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Building resilience in pastoralist communities to the increasing frequency of droughts

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"*We are a pastoralist community and drought is a part of our life. In my lifetime, we used to experience droughts once in every* Gad [eight years]*. But now it is repeating within the* Gad *period. We would usually have 3 – 4 years of good rains to fully recuperate, and in the earlier droughts the calves and heifers survived so we saved the core breeding stock. But currently even the young and strong animals are starting to die, threatening herd regeneration. And that is unprecedented."* Abakubsa Kuroftu (aged 51), pastoralist, Gayo kebele, Borana Zone in Southern Ethiopia.

Whilst the eyes of the world are focussing understandably on Ukraine, in Southern Ethiopia a major drought is taking hold, with catastrophic implications for the pastoralist communities living there. Water and fodder are the key ingredients of pastoralist livelihoods, and both are in short supply when rains fail. The observation clearly stated by Abakubsa Koroftu was reiterated time and time again by members of the Borana community on recent (early March) field visits. It corresponds with forecasts by the IPCC of rising temperatures and an increasing frequency of extreme events. The Borana people are proud of their pastoral heritage and their traditional systems of rangeland and water management, but they are also aware that growing numbers of people and cattle, together with an increasing number and intensity of droughts, makes for an unsustainable combination. The current drought is already killing many cattle – but could soon result in human deaths.

The NRM Borana Project (funded by Swiss agency for development cooperation-SDC) has been working to build greater resilience to drought amongst well over 12'120 households, over half of which are woman-headed, through improving access to both water and fodder or rangeland resources. Within the project's first phase of some five years (including an extension), drought has occurred three times – the current third being the most severe. The project has responded accordingly, switching from a development into a more humanitarian modality, and working at the nexus between the two.

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More productive rangeland management for years of good rains

An unfortunate consequence of well-meaning government and NGO interventions in Borana has sometimes been that traditional systems have been ignored, and traditional authorities thus undermined. There has been a degree of elite capture of good pasture lands, which have been enclosed for private use. The project has sought to address this issue by bringing together all stakeholders to plan rangeland management in a participatory manner, maximising productivity as well as an equitable access to resources. In this way, 16 *kebeles* (an administrative unit broadly equivalent to a municipality) have developed a Participatory Resource Management (PRM) Plan. These plans set out which pastures are to be grazed when – using the traditional knowledge of which pastures are more appropriate for grazing in periods of rainfall, and which can survive dry season grazing. The PRM Plans are also used as an entry point for discussions in the Kora *Elas* (assembly on traditional wells) to set out rules for the use of water reserves, outlined further below.

Since current levels of cattle stocking are unsustainable, the project has supported pasture improvement, hay-making and baling in areas close to settlements, working through women's groups and the zonal pastoralist development office. Hay is of course crucial for keeping milk cows and calves alive once open grazing opportunities have been exhausted. The hay-making practices also contributed to ensure the equitable utilization of rehabilitated rangeland amongst poor and better off households. Linked to hay-making was an initiative to promote the more intensive raising of limited numbers of cows for milk production - this being a key economic opportunity for women. The milk value chain was investigated and analysed, and four women's groups supported in a pilot milk improvement intervention linking them to entrepreneurs (many of them women) in local milk collection centres.

Water in times of drought

Traditionally, the Borana people rely on water from two main sources: ponds and deep wells (*Elas*). Although hand pumps have been installed in many areas and are another source of domestic water, ponds and *Elas* remain crucial, especially for livestock. The ponds are relatively shallow and easily accessed by cattle and people, being sometimes of natural origin but generally enhanced through excavation and de-silting. The *Elas*, which may reach over 100m in depth, have been dug out through labour-intensive efforts and comprise a passageway down to a watering area that is fed by a spring. Livestock are herded down to drink and then back up in a carefully regulated system. In times of drought, when the water table drops, the water must be hauled up manually in buckets by a chain of people from the source and tipped into the watering area or trough. Yet once fodder supplies fail and cattle become highly emaciated, as is currently the case, they are too weak to use the steep passageway to such wells. For example, in Gayo *kebele*, only one out of the 12 *Elas* can be used by cattle at present (being relatively shallow of access).

An innovation introduced by the project in three pilot *kebeles* is solar pumps, bringing *Ela* water up to surface watering troughs for animals and a separate drinking water collection point (installed with a filter) for people. The solar-powered *Ela* in Dhas *kebele* is currently the only *Ela* in the area that can

be used by livestock and is thus a crucial water source for people and livestock from two surrounding *kebeles* as well as Dhas itself. As people and cattle, goats, sheep, camels and donkeys queued for their turn, one of the traditional *Ela* overseers, known as *Aba Herega,* reported that some 1,860 households were using the well due to its accessibility.

Intervening to prevent market collapse during drought-enforced de-stocking

When there is no more fodder, pastoralists sell some of their cattle to feed the rest. When that fodder is used up, they can only sell more cattle – but by this time the animals' condition is often so poor that their value has decreased by over half. For example, at Dubluk livestock market, bulls that in prime condition would have fetched some USD 1,000, being now in very poor condition, are only fetching around USD 400. Pastoralists spoke of desperation to sell just to feed their families; in the worst case, some have been seen to abandon their bulls at the market, being unable to sell or to get the exhausted animals to walk home. Following a full market analysis, the project identified transport and associated costs from the Borana markets to fattening farms in the central highlands as a major constraint. Too many animals were dying during transportation to render the system economically viable for traders.

The project has therefore begun a pilot scheme offering an incentive to traders of USD 40 per head of cattle, calculated to cover the cost of transport and associated expenses. Both project staff and the strictly enforced government monitoring of livestock movements verify transportation, and the incentive is only paid on confirmation of arrival at destination. Although this scheme was only introduced recently and has yet to be fully evaluated, it has already attracted local media interest and strong positive feedback from government officials.

The way forward

As elsewhere, activities under the NRM Borana Project have been negatively impacted by the Covid pandemic. Yet already there are clear lessons learned. One is the importance of good weather forecasting to be able to plan for rain-fed opportunities (de-silting ponds to collect maximum precipitation; cropping, milk production and hay-making) or drought (timely de-stocking and preparation of fodder reserves). An early warning system, working with traditional forecasters and government meteorologists, has been developed and holds good promise. Another lesson is that whilst the significance of cattle raising for Borana self-identity cannot be ignored, numbers need to be limited by focusing on intensive production. Value chains based on livestock that have better drought tolerance, notably goats and camels, seem to have greater potential for future development.