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Herders perspectives on the impact of the 2022-2023 drought and coping tools

ACP commissioned Sakimba Kimiti to conduct a questionnaire survey in collaboration with the resource assessors to gather herders' views of the intensity of the 2022 drought and their strategic responses compared to the 2009 drought. The current drought is still ongoing and will be monitored until the rains begin, and beyond, to look into how herders manage the recovery phase. This interim report is intended to inform the Amboseli Ecosystem Trust, Southern Rangelands Coalition and Kajiado County about how herders are adapting to recurrent droughts and suggest successful strategies which can be scaled up to avoid future large-scale losses of livestock and rangeland degradation.

Introduction

Prolonged droughts are becoming more frequent, severe and widespread in recent years with devastating impacts across the rangelands. The frequent droughts are causing large animal losses amounting to millions of shillings for pastoral herders. The economic losses are impoverishing herders and causing daily struggles with no hope of a better future. The struggles include social and economic factors with long historical roots.

Understanding the nature of drought, its spread, frequency, impacts and successful responses is crucial to future mitigation strategies. Unfortunately, there have been few long term studies looking into the origins, history and consequences of drought with the aim of learning about sustainable practices. There is a pressing need for standard protocols to monitor droughts and successful practices which can be upscaled to combat droughts.

Our drought survey was conducted by the Amboseli Resource Assessors (RAs) from late October through November 2022 until shortly before the start of the poor short rains. Random sampling was used to identify the respondents across the group ranches monitored regularly by the RAs. The drought survey set out to assess the impact of the drought on the livelihoods of sample households, the perceived causes of drought, coping strategies and adaptations herders intended to apply in future. We also assessed the scale of the drought compared to previous droughts and extract the lessons learned.

Out of 134 household heads surveyed, the majority (47%) were from Orgulului Group Ranch, followed by Mbirikani (27%), Eselenkei (22%), and Kimana (4%). Respondents were varied by age and socioeconomic activities, with 78% practicing extensive livestock production. The remainder were crop farmers (10%), agro-pastoralists (3%), or engaged in tourism enterprises (8%). The respondents varied in their levels of formal education, with 60% having no schooling, 22% secondary schooling and 17% primary schooling.

Drought responses

Most (84%) of the respondents moved their stock from place to place during the drought, whereas (16%) kept them at their permanent settlement throughout. Nearly all respondents in Olgulului and Eselenkei moved their animals in search of better pastures. Herders staying on the southern side of Amboseli accessed grazing in temporary settlement areas along the slopes of Kilimanjaro before grazing the swamps inside the national park. Herders north of the park, including those on Eselenkei, grazed their animals along the Eselenkei river before moving them to the swamps in the park. A majority of Mbirikani group ranchers (61%) moved into the Chyulu Hills and others into the Isinet swamps.

Mobility patterns varied among household heads. From May through July 2022, many herders accessed grazing in the Matapato Maparasha Hills, others on the Kaputiei ranches, both areas which received substantial long rains. Herders who remained at their permanent settlements stated that they lacked herders to move their animals, preferred to manage their animals at home, had sold most of their animals, or lacked suitable areas to move to due the poor short rains. In the case of small stock (sheep and goats), 58% of the respondents moved from place to place and 42% kept the animals around their permanent settlement. Herders who kept animals at home explained their choice as having a permanent settlement where it was easy to manage animals, avoid losses elsewhere, had few animals to tend, and due to the ease of providing supplementary livestock feed.

Commenting on the severity of the current compared to previous droughts, 80% felt 2022-2023 drought to be the most severe, 9% felt 2009 was worse, and 11% saw no difference between the two. Although most fe;t 2022-2023 was worse, they felt the current drought has been managed far better. The reasons include fewer livestock losses due to the purchase of hay unavailable in previous droughts. The hardships incurred by the 2022-2023 drought included the cost of hay and other animal feeds, the high cost of living, the covid pandemic, and the sparse and scattered long rains from March through May of 2022.

