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ACTION FOR WORKING HORSES AND DONKEYS

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Working equids and community resilience in flood and drought contexts in Senegal

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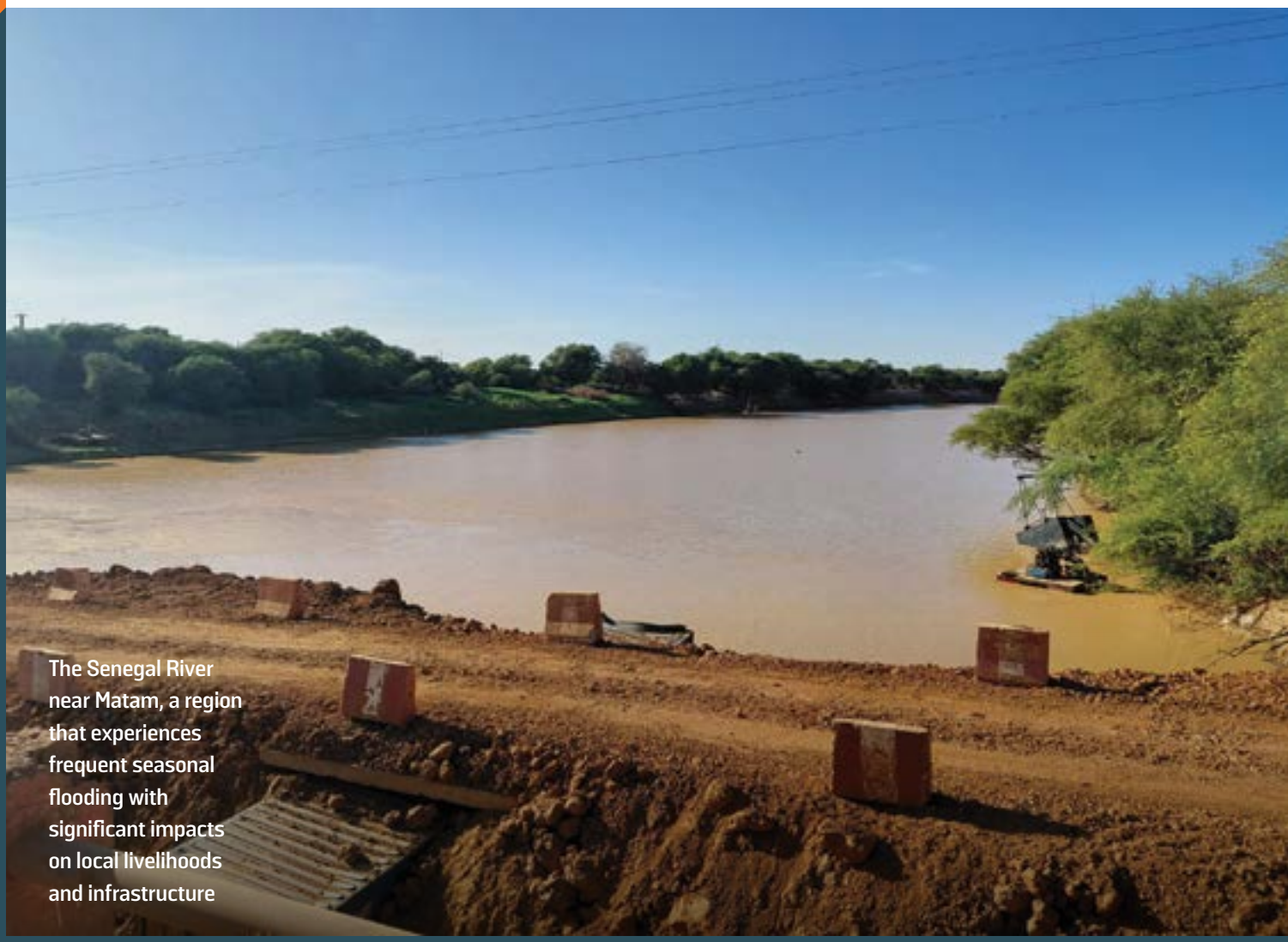

The Senegal River near Matam, a region that experiences frequent seasonal flooding with significant impacts on local livelihoods and infrastructure

Foreword

Across Senegal, floods and droughts are no longer distant or occasional events; they are lived realities for many communities. In Louga, Matam and beyond, families face the daily consequences of changing rainfall patterns, scarce water, declining pasture and sudden flooding. These shocks affect homes, livelihoods, food security and access to essential services. They also affect the animals on which many households depend, particularly horses and donkeys.

Working equids are part of the fabric of community life in Senegal. They help people fetch water, cultivate fields, transport goods, reach markets, access health care and move safely during emergencies. When floods damage roads or drought reduces forage and water, these animals often carry an even greater burden. Their health and welfare are therefore inseparable from the resilience of the people who rely on them. When a horse or donkey becomes weak, sick or lost, the impact is felt by the whole household, and often most strongly by women, who depend on them for many daily responsibilities.

