Are women victims of climate change ?: Lessons from Samburu pastoralist communities in northern Kenya

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Background Information

- Climate change is humanity's greatest challenge of the current and future centuries.

- Its impacts have been felt all over the world and the topic is no longer inn the confines of scientists.

- Increased intensity, severity, frequency and distribution of extreme weather events has been observed globally

The impacts are differently felt and distributed among different regions, generations, age classes, income groups, occupations and genders.

- Pastoralists who live in Arid and Semi-Arid Lands(ASALs) are among the most vulnerable groups by virtue of natural resource based livelihoods.

- 80% of Kenya’s land is classified as ASAL.

Values of pastoralism

Pastoralism constitute 13.2% of Kenya's population with livestock as a major source of livelihood and food security.

- Livestock provide 70% of the meat consumed in the country which contributed to 10% and 25% of Kenya's GDP in 2001 and 2002 respectively (Nassef *et al.*, 2009).
- Biodiversity conservation and wildlife tourism(game reserves and parks)

- Despite the fact that pastoralism is a rational, adaptable, tried valuable and suitable production system, economic activity and cultural way of life in the ASALs, the value generated by pastoral communities is not translating into prosperity due to:
- climate change threats(droughts and floods)
- political and economic marginalization
- Inappropriate development policies
- increasing resource competition

General Objective

- To assess impacts of climate change hazards(droughts and floods) on the natural resources of Samburu community and the translating effects on gender.

Research Question

- Are women victims of climate change?