A loss of land productivity (37%) was seen as biggest cause of the 2022 drought in Amboseli ecosystem. This was attributed to continuous heavy grazing by the large livestock numbers, leading to lower pasture productivity and expansive bare ground. Other important factors mentioned included poor rains (25%), and increase in population and permanent settlement (14%), climate change (8%), biodiversity loss and destruction (7%), land use changes (5%), and an increase in livestock numbers (4%).

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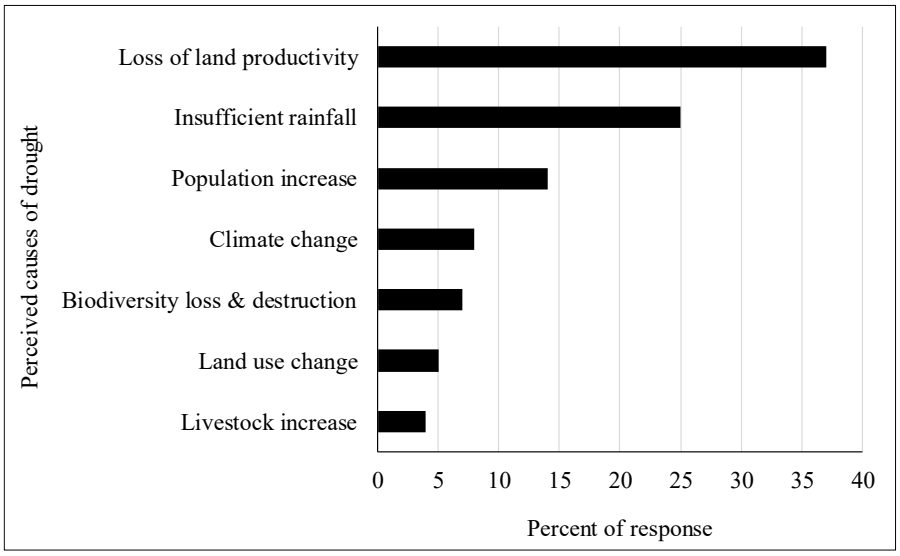

Figure 1: Herders' view of the causes of the current drought across Amboseli.

Drought management practices varied among herders across the Amboseli ecosystem. Supplementing animal feeds (48%), destocking (18%) and watering at home to reduce walking distances (12%) were the major coping strategies. Less mentioned but important were: transporting water to livestock in distant grazing areas; grazing in the Isinet, Namelok and national park swamps; movement to localized good grazing areas, and splitting herd in different classes of weak, strong, lactating females, steers and heifers to improve grazing efficiency.

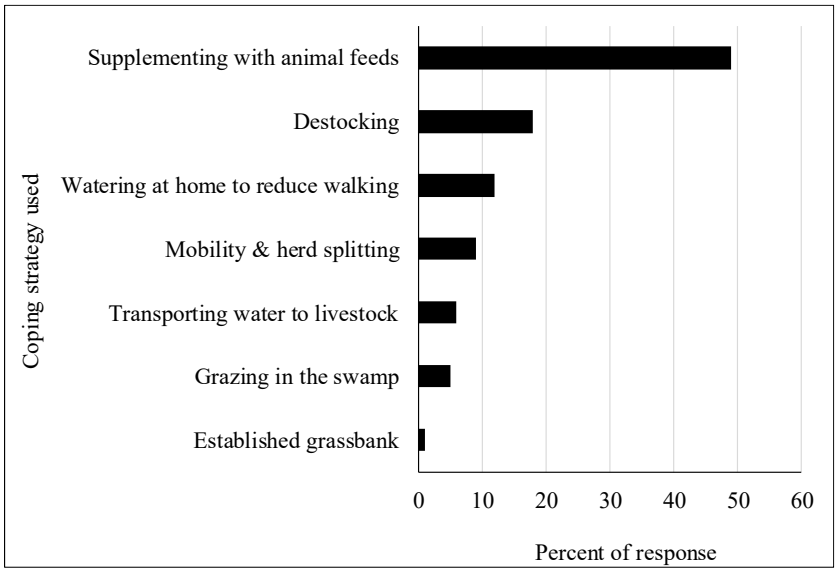

Figure 2: Coping strategies used to mitigate the 2022 drought.