This study is important because it places community voices and local knowledge at the centre of our understanding. Research of this kind helps Brooke West Africa design programmes that respond to real needs, strengthen preparedness and support practical, locally led solutions. It also provides evidence for engaging government, partners and communities so that working equids are recognised within disaster risk management and climate resilience efforts.

As climate pressures increase, building resilience must mean protecting both people and the animals that sustain their livelihoods. I hope this report contributes to stronger action, deeper collaboration and more inclusive approaches that improve the wellbeing of communities and working equids across Senegal.

Mactar Seck
Programme Manager, Brooke West Africa

1. Executive summary

Working equids play a critical role in supporting livelihoods and resilience in communities affected by drought and flooding in Senegal.

This study used a Participatory Action Research (PAR) approach, a collaborative methodology that actively involves community members and stakeholders in identifying challenges, generating knowledge and developing solutions to drive meaningful social change. The research explored how drought and flooding affect working equids and the people who depend on them in the regions of Louga and Matam, and identified opportunities to strengthen inclusive disaster risk management (DRM).

Participants described horses and donkeys as essential to transport, agriculture, water access, income generation and everyday household activities. The findings highlight the close interdependence between human and equid wellbeing: when droughts and floods negatively affect equid health and welfare, household livelihoods and resilience are also undermined.

Drought was associated with shortages of feed and water, declining animal health and increased pressures on households. In flood-prone areas, equids became even more important for transport and recovery efforts, despite facing heavier workloads and greater welfare challenges. Women were identified as being particularly affected, owing to their reliance on donkeys for both household tasks and livelihood activities. Communities highlighted a range of practical measures to strengthen resilience, including improved access to water, fodder and veterinary services, enhanced community preparedness, and greater support from government and development partners. The findings demonstrate the need for DRM, climate adaptation and resilience programmes to recognise and support the vital role of working equids in helping communities prepare for, respond to and recover from climate-related hazards.

Key messages

- Working equids are essential to livelihoods and resilience in communities affected by droughts and floods.
- The wellbeing of people and equids is closely interconnected.
- Climate-related hazards create significant challenges for both equid welfare and household livelihoods.
- Women may be disproportionately affected due to their reliance on donkeys for daily activities and income generation.
- Communities identified practical, locally led solutions to strengthen resilience.
- Disaster risk management policies and programmes should explicitly include working equids.

Study at a glance

- **Locations:** Louga and Matam in Senegal
- **Hazards explored:** Drought and flooding
- **Participants:** 54 (41 men, 13 women)
- **Methods:** World Café discussions and participatory mapping
- **Data collection**: January 2026

2. Background

Brooke and its partners are committed to improving the health and welfare of working equids within disaster risk management (DRM) and advocate for their inclusion in policies and practice at international, national, and local levels. However, a lack of reliable, context-specific evidence limits effective advocacy and programme decision-making, particularly in low- and middle-income countries that are disproportionately affected by climate-related disasters.

Previous research identified significant gaps in data on animal vulnerability, disaster impacts, and recovery [1], highlighting the need for further research to support the inclusion of working equids in DRM and strengthen community resilience.

Consequently, during the development of Brooke's Global Research Strategy in 2023 [2], Brooke agreed to prioritise global research on this topic to guide evidence-based decision making and strengthen Brooke's advocacy and community development efforts. Data were collected in our five countries of operation (Senegal, Ethiopia, Kenya, Pakistan and Nicaragua), and Senegal was selected as the pilot location for the co-designed research methods.

Climate hazards in Senegal

Senegal experiences considerable climate-related challenges driven by both its geographic setting and socio-economic context. Its semi-arid to tropical climate, combined with its location along the Atlantic coast, increases its exposure to a range of climate-related hazards [3].

Senegal is considered to have a moderate level of exposure to major climate-related hazards; however, when these events occur, the country experiences relatively high levels of vulnerability (UNDP, 2026). This vulnerability is further compounded by constraints in preparedness capacity, particularly in rapidly growing urban areas and resource-limited regions, which can reduce the ability of communities and systems to anticipate, respond to, and recover from shocks [3,4].

Flooding represents a common hazard, particularly in urban areas such as Dakar, Saint Louis, and Kaolack, where intense rainfall during the wet season, combined with inadequate drainage systems and widespread surface sealing, increases the risk of flash floods. In contrast, drought is more prevalent in arid and northern parts of the country, where it places significant strain on agricultural production and water availability [4].

Although drought has historically affected Senegal, especially in the Sahelian regions, climate change has intensified rainfall variability, contributing to declining crop yields and increased water stress [4]. Coastal zones are also increasingly at risk due to rising sea levels and coastal erosion, which threaten infrastructure, fishing-based livelihoods, and communities living along the shoreline. In addition, higher temperatures have contributed to more frequent and severe heatwaves and wildfires, posing risks to both ecosystems and public health. Desertification remains an ongoing and escalating concern, particularly in the northern regions bordering the Sahara Desert [4].