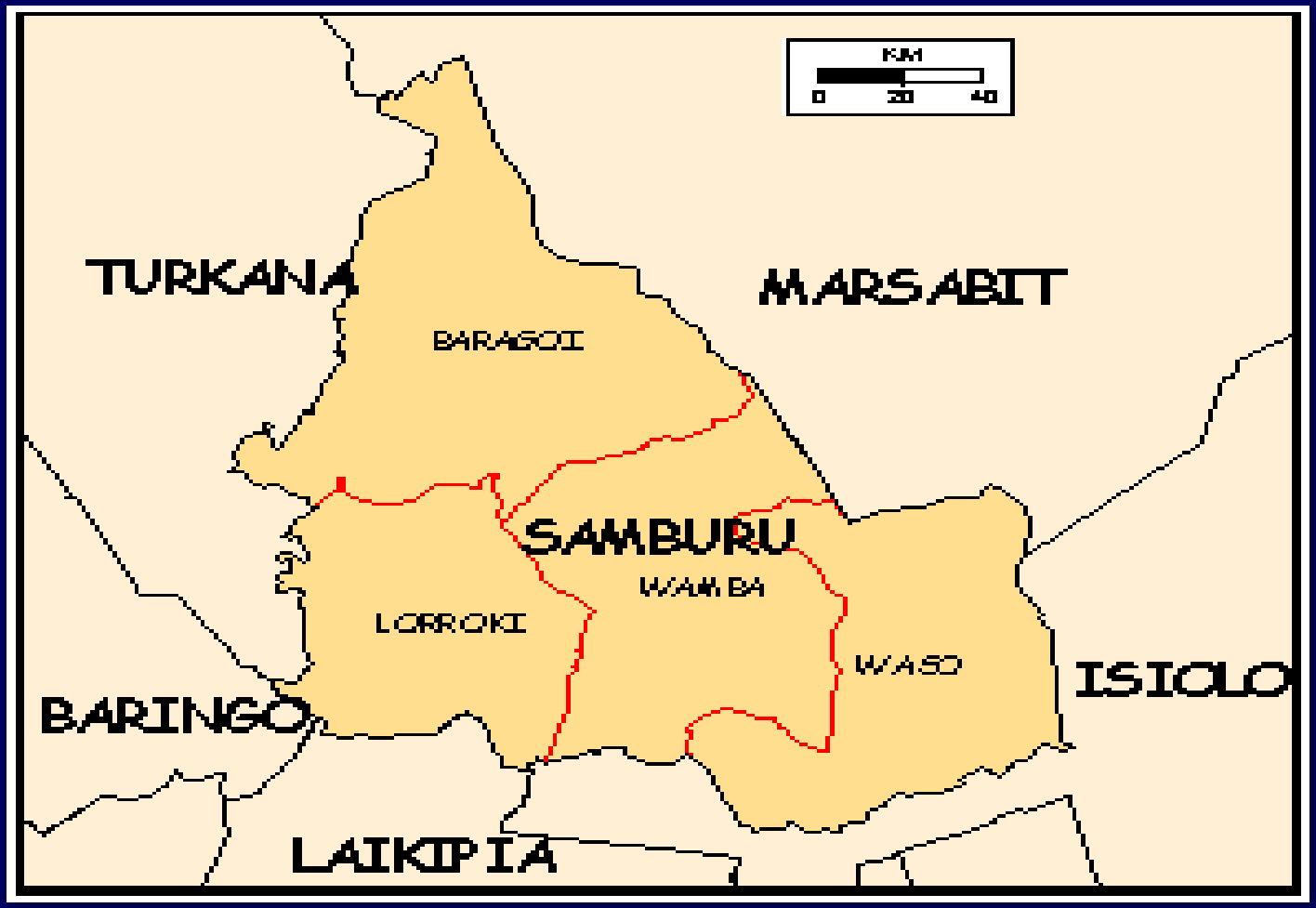
Specific Objectives

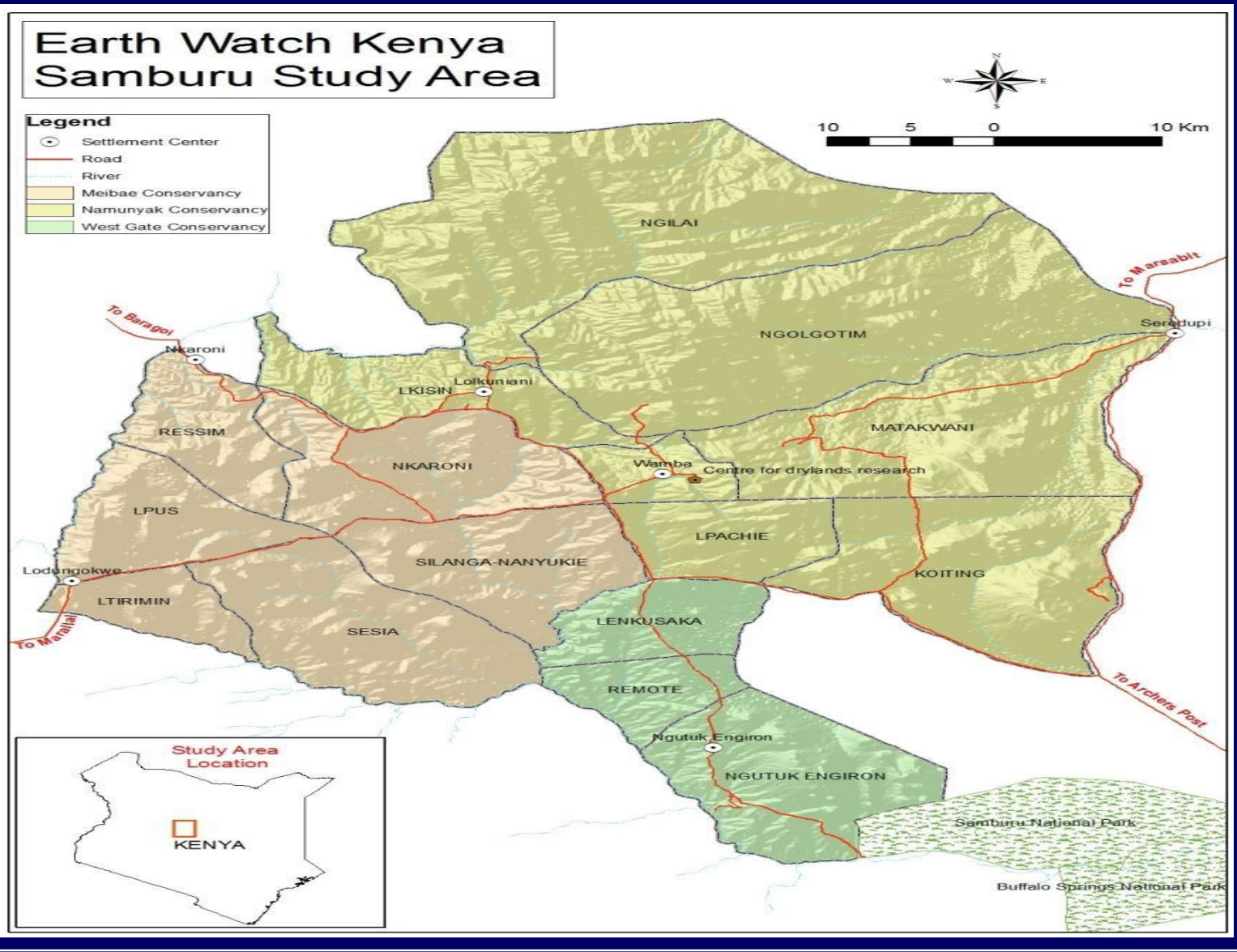
i. To identify and determine gender use of the key natural resources of Samburu communities.