An established grassbank at Nemelog used to mitigate impact of drought. The photograph was taken in October 2022 in the middle of the drought.

Comparison with previous droughts

Although the 2022 drought was ranked worse than 2009 when 70% of livestock died, most herders managed better by buying livestock feeds and providing water at home to reduce the cost of walking long distances to water and pasture. Destocking, a new coping measure not used in previous droughts, was seen as a way to counter the losses in rangeland area and pasture production.

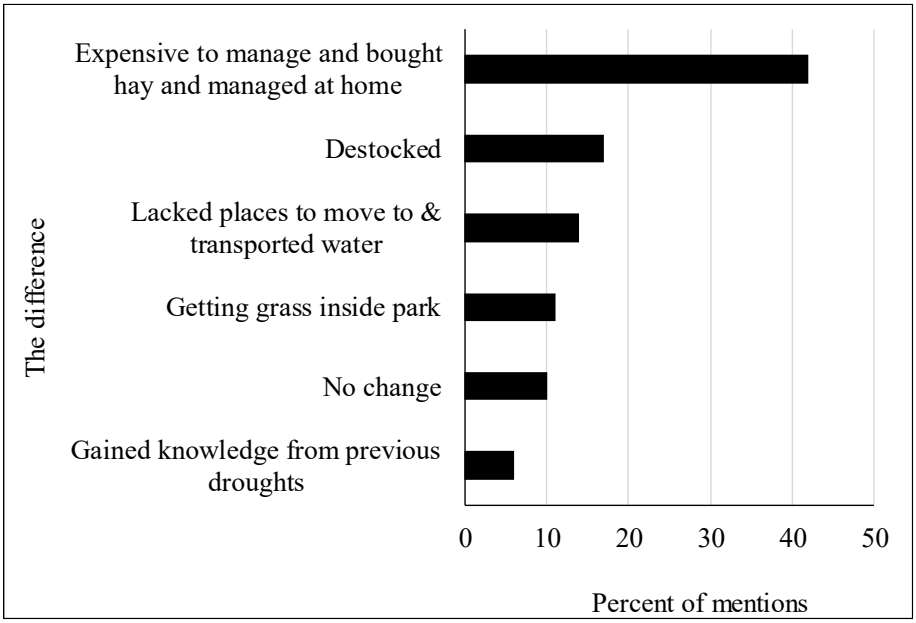

Figure 3: Differences between the current and previous droughts seen by herders.

Another important factor cited in combating the 2022-2023 is the permission granted by park authorities for herders to pasture livestock in Amboseli National Park. Herders were given access to the swamps under supervised guidelines to minimize contact with tourists and conflict with wildlife. Access to swamp grazing in the park saved herders the steeply rising cost of feed supplements and spared many animals.

The early drought alerts issued by ACP were also important in promoting responses. Responding to the early warnings issued in May 2022, the Amboseli Ecosystem Trust convened a meeting of conservation agencies to raise funds for a school feeding program. With most families unable to adequately feed their children, the school feeding program alleviated hunger and ensured children remained in school after two-years of covid distuption.

Herders harvesting fodder in the swamps of Amboseli National Park in September 2022 after reaching agreements with park authorities on the location and timing of access.

Despite the many coping strategies deployed in the current drought, livestock losses are large and mounting. Over half the herders repot losing 40% or more, and nearly two thirds 30% or more. Of note, a considerable number of herders have lost fewer than 15% of their herd, pointing to a large spread in coping strategies worth exploring further. Herders losing fewer animals were seeminly those who destocked, diversified their herding strategies, had smaller herds and spent sufficient money on supplementary feeds. Those who lost large number were seemingly herders who delayed selling animals still in good condition when prices were high.