In northern Senegal's arid Ferlo region, drought is common. Pastoralist communities rely on seasonal migration (transhumance) to access water and grazing, often travelling long distances. During these movements, the strongest donkeys are essential for transporting supplies and vulnerable animals, helping households cope with harsh conditions [5].

3. About this study

While climate-related hazards such as floods and droughts can be natural, human-driven climate change contributes to the increased severity and frequency of such hazards in the longer term [6]. Brooke follows the United Nations Office for Disaster Risk Reduction position on emergencies and disasters [7], acknowledging that whilst hazards may or may not be natural, a disaster itself cannot be referred to as a 'natural disaster'. This is because emergencies and disaster are driven by human factors including exposure and vulnerability, as much as by events such as climate-related hazards.

Brooke's strategy to address the impacts of climate and environmental change for working equids and local communities therefore involves a holistic and participatory approach, aiming for sustainable increases in hazard and disaster resilience. One of the current limitations to this work is the lack of robust evidence at the national and local level to support the inclusion of working equids in programmes for hazard and disaster resilience-building.

As part of a global participatory research programme, this study therefore contributes to Brooke's broader effort to generate evidence on Disaster Risk Management (DRM) and working equids across multiple countries. Specifically, this report focuses on Senegal. The research aims to collaboratively generate evidence to support the integration of working equids into DRM policies and frameworks. It seeks to strengthen recognition of the important role and welfare of working equids, while informing community-level actions and strategies across all stages of the DRM cycle. In doing so, the programme contributes to enhanced community resilience and the wellbeing of working equids in disaster-prone settings.

The research questions were co-designed by Brooke staff and partners; the research programme aimed to understand how working equids' and community members' roles change, the consequences of equid loss for communities, and the specific needs of equids and the community, during both floods and droughts.

Qualitative data were collected in January 2026. The study participants comprised community members and Brooke's partner representatives from two sites located in the Louga and Matam regions. The selected communities reflect differing hazard contexts: those in Louga are predominantly affected by drought, whereas communities in Matam experience recurrent flooding during the rainy season, as well as periods of drought during the dry season.

A total of 54 participants from the communities and local organisations were included in the study, comprising 41 men and 13 women. Across both sites, female participants were generally older or held more senior positions within local community structures.

> **“Our lives depend on horses and donkeys in this area. When you lose a horse or donkey, it means you've lost everything because we can't graze, farm, trade, go to hospital without a horse or donkey.**
>
> (Louga mixed gender group)

3.1 Co-creation of data collection approaches

Participatory Action Research (PAR) methods, including 'World Café' group discussions and participatory mapping, were co-adapted by Brooke teams to ensure relevance to the local context. The World Café is a facilitated discussion method that enables participants to share perspectives and build collective insights through small, rotating group conversations around key questions. Participatory mapping is a collaborative approach in which participants visually map their environment to identify risks, resources, and experiences, capturing local knowledge and spatial understanding.

World Café

For the World Café, participants were asked to divide into groups. In Louga, groups were mixed in terms of gender and community seniority. In contrast, in Matam, a more rigid hierarchical structure meant that mixed groups were not feasible. Instead, group composition reflected existing social structures, with one group of male elders, two groups of younger men, and one group consisting entirely of women.

The World Café discussions were structured around a set of predefined themes, supported by facilitation prompts. In Louga, groups rotated between themes at regular intervals. However, in Matam, due to power dynamics and hierarchical considerations, rotation was not appropriate, and participants remained in the same groups throughout the discussions.

In the community in Louga, the primary language spoken was Wolof, with some use of Pulaar. In contrast, in the community in Matam, Pulaar was the primary language, although Wolof was widely understood.

All discussions were audio recorded for later transcription, translation into English and analysis.

Participatory mapping

Participatory mapping is a qualitative, community-based research approach that engages participants in collectively producing maps to document local knowledge, spatial practices, and experiences. Rather than relying solely on externally generated data, the process empowers community members to identify and visualise features that are important to them, such as natural resources and water points. The method involved facilitated group discussions, where the mapping process helped stimulate dialogue, shared understanding, and context-specific insights.

In both communities in Senegal, participants worked collaboratively to produce the maps as a group from the outset. The maps were drawn on large pieces of paper and photographed for later analysis. Given their strong familiarity with the area, in both communities they did not feel the need to conduct an initial walk-around. While the original intention had been to undertake a walk first, this shift highlights a process of co-design and adaptation in response to participant's preferences and local knowledge. In Louga, the walk-around was highlighted as a valuable community engagement activity, with participants reporting that they enjoyed the experience.

Learning and adaptation

The study highlighted the importance of adapting research approaches to local contexts. While the overall methodology provided a common framework, its implementation was adjusted

> **“The strength of Participatory Action Research lies in its ability to turn research from something done to communities into something done with them, ensuring that evidence is grounded in local realities and translated into action.**
>
> (Gemma Carder, Senior Manager for Global Research, Brooke)

Community members collaboratively develop a community map as part of a participatory mapping exercise, Louga.

to reflect local languages, social norms and community structures. Communities also actively shaped how methods were applied in practice. These adaptations strengthened participation and helped ensure the findings reflected local priorities and experiences.