ii. To determine gender specific impacts of climate change.

iii. To identify gender specific coping strategies employed by Samburu communities.

METHODOLOGY: Study site




Earth Watch Kenya
Samburu Study Area
Legend
Settlement Center
Road
River
Meibae Conservancy
Namunyak Conservancy
West Gate Conservancy
10 5 0 10 Km
NGILAI
NGOLGOTIM
To Mareabit
Serendupi
To Baragoi
Nkaroni
Lolkuniani
LKISIN
RESSIM
NKARONI
MATAKWANI
Wamba
Centre for drylands research
LPUS
LPACHIE
SILANGA-NANYUKIE
Lodongokwe
KOITING
LTIRIMIN
LENKUSAKA
SESIA
To Maralal
REMOTE
To Archers Post
Ngutuk Engiron
NGUTUK ENGIRON
Samburu National Park
Buffalo Springs National Park
Study Area Location
KENYA

Study design

Survey

Sampling

- Purposive, Simple random & Stratified random sampling

Sample Size

- 180-90 males & 90 females
- Stratified as young 6-(18-30),middle aged 6-(30-50) and old 6-(50 yrs and above)=18
- 36 respondents(18 males &18 females)
- 36 × 5 ranches= 180

Research Instruments Used

1.Questionnaires

2.Key Informants

3.Focus Group Discussions

Males

Females

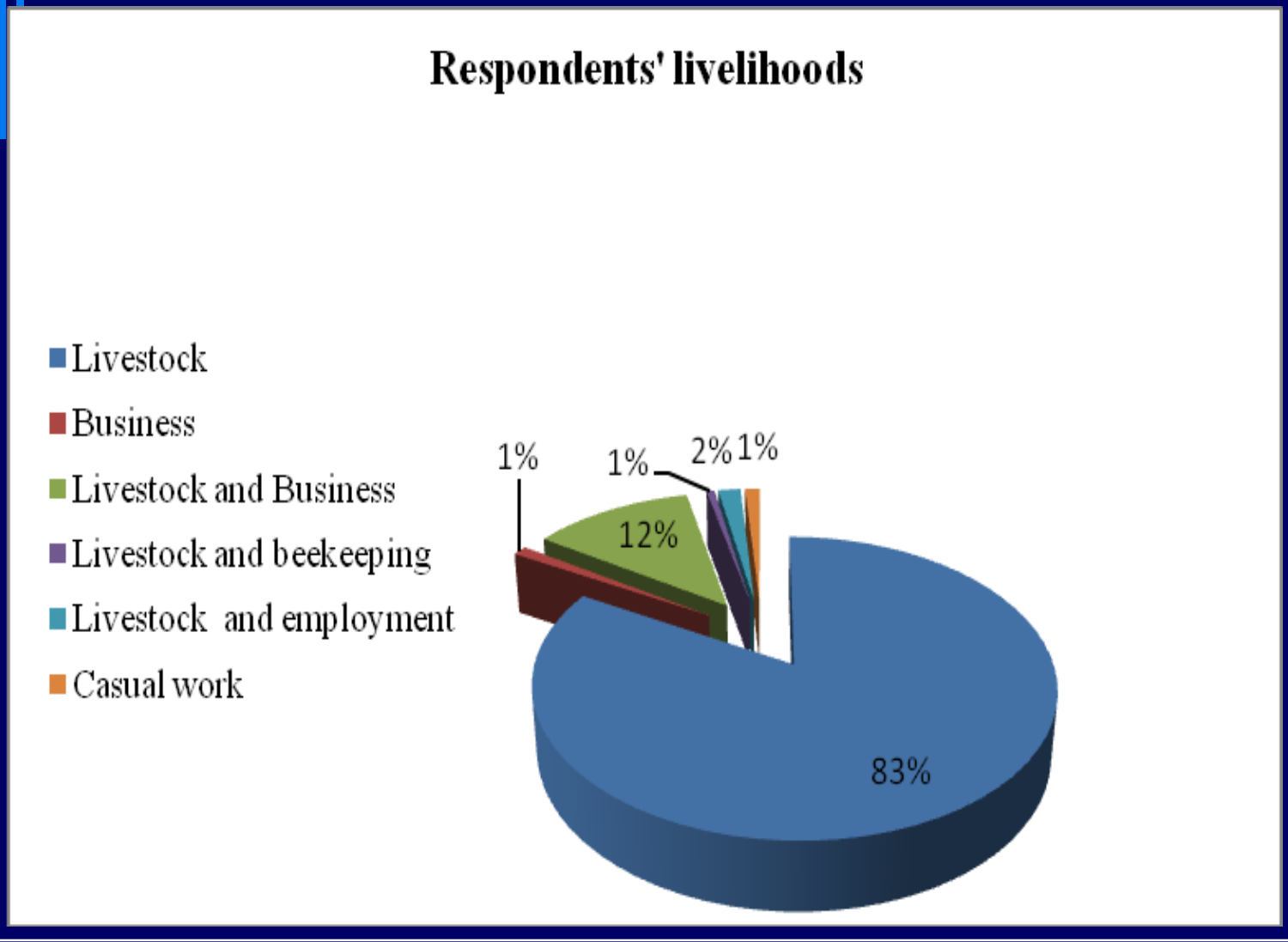
4.Life Histories

Results & Discussion

1.Age of Respondents

Age of respondents in years	Male			Female		
	N	%	n	%	n	%
18-28	19	10.56	26	14.44	45	25.00
29-39	26	14.44	29	16.11	55	30.56
40-50	34	18.89	19	10.56	53	29.44
51-61	6	3.33	12	6.67	18	10.00
62-72	5	2.78	4	2.22	9	5.00
TOTAL	90	50	90	50	180	100

2.Respondents Livelihoods



4.Education levels of respondents

	Women		Men		Total	
Education Level	N	%	n	%	n	%
None	82	45.56	73	40.56	155	86.11
Lower Primary Std 1-3	2	1.11	1	0.56	3	1.67
Upper Primary Std 4-8	5	2.77	11	6.11	16	8.89
Secondary Education	1	0.56	4	2.22	5	2.77
Tertially Education	0	0	1	0.56	1	0.56
Total	90	50	90	50	180	100