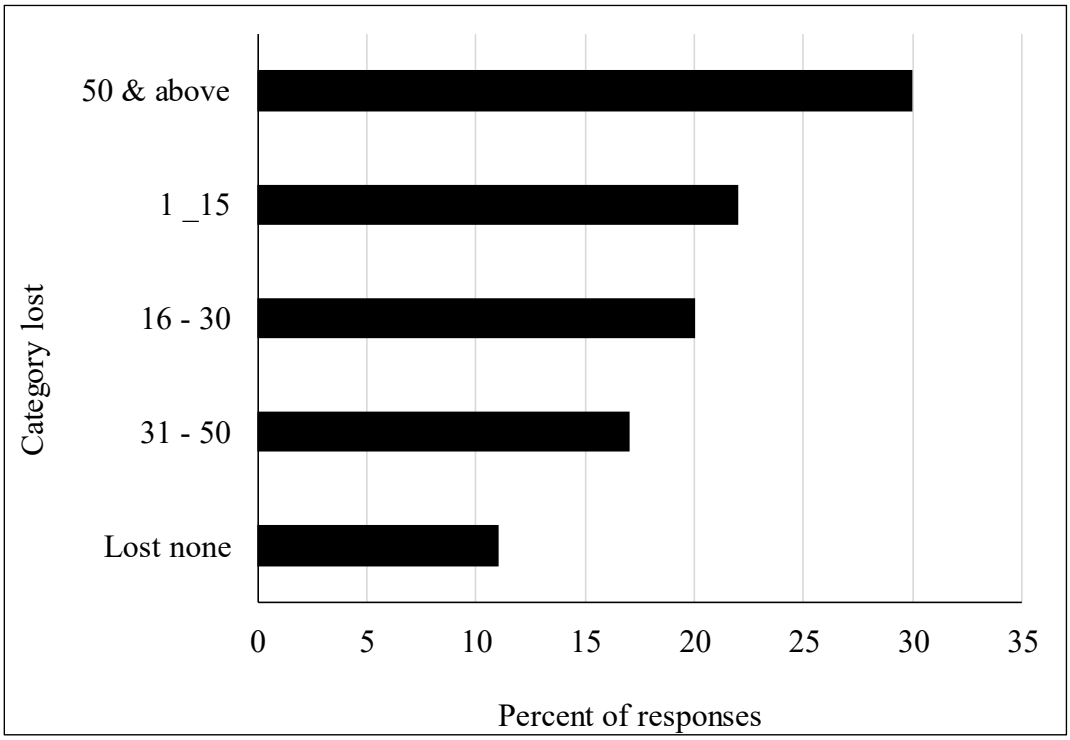

Figure 4: Levels of livestock losses so far reported by herders in the 2022-2023 drought.

Managing future droughts

Herders are continuing to learn better and new ways to cope as the frequency of droughts has increased in recent decades. The respondents noted several ways to manage droughts better and improve livelihoods in future. These include grass banks (23%), diversifying income sources (22%), destocking (21%),), selling animals and restocking after the rains (19%), buying more hay (16%), and setting aside late season grazing reserves (9%).

Of interest too, many respondents see land use planning with designated wet and dry season grazing reserves and settlement areas as important mitigation measures. Herd splitting and mobility across the ecosystem also persist as important traditional ways of increasing feeding efficiency and reducing herd drought exposure.

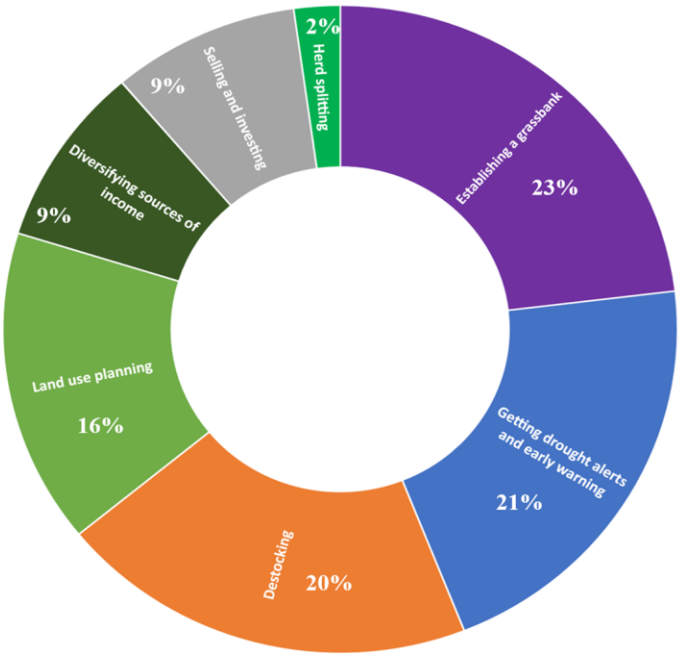

Figure 5: Strategies herders would use to cushion their losses in future based on lessons from the current drought.