Data analysis

The audio files generated from the World Café conversations were transcribed and translated into English manually by an independent Senegalese professional. The data were analysed using Thematic Analysis to identify patterns, themes and key insights across participant responses. Once the initial data analysis was completed, the findings were validated with the data collection team to ensure accuracy, contextual relevance, and consistency with field observations. This validation process provided an opportunity to clarify any ambiguities, reflect on emerging themes, and incorporate the perspectives of those directly involved in data collection, strengthening the overall reliability and credibility of the analysis.

Community members in Matam engaging in a World Café discussion within an all-female group setting.

“The horse has been a very precious asset since time immemorial. In those days, every important man had a horse, whether he was a king, nobleman, and authority figure, and so on.

(Matam male elder group)

4. Findings and insights

4.1. Values of equids

Equids in cultural life and identity

The cultural value of equids was evident in both communities, although it was expressed differently in each community. In Louga, community members associated equids, particularly horses, with social status, identity and local traditions of ownership and management. Horses were seen as enhancing the reputation of individuals and households, while not owning an equid could be a source of social stigma. Although both horses and donkeys featured in local traditions, discussions of the region's cultural heritage and equestrian practices focused almost exclusively on horses.

In Matam, horses occupied a more prominent cultural role than donkeys and were closely associated with local history, ceremonies, festivals and cultural beliefs. Elder men in particular described horses as symbols of heritage, prestige and identity that had been valued since the time of their ancestors. Donkeys, while highly valued, were less frequently linked to cultural traditions and were more often discussed in relation to their practical and labour contributions, although some community members noted their role in parades and traditional sayings.

Discussions of cultural value were largely led by men, particularly older men in Matam, while women tended to focus more on the practical and household importance of equids. Overall, the findings suggest that horses held greater symbolic and cultural significance than donkeys in both locations, with this distinction being especially pronounced in Matam.

Human–equid relationships, emotional bonds and trust

Strong emotional bonds between people and their equids were evident in both Louga and Matam. Community members frequently described horses and donkeys as members of the family, often comparing them to their own children. Across both locations, owners spoke of understanding their equid's needs and emotions, caring for them when they were ill and making considerable sacrifices during periods of hardship to ensure their wellbeing. These close relationships fostered a strong sense of trust and mutual dependence, reflecting the central role equids play in daily life and household livelihoods.

Community members in Louga placed particular emphasis on companionship and the emotional consequences of equid loss. Horses and donkeys were described as close companions and integral parts of family life, with some individuals comparing the loss of an equid to the loss of a child or family member. In Matam, similarly strong emotional attachments were evident, although discussions often highlighted the role of equids as part of family identity and the emotional distress associated not only with death but also with being forced to sell an equid due to financial hardship.

While both horses and donkeys were valued from an emotional perspective, community members in Matam drew clearer distinctions between the species in relation to their cultural roles, whereas emotional bonds were described in similar terms for both horses and donkeys. Discussions of emotional attachment were shared by both men and women, with impacts of equid illness or loss generally viewed as affecting the whole household rather than specific family members.

"I've experienced a situation where I had just one male horse; he died during the rainy season. ... as for me, my horse fell that night; it was like losing my own child, because I loved him deeply."
(Louga mixed gender group)

"Horses and donkeys are living beings; they're like your children. If you lose a child you saw every day, it will hurt you deeply; it's the same if you lose a horse or a donkey. They're living beings just like us; if you lose one, it's incredibly hard."
(Matam women group)

4.2. Supporting livelihoods and economic resilience

Equids play a vital role in supporting livelihoods and household resilience in both Louga and Matam. Community members described horses and donkeys as essential assets for income generation, agricultural activities, transporting goods and people, fetching water and forage, and accessing markets, schools and healthcare. Their contributions were often seen as fundamental to household wellbeing and economic security.

In Louga, community members emphasised that many livelihood activities and access to services such as health centres depended on equid labour, making horses and donkeys central to, income generation, transportation and daily survival. Equids also contributed to resilience during periods of drought, with some households making significant sacrifices, including reducing their own food consumption or seeking alternative sources of income, in order to maintain their animals and avoid overworking them. In Matam, community members similarly highlighted the importance of equids for farming, fishing and transport activities. However, discussions more frequently focused on the consequences of equid loss, which was often described as an economic disaster that could result in unemployment, poverty or the need to hire or purchase replacement animals.

While donkeys were more commonly associated with everyday labour and household subsistence, and were worked by both women and men, horses were often linked to transport services and activities that could enhance household income and social standing, and were only worked by men. The impacts of equid loss were generally perceived to affect the whole family, although one woman in Matam suggested that women may experience these impacts more acutely because they rely on equids for a wider range of daily tasks. Overall, the findings demonstrate the important role equids play in sustaining livelihoods and helping households withstand economic and environmental shocks.