i. Key Natural Resources

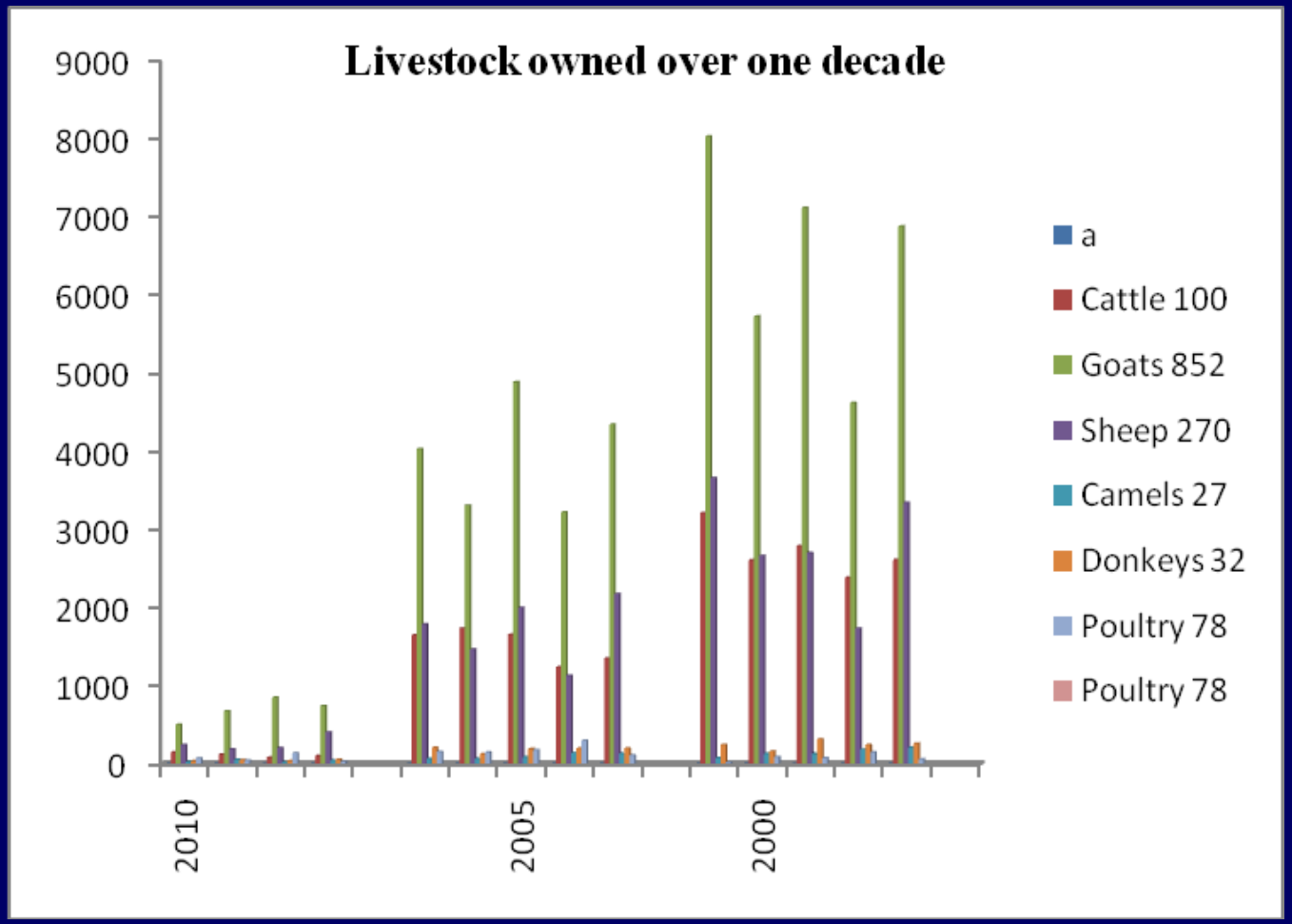
Natural Resource	Very Important(%)	Important(%)	Not Important(%)	Total(%)	Rank
Water	100	0	0	100	1
Livestock	97.8	1.7	0.5	100	2
Forest	72.2.	57.8	35.0	100	3
Medicinal Plants	70	28.3	1.7	100	4
Pasture	63.9	36.1	0	100	5
Wild animals	40.6	38.2	21.2	100	6
Mountain and Hills	13.9	59.4	26.7	100	7
Crops	1.1	0	98.9	100	8

