists



Gender and Vulnerability to Droughts

- **Women are especially affected and face multiple challenges**
 - Women and elderly people more affected
 - Women are excluded from formal and informal institutions
 - Credit and saving institutions are increasingly embracing women
 - Drought increases women's workload and school dropout of girls



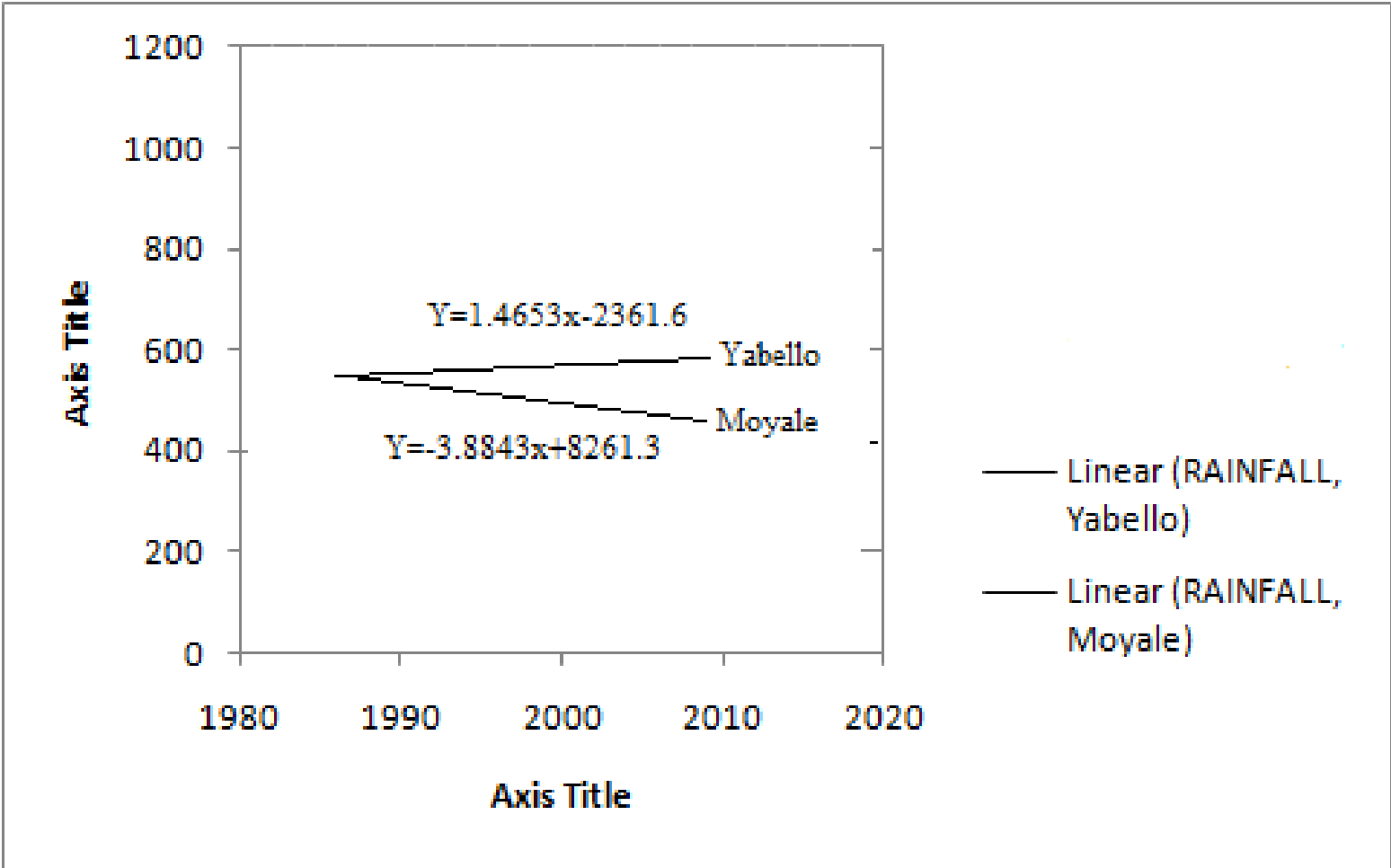
Collecting grass & fetching water

Perceptions and Traditional Forecasts

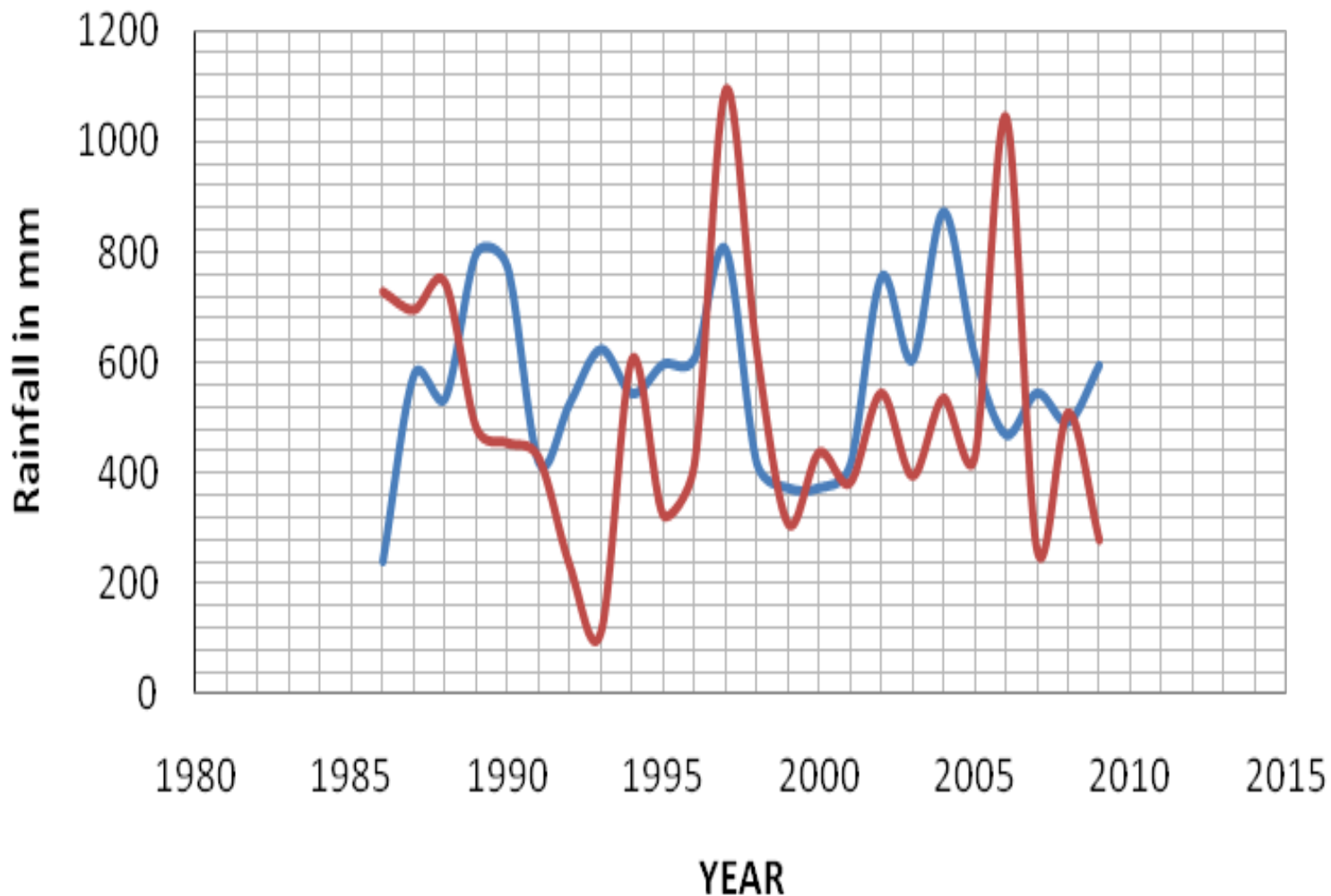
- **Droughts and Local Climatic Knowledge**
 - Two ways of predicting hazards:
 - Mara gada, gada cycle (events, including droughts, repeat themselves every 40 years (5 gada));
 - knowledge of the mysterious world (Uchu, Ayantu, and Usa)
 - There is increasing variability:
 - a major change in rain pattern occurred in the 1960s and 70s
 - **Ganna** rain became smaller after the gada of Boru Guyyo (1985-1992)
 - Especially in the past five years, there was poor rain, erratic distribution, and long dry spells



Annual Rainfall Distribution



Annual Rainfall Distribution



— RAINFALL, Yabello

— RAINFALL, Moyale



Early Warning Systems and Response

- Ethiopia improved its early warning system overtime
- But still there are problems:
 - Not integrated its strategies with that of existing institutions.
 - Most of the early warning systems in Ethiopia are based on farming areas (such crop field assessment);
 - No food reserve stores in the region;
 - Several appeal revisions (2.8 million in Feb, 3.2 million in April, and 4.5 million in July)
 - Cumbersome and unreliable assessments
- Pastoralists prefer traditional forecast: 89% in Dida Hara and 62% in Maddo get information from traditional forecasters
- Why?
 - Their timeliness with regard to the onset of long rains, local specificity, and comprehensible languages.



Recommendations:

- Address the underlying drivers generating vulnerability, marginalization, and poverty of the Borana;
- Support customary insurance systems such as *buusa gonofaa*
- Target women;
- Integrate traditional and modern weather forecasting;
- **Include activities besides herding in livelihood protection efforts;** and
- Research sustainable economic options.