In Louga, households described making considerable sacrifices to maintain their animals during drought, while in Matam equids were considered particularly important during floods when poor road conditions limited access to other forms of transport. Women and donkeys were identified as facing particular vulnerabilities during such hazards due to women's reliance on donkeys for household and income-generating activities and the lower levels of care often afforded to donkeys compared with horses.

"During drought, once you lose your horse, it's too hard; it's like a head of the family who was in charge of the daily expenses and providing for everyone; once you lose him, the community will feel it, the one who brought in all the money, the provisions for everyone; when you lose a horse, it's as if you've lost the head of the household, because he's the one who brings in the household's provisions, the food and all the comforts of home – it's the horse that brings them to you. You see people who have lost theirs, and may take two to three years before regaining their strength"
(Louga mixed gender group)

Comparing the roles and care of horses and donkeys

While both horses and donkeys were essential to local livelihoods, community members described distinct roles for each species. Across both Louga and Matam, horses were more commonly used for transporting people and goods over longer distances and were often associated with income generation and mobility. Donkeys were typically used for local transport, agricultural work, water collection and household tasks, particularly by women.

Community members generally viewed donkeys as more resilient and better suited to demanding daily labour, while horses were often seen as requiring greater care and management. In both locations, men were more commonly associated with working horses, while women relied more heavily on donkeys and were often responsible for caring for equids within the household.

Community members and local partners engaging in World Café discussions in Louga, sharing insights and perspectives.

There was also an important gender and species dimension to these differences. Women relied particularly heavily on donkeys for water collection, household tasks and small-scale trading. At the same time, donkeys were often reported to receive lower levels of care and management than horses. Community members noted that this combination could increase the vulnerability of both women and donkeys during periods of drought and other hazards. Overall, the findings highlight the complementary roles of horses and donkeys, as well as the particular importance of donkeys in supporting women's livelihoods and daily activities.

"Donkeys are a huge help to the people in the household with household chores, especially the women who live far from water sources; it is the donkeys that go to fetch water, firewood, and economically, in agriculture, the donkey plays a very important role, so the donkey is very useful to us"
(Louga mixed gender group)

"Donkeys are good, but those who use them here don't look after them properly because during the rainy season, they've been neglected; they're being ruined and have nowhere to go. Those who do look after them do so very minimally; the donkeys are neglected; they wander into other people's fields, that's not right, we need to talk about it.

(Louga mixed gender group)

> **"During floods, horses help us transport luggage and people; you can't use a vehicle, so it's the horse that gets you out of the situation."**
> (Matam women group)

4.3. During floods and droughts

Participants in both Louga and Matam described the challenges faced by equids and their owners during droughts and floods as closely interconnected, often emphasising their shared vulnerabilities. Discussions focused primarily on physical health impacts, including malnutrition, exhaustion, illness and reduced capacity for work, while references to equids' emotional wellbeing were rare.

In both regions, drought reduced the availability of forage and water, leading to weight loss, weakness and, in some cases, equid deaths. Although participants reported that workloads sometimes decreased because animals were less able to work, equids were often still required to undertake essential tasks despite their declining condition. Opinions differed regarding whether horses or donkeys were more resilient during drought, although some participants suggested that donkeys coped better with food shortages while receiving lower levels of care.

In Louga, drought was the predominant concern. Participants described travelling longer distances to obtain water and forage for both their equids and other livestock, reflecting the central role of equids in sustaining household livelihoods. Reduced grazing availability, increasing environmental degradation and difficulties obtaining supplementary feed were identified as major challenges. Households commonly adapted by working during cooler hours, seeking alternative income sources or, in some cases, selling equids to manage economic pressures. Participants highlighted a cycle in which declining equid health reduced livelihood opportunities, further limiting households' ability to care for their animals. Women and donkeys were identified by the data analysis as particularly vulnerable during these periods.

In Matam, while drought presented similar challenges, greater emphasis was placed on flooding. Participants explained that motorised transport often becomes unusable during floods,

increasing reliance on equids for transporting people, goods and emergency supplies. This can substantially increase equid workloads, particularly during evacuations and flood response activities. Flooding was also associated with poor hygiene conditions, hoof problems, exhaustion from prolonged standing in water and increased disease risks. Equids remained essential for farming, fishing, transport and household activities, and participants frequently described the stress of maintaining animals while facing rising costs and reduced income opportunities.

Across both communities, hazard events were perceived to have significant implications for both equid welfare and household resilience. The strong dependence on equid labour means that declines in equid health can quickly translate into livelihood losses, while economic hardship can further reduce households' capacity to care for their animals. This creates a reinforcing cycle of vulnerability affecting both people and equids during periods of environmental stress.