iii. Impacts of cc on Natural Resources

- *Nkolong*-short dry period
- Longer dry periods-*Riai*
- 1984-*Riai Elkiroro*, 1994-*Riai Elmooli,*
- *2000-Riai Elborana, 2005-Riai Eldonyo Kerri*
- *2008/2009, 2011/2012-*

- National Drought Management Authority of Samburu county issued a drought alarm on march 2015

Livestock trends over a decade



Impacts contd…

- Diminishing of forest resources notably pasture, wild fruits, medicinal plants and building plants.
- Unstable food supply system that has seen progression- 3 - 2 -1 and 0 for several days during extreme conditions.
- During data collection:74%-one meal, 23% two meals &3% three meals.
- During floods food was inaccessible due to impassable roads

Food security

Source	Type	Respondents food source		Decrease observed	
		n	%	n	%
Livestock	Blood, Milk, Meat	180	100	180	100
Government	Oil, Flour, Rice, Beans	179	99.4	*	*
Market	Oil, Flour, Rice, Beans Potatoes, Cabbage, etc.	172	95.6	*	*
Forests	Bush meat, Wild fruits/berries	9	5	180	100

Conflicts

		Respondents Experience	
Conflict Type	Cause	n	%
Resource Use	Water	51	28.3
	Pasture	80	44.4
	Forests	4	2.2
Human-Wildlife	Hyenas	177	98.3
	Elephants	150	83.3
	Leopards	51	28.3

Gender specific impacts

Gender:- Socially constructed identities, roles and responsibilities of women and men and the relationship between them(World Bank,2002).

Resource	Collector
Firewood	Females
Building materials	Females
Fodder	Females
Gourds	Females
Charcoal	Females
Medicinal plants	Females
Wild fruits	Females

Coping strategies

1.Diversification & Alternative livelihoods

- Business ventures-traditional beads, milk, livestock, local brews, charcoal, foodstuffs etc
- Poultry rearing
- Informal and formal employments
- Crop farming
- Commercial honey production

2. Herd management

- **Mobility**
- **Herd diversity**
- **Maintenance of female dominated herds**
- **Herd splitting**
- **Livestock feed supplementation**

3.Management of diseases

- Use various medicinal plants to prevent, treat and alleviate both common and new livestock and human diseases.
- Avoid grazing in areas known to be particularly susceptible to diseases.
- Controlled burning of grazing areas to reduce parasites

4. **Diet change & diversification**

Source	Type	Respondents food source		Decrease observed	
		n	%	n	%
Livestock	Blood, Milk, Meat	180	100	180	100
Government	Oil, Flour, Rice, Beans	179	99.4	*	*
Market	Oil, Flour, Rice, Beans Potatoes, Cabbage, etc.	172	95.6	*	*
Forests	Bush meat, Wild fruits/berries	9	5	180	100

5. Rain water harvesting

Water pans-*Silango*

Water tanks

6. Control of human-wildlife conflicts
-Scare crows
-Lighting fires at night
-Community gatherings-Barazas

Conclusion

- Climate change impacts in ASALs affect different genders differently.
- Although women are the most vulnerable to climate change impacts on the contrary the hold the greatest responsibility of both adaptation.
- If supported, women are powerful agents of change who can help raise resilient communities.

Recommendation

- Government to provide insurance for livestock loss due to droughts/floods.
- Improve infrastructure and economic development in the region: transport ,education, trade especially on livestock products e.g dairy, meat and hides processing to create employmeny etc.
- Relevant ministries to introduce, train and support apiculture (bee keeping) to supplement the already failing livestock production due to climate change.

Acknowledments

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END

THANK YOU.