Collaboration with neighbors and maintaining kinship ties also played an important role in coping with the current drought. Kinship ties have traditionally been a insurance mechanism to buffer herders and restock after calamities such as drought and disease epidiemics. In the current drought, 53% of herders feel collaboration is more important than ever, 42% less so, and 5% see no change. The major roles played by collaborators include collective herding efforts (34%), sharing knowledge (27%), construction of water dams (15%), pooled family care (15%), and restocking (9%).

The impacts of land subdivision in coping with drought condition were also evaluated. The majority of herders see permanent settlement as reducing grazing areas, increasing land sales and reducing herd sizes. A minority (16%) saw no significant difference yet across the Amboseli ecosystem.

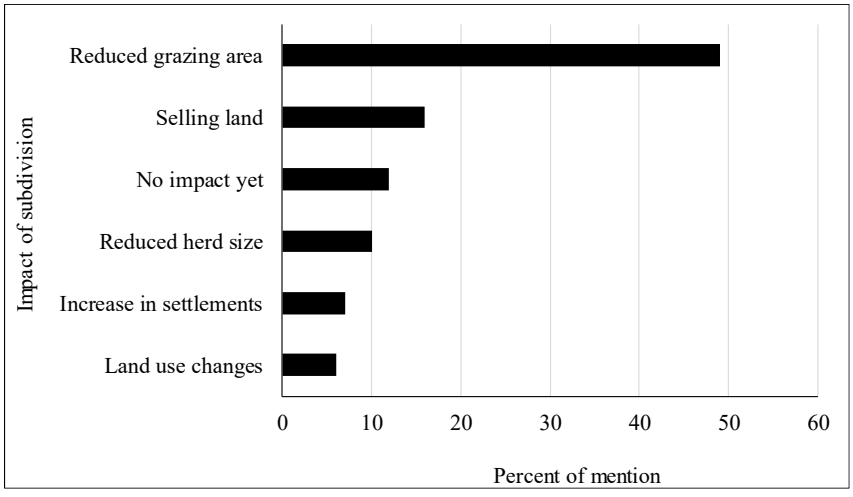

Figure 6: The perceived impact of land subdivision on drought vulnerability.

The way ahead on drought mitigation

ACP commissioned the current survey to evaluate herders'e views of the 2022-2023 drought, assess how thay have fared, and hear how to they would manage droughts better based on lessons learned.

It is clear that the impacts of drought on pastoral families is growing with the loss of rangelands, permanent settlement, population increase, land subdivision and pasture degradation. The economic hardships resulting from the heavy losses of livestock and reduced pasture productivity are causing greater food insecurity, poverty, conflict with wildlife, loss of social standing, stress and anxiety.

It is also clear that despite the heavy livestock losses, herders have used time-tested traditional collaborative practices, adapted in some ways to the worsening pasture condition and, in other ways, have adopted new coping strategies. Herder's suggestios for the future range from land use planning to keep the rangelands open, better collective grazing strategies to restore and sustain degraded pastures, grass banks, late season grazing reserves, better uptake of drought warning alerts, early livestock sales, supplementary feeding, and disease containment.

None of the measures taken to reduce the impact of drought, increase herd productivity or diversify livelihoods can, however, be achieved without collective action to plan rangeland uses commensurate with the area and mobility needed to manage and sustain pastoral livestock and wildlife herds in the face of poor and widely scattered rains which typify the pastoral lands.

This intermim report has been prepared for the Amboseli Ecosystem Trust, the Southern Rangelands Coalition and Kajiado County, with the aim of bringing together community leaders and supporting institutions to use lessons from the drought to avoid future losses.

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