"During floods, horses and donkeys help us bring in sand to build channels to block the water. They're also very useful during the rainy season. They also allow us to transport the belongings of those affected by disasters when they move."
(Matam younger men group)

Interconnected changes in human and equid roles

Across both Louga and Matam, participants described the roles of equids and their owners as changing together during droughts and floods, reflecting their close interdependence. During hazard periods, households relied more heavily on horses and donkeys to access water, forage, markets and alternative income opportunities, while also depending on them for transporting livestock, household goods and, in Matam, supporting flood response and evacuations. At the same time, declining equid health and strength often forced owners to adapt their own activities by reducing loads and journey distances, seeking work elsewhere, purchasing feed, or making difficult decisions such as selling animals. Participants frequently described balancing the need to continue using equids for essential livelihood activities with efforts to protect weakened animals by reducing workloads, modifying travel patterns and prioritising scarce resources for their care. Challenges affecting equids were therefore understood to have direct consequences for household wellbeing, creating a shared cycle in which reduced access to resources undermined both equid welfare and livelihood security.

"When there is a disaster, they are used less frequently because feed becomes scarce; you can only use them from time to time, and the level of use seen before the disaster is no longer possible."
(Louga mixed gender group)

"At the time of a disaster, horses and donkeys are themselves exhausted because they are conditioned to keep carrying on with the work they were doing before; so I believe that what they could do before, they can no longer do"
(Louga mixed gender group)

Challenges faced by women

Participants in both Louga and Matam highlighted that droughts and floods can have disproportionate impacts on women due to their reliance on horses and donkeys for a wide range of household and livelihood activities. Women described using equids to collect water, firewood and forage, access markets, transport children and generate income, meaning that declines in equid health or availability could substantially increase their workload and reduce their ability to meet household needs. Participants also described how equid-driven transportation was essential for women-specific health services access, such as for pregnant women to travel to the local hospital, and for women to ensure their children could access education.

In Louga, participants noted that women may spend considerable time searching for donkeys during droughts, particularly when animals roam

further in search of forage. In Matam, women consistently emphasised that they are often the most affected by equid loss or reduced working capacity because of their central role in managing household resources and daily caregiving responsibilities.

"During times of flooding or drought, who is more exhausted, men or women? ... Women are more exhausted because they are the ones who use the horses and donkeys the most. When we want to cook, we use them to fetch wood; we also use them to go to the market, take the children to school, and fetch water from the well, the river or the streams. If we lose them, it is the women who are most affected."
(Matam women group)

Health and welfare challenges faced by equids

Droughts and floods were perceived to have substantial impacts on equid health and welfare in both Louga and Matam, primarily through reduced access to feed and water, increased fatigue, declining body condition, and increased susceptibility to disease. During droughts, participants in both locations described horses and donkeys becoming thin, weak and exhausted as forage became scarce and travel distances increased, with some reports of illness and death from starvation or dehydration. In Louga, concerns focused on prolonged food shortages, limited veterinary access and the particular vulnerability of donkeys, which were often described as receiving less care than horses. In Matam, participants also highlighted welfare challenges associated with flooding, including poor quality forage, waterlogged and unsanitary housing, hoof and skin problems, increased disease risks and heavier workloads as equids became essential for transport and flood response activities.

"I'd like to talk about the drought because as soon as we enter the dry season, it's too hard for the horses and their owners because as soon as you leave the village you'll see horses or donkeys struggling to find enough to eat until they're losing weight; they're almost on the verge of death, and all this happens during the drought—it's a tough time."
(Louga mixed gender group)

"Horses and donkeys are exhausted; they're no longer being looked after because there's a shortage of feed, and they've lost their strength. You, who used to give them khonte, don't have any left. They're so exhausted that some are even dying"
(Louga mixed gender group)

"During floods, we use them much more often for getting around. Their diet also changes, because the grass is wet. During droughts, too, looking after them becomes very difficult. The owner is forced to buy animal feed to feed them. That is why they lose weight and become very thin."
(Matam younger men group)

"Donkeys and horses cannot lie down during a flood. There is no grass either. The water rots the little grass they had. This causes illness in the animals. Humans get tired, so animals do even more so. It is not pleasant to see them like this."
(Matam elders group)

4.4. Community's suggestions for building resilience

Participants identified a range of strategies to strengthen resilience to droughts and floods, although the approaches emphasised differed between Louga and Matam. In Louga, discussions focused primarily on improving the availability of feed and water for equids through local fodder production, irrigation, water infrastructure and better management of grazing resources. Participants also highlighted the need for improved veterinary services, environmental protection and emergency support from the state and other external actors, particularly during severe droughts. While community members recognised the importance of self-reliance, many viewed external assistance as essential for implementing long term resilience measures and responding to future crises.

“During times of flooding or drought, who is more exhausted, men or women? ... Women are more exhausted because they are the ones who use the horses and donkeys the most.

(Matam women group)

An elder in Louga taking part in participatory mapping, walking with his donkey to identify points of interest.

In contrast, participants in Matam described a stronger tradition of community-led action, particularly in responding to floods through collective efforts such as constructing temporary flood defences and supporting affected households. Participants proposed a combination of household-, community- and infrastructure-based solutions, including storing fodder, improving equid shelters, growing fodder crops, coordinating equid use during emergencies and strengthening local flood protection infrastructure. Women contributed practical suggestions based on their experiences caring for equids within the household, while younger men emphasised community organisation and collaborative resilience initiatives. Across both communities, participants highlighted the importance of protecting equid health and welfare as a key component of household resilience, reflecting the central role of equids in sustaining livelihoods during environmental hazards.

