

EDITORIAL

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Editorial

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The central feature of pastoralism, regardless of continent or environment, is that livestock must seek out feed for much or most of the time. Water is another essential requirement, which mediates livestock's access to pasture. Further to these basic biological animal requirements, there are social, institutional, political and economic conditions that overlay and influence the way in which pastoralism can be carried out. The five papers we now present each and collectively show how livestock's access to optimal pasture and water is compromised or assisted by these non-biological human factors. The papers consider how solutions have been devised for some of the impediments, which can in turn bring new compromises in their wake.

A recurring restriction on livestock's feed intake from pasture is the occurrence of low or failed seasonal rainfall - drought. As grazing potential dries up, action is demanded if animals are not to die in unacceptable numbers. Pastoralists world-wide in semi-arid environments expect droughts, and have a limited number of possible responses: bringing feed to their livestock, disposing of animals, or taking livestock to other feed sources - or a combination of all three. Our first paper, "Mobility and livestock mortality in communally used pastoral areas: the impact of the 2005-2006 drought on livestock mortality in Maasailand", by David Nkedianye and his co-authors at ILRI (International Livestock Research Institute) follows what happened during one recent drought when pastoralists carried out their long-standing practice of moving animals out of blighted grazing lands to places less-affected by drought, so their livestock could find more forage. While this practice is socially-endorsed, institutional and economic changes have intervened, with unexpected results. Some livestock in Maasai areas of Kenya and Tanzania, which experienced lower rainfall that particular year, were moved into another Maasai grazing land which had higher rainfall in that same year. This would, one might assume, have a beneficial result as livestock had access to more grazing in the destination area. Contrariwise, despite better rainfall, there was a higher livestock mortality rate in the destination area compared to the drought-stricken sending areas. The authors attribute this apparently anomalous result to several factors: the over-crowding of immigrant and resident livestock in fragmented, discontinuous and fenced grazing blocks, and the increasing preference among pastoralists in the destination area for high-productivity livestock breeds to profit from commercial meat and milk markets of Nairobi; these breeds are however, more susceptible to drought. The authors conclude that: "In recent times, competition for resources is intensifying as demographic and other pressures as well as fragmentation and intensification of land use due to sedentarization progressively exclude pastoral livestock from their historical dry-season refuges".

The second paper, “Effects of cattle rustling and household characteristics on migration decisions and herd size amongst pastoralists in Baringo district, Kenya”, by George Kaimba, Abdi Guliye and Bernard Njehia explores what happens when large-scale criminal activity intervenes in the normal pattern of pastoral movement to seasonal grazing grounds. Raiding of livestock is not a new phenomenon in East Africa, as historical records attest. What has changed is the severity of the raids, due to proliferation of fire arms and as the authors remark: “an emergence of commercialized cattle rustling where wealthy businessmen, politicians, traders or local people pursuing economic objectives finance raids among the pastoral communities”. Some pastoralists now reduce the risk of losing their livestock assets to violent theft, as the authors find that “another type of migration has emerged, where herders migrate to safer areas due to the intensity of cattle rustling/raiding or in fear of attack by rustlers”. Insecurity caused by rustlers may compromise production, as livestock are kept away from areas with the optimal grazing and water available in a particular season. This paper also applies statistical analysis to determining the relationship between herd size, household head’s level of education, gender and non-livestock income. As is often reported elsewhere, pastoralists with larger herds are more likely to migrate, while better-educated pastoralists, women-headed households and those with alternative income sources are less likely to migrate.

The review by Keith Weber and Shannon Horst evaluates the interactions between pastoralist livestock grazing systems, environmental and climate change, and social as well as political forces towards pastoral settlement, keeping the processes of grazing rest and livestock movement in the forefront of the review. Their paper “Desertification and livestock grazing: The roles of sedentarization, mobility and rest” is perhaps controversial, as they address the value-laden concepts of “desertification” and “land degradation” with regards to pastoral grazing in the arid and semi-arid rangelands. Their assessments and counter-arguments are thoughtful and deserve our close attention, whether we agree or not with their approach and conclusions. In practice, the authors remind us that however the notion of desertification is defined or whether the notion is defensible, “the perception of decision-makers [is] that rangelands are degrading and that some form of intervention or change in practice or policy must be enacted to prevent further desertification”. We must therefore continue to pay attention to the whole debate.