Proposed community led resilience strategies

Participants in both Louga and Matam viewed resilience as a collective rather than individual responsibility, emphasising the importance of community organisation, cooperation and preparedness. Across both sites, participants repeatedly highlighted the need for communities to take an active role in addressing challenges before crises occur, rather than relying solely on

external assistance after hazards have already had an impact. Prevention was frequently discussed as more effective than emergency response, with participants emphasising forward planning, awareness raising and local leadership.

While both communities recognised the value of external support, their perspectives on local action differed somewhat. In Louga, participants often stressed the importance of communities first demonstrating initiative and commitment before seeking assistance from government agencies or NGOs. Discussions frequently focused on self-sufficiency, community mobilisation and collective responsibility for protecting natural resources, livestock and equids. In contrast, participants in Matam described a stronger tradition of organised collective action during flood events, drawing on existing practices of neighbour support, community problem solving and locally coordinated emergency responses. Participants in Matam also noted the local livestock association tended to exclude working equids, and suggested establishing a community-led, multi-stakeholder association to focus specifically on improving management and resilience for equids and their owners. Across both communities, resilience was therefore understood not only as access to resources and services, but also as the ability of communities to work together, support one another and take proactive action to reduce future risks.

"In my view, the first thing we need to do is for the whole community to come together to tackle this problem; in other words, rather than everyone acting on their own, we should get together to see how we can find a solution. The community must find ways to mitigate the effects of disasters by setting up market gardens for the whole village; if we had this sort of market garden for the whole village, we could all grow crops there, so that if there is a disaster, we could use what we have grown there to help the community and alleviate the difficulties"
(Louga mixed gender group)

"The solution is that prevention is better than cure. Before the flood, you can harvest enough grass and store it properly so that if the flood comes, you'll be safe on that side. Help must also start with yourself. If you live in a place where a flood comes and destroys everything, you must take precautions to move elsewhere next time. But if you stay there waiting for the aid that will be brought to you – rice, mattresses or other supplies – it will be very hard for you and the horses and donkeys. Still on the subject of prevention, before the flood arrives, filling sandbags and placing them around the house can mitigate the effects of flooding."
(Matam younger men group)

"During floods, the over-exploitation of animals occurs; if we had a meeting to discuss this, we could mitigate it. Instead of one person staying in their corner to exploit these animals, we should come together to divide up the tasks: those who need to work and those who need to rest, and so on. But if we let them work all the time, they can become overworked. So this requires organisation; we can even do it by neighbourhood. And this can improve working conditions for equines during floods."
(Matam younger men group)

> **"Yes, before these difficulties arise, we must unite, raise awareness, get involved in projects, find support and partners for plots of land; we must focus on prevention, especially raising awareness – it is very important."**
>
> (Louga mixed gender group)

Suggestions for state and local authority support

Participants in both Louga and Matam emphasised that while communities should take an active role in preparing for and responding to hazards, government institutions and local authorities also have an important responsibility in supporting long term resilience. Community members and local stakeholders consistently highlighted the need for greater investment in prevention rather than emergency response alone, including measures that would strengthen food, water and livelihood security before droughts or floods occur.

In Louga, participants primarily called for support to address the underlying drivers of drought vulnerability. Suggested priorities included support for fodder production, irrigation, boreholes, retention basins, protected grazing areas and forest conservation, alongside improved access to veterinary services and technical advice. Participants also highlighted the need for government assistance with agricultural inputs such as seeds, fertiliser and equipment, as well as stronger environmental management to address deforestation, invasive plant species and declining grazing resources. Many stressed that emergency relief, including feed, food aid, cash transfers and support to replace lost animals, would remain essential during severe crises, but argued that preventative investments would help reduce future dependence on aid.

In Matam, community members focused more strongly on flood mitigation and preparedness. Participants repeatedly identified large scale protective infrastructure, particularly the construction of flood protection dykes, as a priority for reducing risks to both people and equids. Other suggestions included improved drainage systems, emergency accommodation for displaced households, access to motorised pumps and flood-suitable vehicles during flood events, local vaccination services, and support for irrigated agriculture and fodder production. Several participants also suggested that local authorities could help reduce pressure on equids during emergencies by providing alternative

transport options and strengthening disaster preparedness planning.

Across both communities, participants viewed effective resilience building as a shared responsibility requiring collaboration between communities, local authorities, government services, NGOs and other development partners. While the specific priorities differed according to local hazard contexts, there was a common perception that state support should focus not only on responding to emergencies but also on enabling communities to better prepare for future droughts and floods.

"During floods, the primary responder must be the state, and its representative here is the livestock sector and certain NGOs such as Brooke, which focuses on equine welfare. Then there is the farmers' association, because the farmers have come together to form a farmers' association. But the problem for them is that they only deal with ruminants, neglecting equines. They need to broaden their focus to include all animals. And that is part of the solution." (Matam younger men group)

"During floods or droughts, animal health becomes more vulnerable. There was talk

This image: A Brooke staff member and community members working together to create a map as part of a participatory mapping exercise in Louga.

of setting up vaccination centres in local communities, yet it seems there are none here." (Matam women's group summary)

Suggestions for NGO support

Participants in both Louga and Matam recognised Non-Governmental Organisations (NGOs), community organisations, religious networks and other development partners as important contributors to resilience building. Community members valued support that strengthened local capacities and reduced future vulnerability, rather than focusing solely on emergency assistance after disasters had occurred. Across both sites, participants frequently emphasised that external support should work alongside local initiative and community action, with several noting that communities themselves have a responsibility to engage with, support and sustain development efforts.

In Louga, participants highlighted the role of NGOs and other organisations in supporting livelihoods, livestock management, climate resilience, agroforestry, awareness raising and community development. Existing organisations, including Brooke and other local development programmes, were recognised for increasing awareness, providing training and supporting resilience related activities. Participants suggested that NGOs could further support communities through assistance with fodder production, protected grazing areas, veterinary services, equid welfare education, training, equipment and the development of community based projects. Several participants also emphasised the importance of sustainable support that enables communities to become better prepared for future droughts rather than relying solely on emergency aid. Beyond formal organisations, participants identified diaspora associations, religious networks and local community groups as additional sources of support during times of crisis.

> **"NGOs can help us with good vaccines for animals, ruminants, horses and donkeys – especially horses and donkeys.**
>
> (Matam women's group)

In Matam, participants particularly emphasised the role of NGOs in strengthening local capacity through training, organisational development and resource mobilisation. Suggestions included supporting young people with skills, equipment and training related to disaster preparedness, climate change adaptation, animal husbandry, reforestation and emergency response. Participants also proposed that organisations such as Brooke could support the establishment and strengthening of community based organisations focused on equid welfare and resilience. Several participants highlighted the willingness, knowledge and commitment already present within the community, suggesting that the primary contribution required from NGOs and other partners was funding, technical expertise and resources to help transform community led ideas into action.

Across both communities, participants viewed NGOs and other stakeholders as partners in resilience building rather than solely providers of aid. Their suggestions reflected a strong preference for collaborative approaches that combine local knowledge and initiative with external technical, financial and organisational support to strengthen the resilience of both households and equids.

"After losing the horses and donkeys in the floods, the community must put in place solutions to prevent this sort of impact. The government must also help us by providing reserves so that we no longer suffer major losses during floods. If there are any associations or NGOs that want to get involved, they should help us too – even if it's not financial support, but by providing training so that, when floods occur, we'll have solutions and the means to avoid losing our horses and donkeys again." (Louga mixed group)

5. Towards more resilient communities and equids

The findings demonstrate that the resilience of people and working equids is closely connected. Participants described equids as essential for accessing water, transport, markets and livelihood opportunities during droughts and floods, while also highlighting the welfare challenges animals face during these periods. The findings support a One Health perspective, showing that human wellbeing, animal welfare and environmental conditions are closely linked. Resilience strategies are therefore likely to be most effective when they address these interconnected challenges. The study also demonstrates the value of participatory approaches in identifying locally relevant solutions. Participants proposed practical actions at household, community and institutional levels, highlighting the importance of collaboration between communities, government and development partners.

6. Recommendations

For government and local authorities

- Integrate working equids into disaster risk management policies, plans and preparedness activities.

- Strengthen access to veterinary services, vaccinations and animal health support before, during and after disasters.

- Invest in water infrastructure, fodder production and grazing management to reduce vulnerability during droughts.

- Ensure flood preparedness and response plans consider the role of working equids in transport, evacuation and recovery.

For NGOs and development partners

- Support community-led resilience initiatives that recognise the contribution of working equids to livelihoods.

- Strengthen training on equid welfare, disaster preparedness and climate adaptation.

- Facilitate the inclusion of equid owners within local disaster and livestock coordination mechanisms.

- Promote One Welfare approaches that address human wellbeing, animal welfare and environmental sustainability together.

For communities

- Strengthen collective planning and preparedness for droughts and floods.

- Develop local systems for fodder storage and emergency water access.

- Encourage equitable sharing of equid workloads during hazard events to reduce overwork and welfare impacts.

- Support community awareness of the importance of protecting equid health and welfare during disasters.

7. Concluding reflections

This study highlights the important role of working equids in supporting livelihoods and resilience in communities affected by droughts and floods in Senegal. Equids were valued not only for their economic contribution, but also as trusted companions and important members of households and communities.

The findings provide evidence to support the inclusion of working equids within disaster risk management, climate adaptation and resilience initiatives. They also demonstrate the value of participatory approaches in identifying locally relevant priorities and solutions. As climate-related hazards intensify, recognising and supporting the contribution of working equids will be critical for building more resilient and inclusive communities.

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