The biological role of livestock grazing is again a focal point in the next paper. There is considerable current interest and field research on the capacity of pastures (grasslands and rangelands used by pastoralists) to absorb some of the world’s excess carbon emissions. This is especially important given that pasture occupies the world’s single largest area of land use, while CO₂ and other greenhouse gases are negatively implicated in climate change. The careful long-term study of these processes is much welcomed, as in the case presented by Rod Chimner and Jeff Welker in their paper, “Influence of grazing and precipitation on ecosystem carbon cycling in a mixed grass prairie”. They study the effects of two different years of dry and wet years on soil carbon exchanges on controlled plots in Wyoming USA with a twenty-year period of different grazing intensities. Though their measurement indices and calculations are complex, there is one clear result: “Grazing treatments [intensity of livestock grazing] exhibited only minor differences in overall ecosystem carbon flux rates compared to

precipitation effects during our study period. This agrees with other studies that have found that water availability is more important than grazing intensity in grassland carbon cycling". The authors report that this overall finding is modified by interactions between grazing intensities, timing and amount of precipitation, all of which are similarly variable in real life pastoralist and rangeland conditions. Nevertheless, the effects of a variable precipitation regime may be greater than the level of grazing on some key environmental parameters.

Our last paper is from two practitioners, working over a period of 12 years with Tibetan pastoralists in western China. Marc Foggin and Marion E Torrance-Foggin, in their paper "How can social and environmental services be provided for mobile Tibetan herders? Collaborative examples from Qinghai Province, China", describe the ways in which their NGO Plateau Perspectives engaged with local government offices and pastoralists to tackle the issue of how pastoralists could maintain their mobile and customary practices, while gaining access to desirable services such as schools and health clinics. The experiences and successes of their NGO are decidedly relevant to policy-makers and practitioners concerned with pastoralism, as the authors note that: "In many regions of the world, national governments have considered the extension of social services to remote or sparsely inhabited areas, such as found in the Tibetan plateau region, to be too problematic or prohibitively expensive. This view - [is] often based on ideological premises...". The Chinese government has taken a clear and firm line on this subject, which is to implement a series of programmes to settle the Tibetan nomadic pastoralists in towns. As may be expected, over the years the NGO has encountered set-backs, but their progress underscores the necessity of sensitivity to political context, long-term NGO commitment and the simple but effective approach of "drinking tea" - spending time and learning together with local participants.

We continue to publish reviews of recent books which will be of interest to the readers of this Journal. Accompanying this set of papers is a comprehensive book review by Professor Katherine Homewood, an international authority on the Maasai pastoralists of East Africa. The Serengeti plains of East Africa, divided and overlapping between livestock grazing lands and game parks, may be one of the best studied pastoral ecosystems in the world's drylands. The book reviewed is "Serengeti III: Human Impacts on Ecosystem Dynamics", edited by ARE Sinclair, Craig Packer, Simon Mduma and John M Fryxell, of more than 500 pages with drawings and illustrations, encapsulating a lifetime's research for some of the contributors.

Our next set of papers which will be published is on European pastoralism, with particular reference to the impact of the European Union Common Agricultural Policy (CAP) on extensive livestock rearing in Europe's uplands and less peopled byways. We have case studies on Italy, Sweden and Greece in the European Union, as well as a summary of how the EU CAP is intended to support "high nature value" lands with their floral and faunal biodiversity, which are in the care of pastoralists with an ancient heritage in western Europe. We will also have an article about a much less visible group, Kurdish pastoralists who are still practice mobile livestock management on the eastern fringes of Europe, contained in the modern state of Turkey.

As the editor of this set of papers, I would like to extend my gratitude not only to the article contributors for their fine work, but also to the unsung heroes and heroines, the article reviewers, who have offered such thorough and objective reviews. For a

young Journal such as ours, quality reviews add much to the strength and reputation of our Journal as it develops.

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